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# M.I. MAGAZINE

VOLUME 2 ISSUE 1

JAN/FEB 1980



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From his apprenticeship with Ray Charles to his world tours with the Rolling Stones **Billy Preston** has remained one of the most exciting keyboardists around. Billy puts his eventful career in perspective in this interview by Melodie Bryant.



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Following a brief stint with Weather Report, **Narada Michael Walden** embarked on a solo career that has yielded new directions in rock-jazz fusion. Narada discusses his approach to drumming and composing with Robin Tolleson.

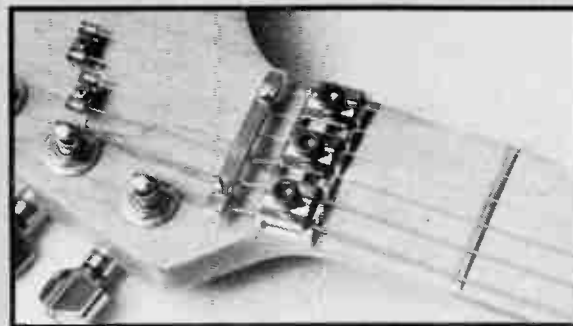
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**Larry Fast** sometimes known as Synergy, may be just what electronic music has needed to cross over to a wider audience—a palatable blend of technique and intuition. By Kirk Austin.



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# EDITOR'S

*We at Mix Publications are now entering our second year of publication of M.I. (Musicians' Industry) Magazine, as the music industry enters a new decade; and, thanks to the incredible response we've received from readers, manufacturers, retailers, and artists, things couldn't be more encouraging. We originally set out with the idea that musicians were looking for—craving might be a more accurate description—a magazine that covered the entire spectrum of music and the music business. Apparently, we were dead on target.*

*In the year-end/decade-end retrospectives I've been reading about the music of the Seventies, the usual consensus is that it was a decade without any particular focus, sort of a hodgepodge of musical styles and trends—which is just the point. The decade was marked by movements toward fusion (melding diverse elements into one style) and eclecticism (embracing many different styles). One can only predict that the music of the Eighties will continue on this broad path—and you can bet that M.I. will, as well.*

*We're kicking off the Eighties with a detailed interview with one of the fathers of fusion, electric violin virtuoso Jean-Luc Ponty; and a close-up view of one of the most eclectic keyboardists of the past ten years, Billy Preston. Other features include a conversation with one of the synthesizer's most promising composer/technicians, Larry Fast; perhaps the most definitive piece ever written on the growing problem of record counterfeiting and bootlegging; a talk with multi-faceted drummer Narada Michael Walden; a look at the electronic wizardry of Jimi Hendrix's personal technician, Roger Mayer; and our lead story, a round-table discussion with the four members of Cheap Trick, one rock group that's sure to have a huge impact on the sounds of the coming decade. Not a bad deal for the price—which is, as it always has been, free.*

*A belated introduction is in order for Kirk Austin, who has been working at M.I. as Assistant Editor since November. Kirk is an experienced guitarist and synthesizer player, and is now applying that knowledge and experience to writing and interviewing, as exhibited by his features this month on Larry Fast and Roger Mayer.*

*Kirk also coordinated the special sections in this, our West Coast NAMM Show issue—our semi-annual listing of New Products, the most complete index of what's on the market offered by any publication; and our section on Hotrodding, surveying some of the instrument modifications popular with many players today (by the way, that's Kirk's customized Stratocaster pictured in the segment on Floyd Rose).*

*M.I. comes out six times a year and is now in circulation throughout the United States, and is read by many pros in Canada and Europe. As mentioned earlier, feedback thus far has been more than favorable—with compliments covering everything from editorial content to graphics. Understandably, we're quite pleased and enthusiastic, and we look forward to hearing from more readers. Your input is not only welcome; we feel it's necessary. After all, we're out to serve your interests and needs—let us know what they are.*

*All the best for the coming new year and decade,*

*From the people at M.I.  
Dan Forte, Editor*

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# NOTES



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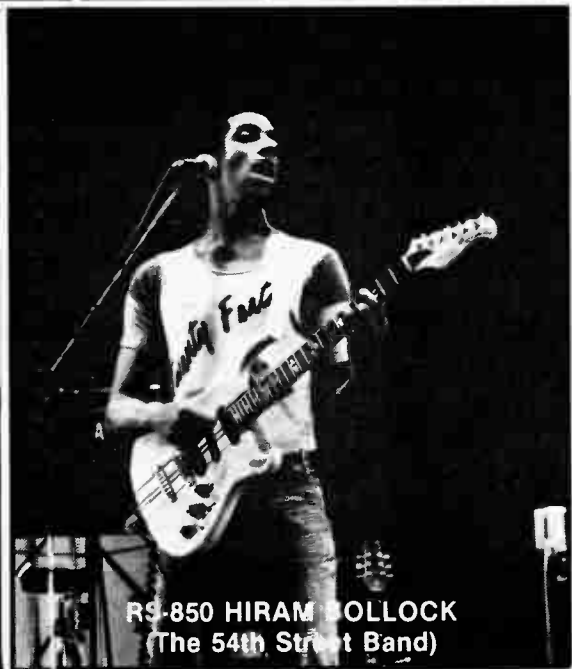
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# BILLY PRESTON

## Gospel Prodigy ROCK SIDEMAN SOUL SUPERSTAR

by Melodie Bryant

ROBERT LANDAU



From the nappy headed kid whose picture appears on the early gospel albums of Reverend James Cleveland, to the skinny 19 year old in the Beatle wig who was first discovered by Ray Charles tearing up the organ on *Shindig*, Billy Preston has had one of the most varied careers in the pop music business—a career whose variety Preston himself is only now learning how to deal with.

At 33, Preston has produced hits such as "That's The Way God Planned It," "Will It Go Round In Circles," and "Nothin' From Nothin'" —not to mention Joe Cocker's hit version of Billy's "You Are So Beautiful." He has also toured extensively with the Rolling Stones and George Harrison and appeared in the Beatles' film *Let It Be*.

Inspired at the age of three to take up piano, Preston was already playing organ for services at the Victory Baptist Church in Los Angeles and conducting the choir by the age of seven. "It was a very good choir," according to Billy, "about 100 voices, and all older people. They used to have a television show on Channel 11 every Sunday night. So, they built me a box, made me a robe, and put me up in front of the choir. I didn't read music yet, though; I didn't learn to read until I was 13. Then I had about 26 lessons before my teacher died. I never did get another one."

By that time, however, Preston had already won a contest to conduct the Houston Symphony Orchestra and had recorded his first professional gospel session as an organ player with Reverend Alex Bradford: By age 15, Preston was well on the way to a career as a gospel organist and might have continued playing in that capacity indefinitely had it not been for an accidental brush with rock and roll, in 1962.

"Little Richard was a minister then," he recounts, "and he asked me to play on a gospel tour in Europe. So I said great, and my mother was all excited. But when we got over there, we found it wasn't a gospel tour at all. They had conned him into thinking it was, just to get him over there. But when we arrived, they said, 'Hey, it's rock and roll. What you gonna do now?' By that time, it was after all of his hits, so we did it. That was the first time I had ever played rock and roll."

It is doubtful that anyone playing with Little Richard could have escaped being infected by the rock and roll virus, but that particular tour contained an especially potent strain: dates with Gerry and the Pacemakers, Sam Cooke and the Beatles. "We played the Star Club in Hamburg for two weeks," says Preston, "and the Beatles were with us the whole time. We would hang out together, and they would ask me about America.

John taught me to play 'Love Me Do' on the harmonica. Ringo was already with the band—but this was 1962—but there were so many groups that they weren't getting any great response yet."

Times being what they were, Preston returned to the States and hooked up with Reverend James Cleveland, with whom he toured for the next two years, once again playing gospel. But by then, his interests were beginning to diversify; and in an attempt to explore new musical areas, Preston began to play both pop and gospel, establishing a pattern which he has continued to this day.

While with James Cleveland, he signed to Sam Cooke's SAR label at Cooke's request, releasing *Sixteen Year Old Soul*, which he recorded in one day. When SAR went under, he signed with VJ, recording several albums of hits of the day; and when VJ went under, he continued with Capitol. Three years after the Little Richard tour saw Preston wearing a Beatle wig, ensconced as resident organist for the TV show *Shindig* where he gained national coverage playing the hits of the week.

He could not have been in a more fortuitous situation. During the course of the show, he worked with artists like Glen Campbell, Delaney Bramlett (one third of the resident *Shindogs*), the





Preston (right) with Ray Charles (far left) and the Raelettes, Newport Jazz Festival, 1968.

Righteous Brothers, Sonny and Cher, and made his first connection with the Rolling Stones, a meeting which was to stand him in good stead later on.

As he talks about his early days as a rock player, Preston is surrounded by the material accumulations of a successful career in the field. A total of nine quarter horses in their paddocks outside, a collection of cars including a Rolls, a Bentley and a Jeep, and a high vaulted house in Malibu all testify to the rewards of a lucrative career in rock. But in Preston's attitude and understated conversation, it is clear that while materially he may owe much to the world of rock, musically his greatest debt is to gospel, and to Ray Charles whom he met on *Shindig*, and with whom he subsequently recorded and toured for three years.

"I had wanted to meet him since I was ten. My mother used to have a lot of records around the house—Nat King Cole, Arthur Prysock, Ray Charles—and I used to listen to Ray Charles, because his music reminded me of gospel. I even remember putting on my choir robe and standing in front of the mirror singing 'I've Got A Woman.' And later on in school, I had a group called Billy and the Billettes [after Ray Charles' Raelettes], and we'd do all Ray Charles songs. I'd put on the shades, and they'd lead me out and everything. Ray Charles has always had a big influence on me.

"I just formed another Billettes," says Preston proudly, "And we do a little Ray Charles number. I haven't put the glasses on yet, though."

If Preston was ecstatic about being able to work with his idol, his enthusiasm constituted only half of what was to become a mutual admiration society. Touring with Charles, he rapidly acquired the introduction as "The young man that anytime I leave this business, I want him to take over." So confident was Charles in his protege, that he even agreed to launch him on a solo career after his own image.

"Just about the time that *Shindig* was going off the air," remembers Preston, "I met Sly Stone. At that time, he was still a DJ up north

and hadn't started playing professionally yet. We were going to start a group which would have been me, Sly Stone, his brother Freddy and Larry Graham. We were going to call ourselves the Sons of Ray. I was on Capitol at the time, and Ray Charles was my manager, so I had arranged for him to produce us. It was all set, and I sent them the plane tickets to come down. So there I am sitting with Ray Charles waiting for them, and they show up three hours late. After the session, I said, 'Hey, I can't do any business with you.' And that kind of thing just seemed to follow for Sly's whole career." That was the forerunner in a series of attempts by Preston to establish a solo career on the level of the superstars he was backing—a career that saw him become one of the most celebrated sidemen in rock.

While working with Charles, he made frequent visits to England to record with his Beatle buddies, first playing on the "White Album" [*The Beatles*] and then on *Abbey Road* (for which he received an album credit), and participating in the filming of *Let It Be*. "I was with Ray Charles in Europe at the time, doing a concert at the Festival Hall, and George was in the audience and said, 'Wow, I think that's Billy.' So he sent word back for me to come by and say hello to the fellas. And that led to my walking in on *Let It Be*. When I came in, they were arguing and nobody was really that interested in finishing up the film. But we started reminiscing and playing old songs, and it was a nice lift for me to be there." Preston subsequently appeared in the film, and soon after switched from Capitol over to Apple where with Beatle support he made his first serious attempt at going solo.

Recording *Encouraging Words* in 1970 and *That's The Way God Planned It* in 1971, it looked like he might have some luck. The title cut from his second album did well in Britain; but soon Apple became involved in internal struggles and Preston, foreseeing difficulties, decided to leave, less for his own sake than for that of his friends. "That was my dream company," he says fondly. "I was really happy with them. They really wanted me to make it, and they had plans for me. And at first it was very nice. But things started getting out of hand, and I didn't want to be a burden, because we were friends. I felt like there was nothing they could do for me, because

they needed things done for themselves." In 1972, Preston signed with A&M.

While with A&M, he cut a total of seven albums in the space of five years, which included such hits as "Outa Space," "Circles," "Space Race," and "Nothin' From Nothin'," as well as "You Are So Beautiful," which was a hit for Joe Cocker. But in spite of his series of successes, Preston's career did not take off the way he wanted it to. Looking back, he puts the blame on A&M.

"I was dissatisfied with how they promoted my albums," he declares, "because every hit was on the B side. They would say, 'This is the A side,' and they'd put out the single and the disc jockeys would flip it over and that would be the hit. And every time I put out an album, they didn't know what would be the hit. They'd just put it out there and see what happened, and you can't just do that.

"Also," he adds, "they didn't know how to market me. The reason they signed me was that they wanted to break into the black market; but they found out I was more white than black and it was confusing for them."

Listening to Preston talk, you'd think he had never even seen the back pages of a pop chart. The fact is, during his partnership with A&M, he came away with numerous gold singles and had at least one, sometimes two, albums on the charts for a period of four years running; an enviable record by most people's standards. Moreover, if A&M was confused, it was not without reason.

When Preston first signed with the label, his music offered a golden opportunity for them to become involved with black music; and his first two albums, reflecting his apprenticeship with Ray Charles and his many years as a gospel player, fit in well with their strategy. By his third album, however, Preston's musical direction had taken a drastic change. *Everybody Likes Some Kind Of Music* contained not only funk and gospel tunes, but also rock, jazz, classical and even country numbers—a package guaranteed to raise the consumption of Valium in the marketing department of any record company. And the three albums which followed that—*The*

Cont'd on next page



# BILLY PRESTON

Cont'd from page 9

*Kids And Me, It's My Pleasure, and Billy Preston* were pure unadulterated pop.

Although hindsight doesn't change anything, Preston's passage into pop was an inevitable occurrence given his musical environment at the time. Even before he joined A&M, his affiliation with the Beatles was more than a superficial one, as was his relationship with the Stones with whom he recorded in 1971 [*Sticky Fingers*] and later in 1976 [*Black And Blue*]. All in all, Preston's success was impressive in view of the fact that he and A&M were working at cross purposes. But it's all relative. Working with superstars undoubtedly had an elevating effect on his solo expectations; and when immediate stardom eluded him, Preston, not used to being patient, took up with his rock cronies at every opportunity, rendering A&M's already ineffective black marketing campaign a rather sad joke. "The gigs I was playing with my music, we just went back to the same places. We never really went up or down, and I didn't see much sense to that. So when the opportunity came for me to be a sideman and be on a big tour and get my money clear, it was a decision I had to make because of finances, and just to get rid of the headache."

Between solo tours, Preston recorded with such artists as Aretha Franklin, Sly Stone and Barbra Streisand, toured with George Harrison in 1974, and made three tours with the Stones.

Of all the musical relationships in which Preston has been involved, that with the Stones has to stand out as the most contradictory in view of his deeply religious background. But says Preston, "I didn't feel any conflict at all. When I was with the Stones, I thought that's just where I should be. I thought they needed a little Jesus, something pleasant in their lives. In fact, I used to preach to them all the time. Me and Mick would talk about Jesus and different prophets, and they weren't skeptical at all. I used to ask him why it was that people think they're devils and worship Satan; and he said they brought it on themselves. They allowed that to happen, because that was what made them famous. But they're very nice people. They're nicer than anybody would know." But even the Stones could not put Preston's solo act together and in 1977, exhausted with relentless touring and session work, he took some time off to sort out his career. In 1979, he signed with Motown.

At this point, there can be no question that Preston is an artist with pop potential. His own dissatisfaction notwithstanding, Preston's solo track record, to say nothing of his rock collaborations, has been a history of popular successes. But his past experiences have made him warier than before. More conscious of the pitfalls involved, and perhaps more than ever aware of how varied an artist he really is, he is leaving nothing to chance; and in what amounts to a precautionary self marketing campaign, Preston has packaged and labeled his own music in advance of releasing anything. Signed to Motown for popular releases, he has worked out a separate agreement for his gospel material.



Preston (R) with Mick Jagger, 1975.

"It's different from anything Motown's done before," he says. "Usually you can't be on two labels at once, but I have an outside deal for gospel on Word Records. They're based in Waco, Texas, and have their own distribution. I've always put a gospel song in my albums, but I've never had the chance to do a full gospel album since I was with James Cleveland, so I've been longing to do it."

Preston has already released one album, *Behold*, and recorded a second, entitled *Universal Love*, which is slated for January release. "The band and the Billettes are on it," he says, "but the songs are different from what we do on the show."

Motown is undoubtedly relieved not to have to carry the responsibility for all of Preston's interests, though they shouldn't have a very hard time putting over his newest *Late at Night*. From the title cut to the Beatles oriented "It Will Come In Time" to the sensitive ballad he sings with Syreeta—"With You I'm Born Again"—this is a distilled pop album whose various influences strike a pleasing and consistent balance, and ought to do well enough to satisfy even a tough customer like Preston.

The album's jacket cover is littered with familiar names of studio pros: David T. Walker on guitar, Chuck Rainey on bass, James Gadson on drums. The current touring band, which is naturally different personnel, includes three horns, three "Billettes," two keyboard players, and even two bass players. On top of that, Preston also uses his organ pedals. "I use them for everything," he says, "for gospel and the show. In fact, I get mad when I rent an organ and they forget to bring them. It doesn't conflict with the bass player at all. I just play straight tonic, a very simplified bass, and it matches."

As for how the two bass players work with each other, he says, "It has been a challenge; because it has made better musicians out of both of them to really work together. They had

to sit down and really listen and figure out who was going to play what. It's been a great experience, and it comes off very well. I think that's the art of musicianship: to be able to accompany and play along rather than being the solo artist with the fancy licks.

"I never really got tired of being a sideman," he confesses. "I enjoy it. It's a lot easier than being the one out in front."

But his own career takes precedence now. "I haven't been working with anybody lately," he says, but for Preston that is a very relative statement. This last year he recorded the soundtrack for Gabe Kaplan's movie *Fast Break*, and just prior to this interview he had been in the studio with Syreeta, working on her new album. But generally speaking, he is winding down his outside activities. "People still call and ask me to do sessions, and it's hard to say no, because I do enjoy doing it. But now it's my turn. I really have to concentrate on my own music and my career."

As someone whose playing has always come from the heart before the head, Preston is not very technically oriented. That's a deceptive concept considering how much he has grown as a producer and synthesist; but he insists, "I just play around until I find what I want. That's the interesting thing about electronic instruments. There are so many variations, and that keeps it fresh and interesting."

Preston's basic keyboard setup consists of a Hohner Clavinet, ARP Pro Soloist and Quadra, Polymoog, Melodica, a Univox piano which has been modified so that it can be worn with a shoulder strap—and, of course, a Hammond B-3 (cut down). "My latest gadget is a vocoder. I've written a lot of funky things with it, and I was going to use it on my gospel album, but when we got it into the studio, it wasn't working. I'm still learning about it, though."

Throughout a career that has taken him symbolically from the house of God (James Cleveland) to the house of Satan (the Rolling Stones), Preston remains a devoutly religious man. "I play in various churches whenever I can," he says. "My mother still plays at the Victory Baptist Church, so I go there and play with her sometimes. And my sister has a choir. She does a lot of programs and records, and I play along with her when they're having concerts. Any church that's having a program, I just go along and play. I don't take money for it; just do it for love."

As for why he has been so successful in such a short time, Preston declines responsibility. "Because that's the way God planned it," he says with a smile. "Everything just happened because I was in the right place at the right time. I give God the credit, because it wasn't me. I never could have negotiated with the Beatles to put my name on an album. It was just because they liked me so much they did it. And I think those kinds of gifts are better than asking for something."



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# Roger Mayer

## the world's most EXCLUSIVE roadie?

by Kirk Austin

Jimi Hendrix, Bob Marley, and Ernie Isley — three guitarists with very different styles, yet one thing in common: All of them have relied on the talents of Roger Mayer to produce the sounds that they imagined. While musicians can hear new and exciting sounds in their heads, it can sometimes be very difficult trying to explain them to someone involved in electronic design. Mayer provides this vital link between the musician and the technology. By approaching design from an artistic viewpoint rather than an engineering one, he has been able to create unique tone colors to fit the individual's playing style. The 34-year-old Mayer has worked with individual clients on a custom design basis for over fifteen years, and this year, as president of Roger Mayer Electronics (225 East 57th Street, New York, NY), he is going into full-scale production of his legendary guitar devices.

After talking to Mayer for a while it becomes easy to understand his appeal. His friendly disposition and willingness to make the effort to really understand the preferences of the musicians he has worked with have made him a val-

uable asset to the music world. His thick South London accent is punctuated with hearty laughter, and his stories about the late Sixties rock scene are both colorful and fascinating. Although probably best known for his work with Jimi Hendrix, Roger's equipment can be found in over 3,000 recording studios worldwide.

Roger Mayer grew up in England at a time when guitar heroes were the rule rather than the exception. A guitar player himself, Roger used to hang out and occasionally jam with the likes of Jimmy Page, Jeff Beck and Eric Clapton. During this time Jimmy Page and Jeff Beck ended up coming around Roger's house quite a lot, and they became interested in making some different sounds for the guitar. This was when the distorted guitar sound that we're all so familiar with today began taking shape. Roger Mayer was one of the first people to design electronic devices that deliberately distorted the tone of the guitar; making it a much more powerful, melodic type of sound. His devices were used in the middle Sixties by Big Jim Sullivan, Jimmy Page and Jeff Beck, and Roger was told that one of his fuzz-



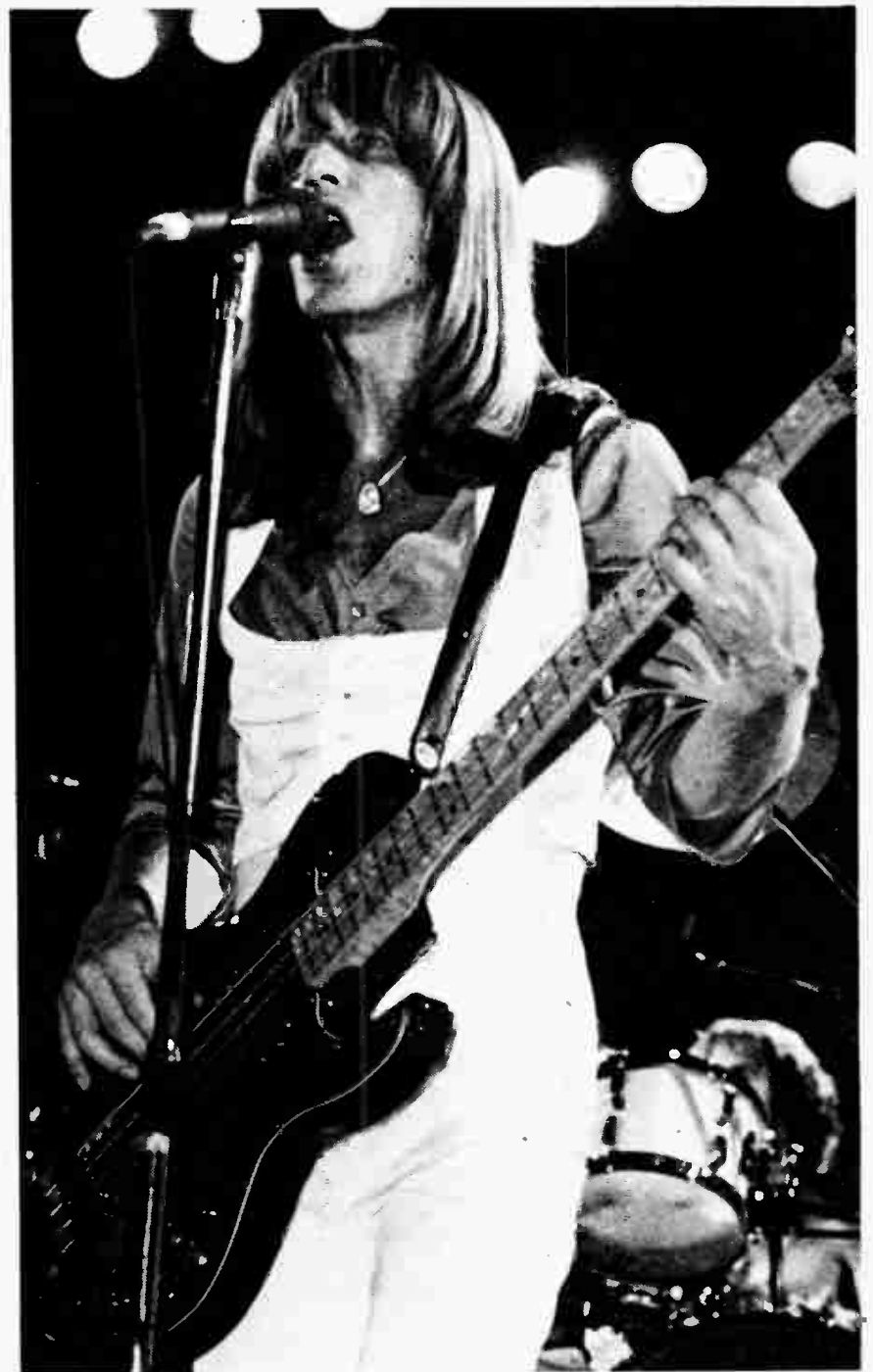
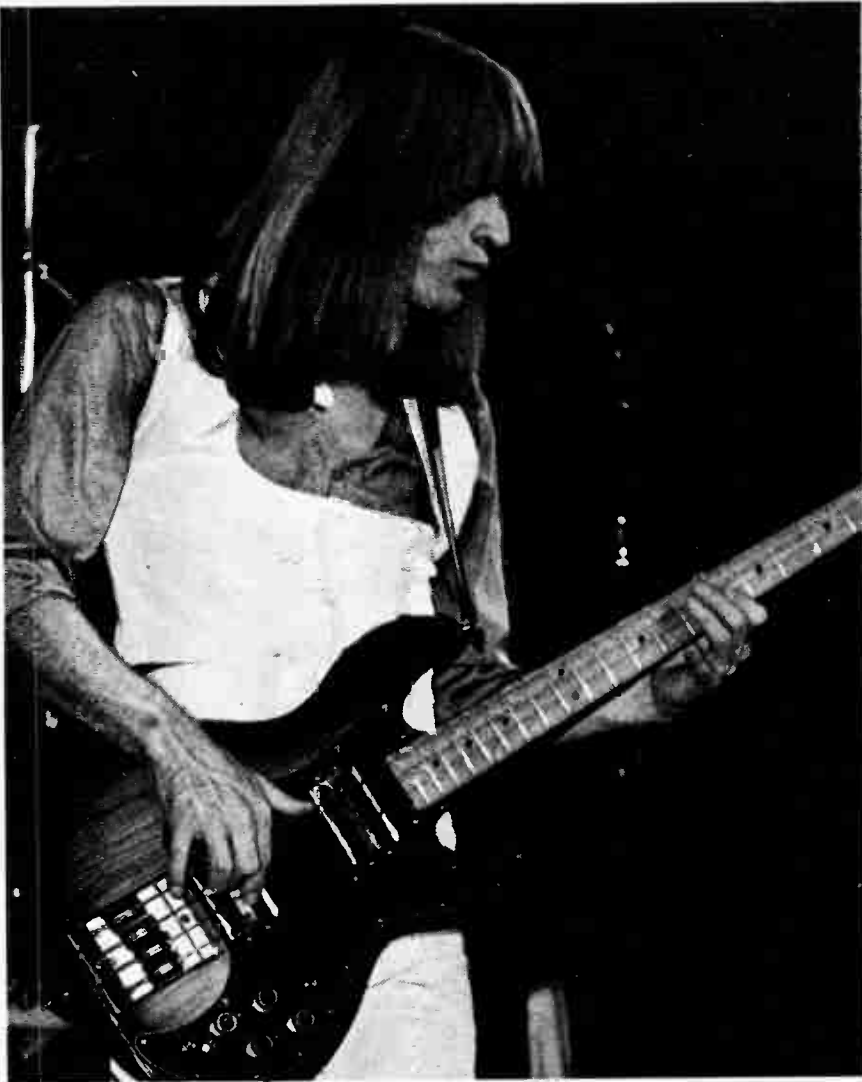
tones made its way to Keith Richards for the recording of "Satisfaction" by the Rolling Stones.

All of this experience led to Roger's association with Jimi Hendrix in 1967. Mayer recalls, "The first thing that I remember about Jimi Hendrix was seeing him on a television program called *Ready, Steady, Go!*, and he was playing 'Hey Joe.' I don't know if that was his first television appearance in England, but it was very close to it. Then I went down to see him performing at a club in London called the Bag O'Nails. It's quite a small club — about a hundred and fifty people; really like a small private club — and everybody who was anybody in the music business was there. After Jimi first came to England the word got around so quick that everyone was really anxious to actually see him play. There was a terrific interest in him in a very short period of time. So, I went down and had a few words with him after the show. Everything seemed to click pretty well, and he asked me to go to a gig he was playing at a place called Chiselhurst Caves. These are some caves in the southeast of England where pirates used to hang out, and the actual rock auditorium is inside a cave; they would set up the band at the end of one of the caves. And Hendrix was burning up this place, man, just louder than anyone you could imagine in Hell! At that gig I brought some of my earlier experimental Octavias with me and he was playing around with them in the dressing

Cont'd on page 14



# ROSS VALORY



## LAYS DOWN THE BOTTOM LINE WITH THE PEAVEY T-40.

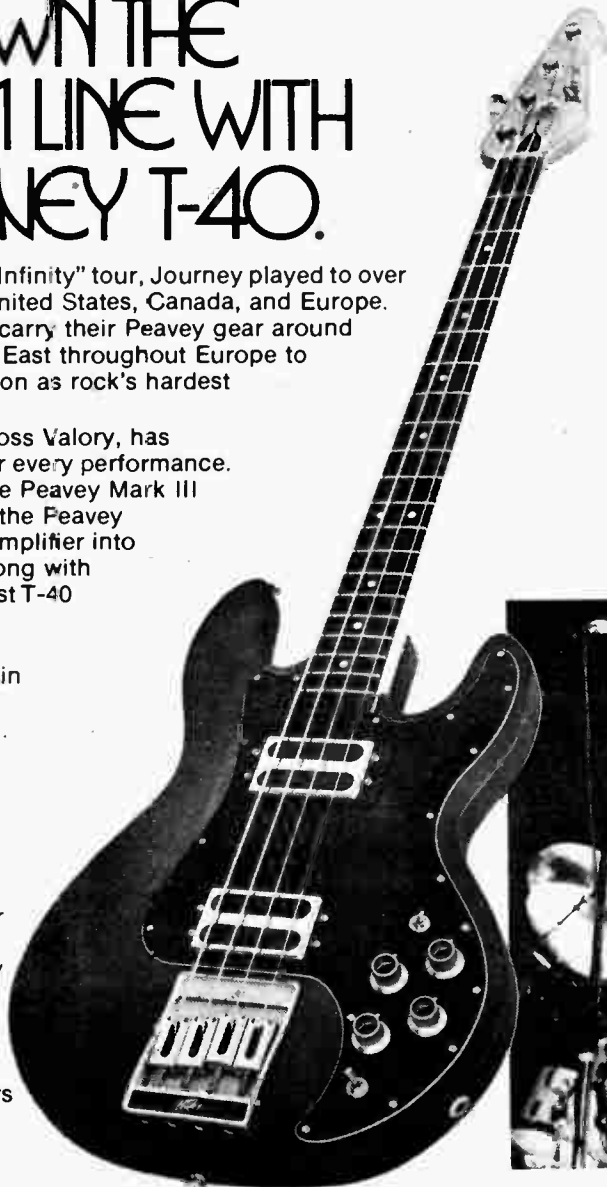
Last year on their "Infinity" tour, Journey played to over 170 cities across the United States, Canada, and Europe. This year Journey will carry their Peavey gear around the globe from the Far East throughout Europe to underline their reputation as rock's hardest working group.

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(L to R) Roger Mayer, Mitch Mitchell, Jimi Hendrix, Noel Redding.

room. He liked the sound of them and asked me to bring them to a recording session the next week. So, the next week I went to another gig with him, and after we finished the gig, at about twelve in the morning, we went over to Olympic Recording Studios and he cut two tunes in one night — 'Purple Haze' and 'Fire.' He used the Octavia and one of my fuzz boxes, and that's really how it started. Two weeks after meeting the guy I'm in the studio with him."

Later that year, after the recording of *Axis: Bold as Love*, Mayer toured the United States with Hendrix as his personal sound man. Although that was the only tour that Mayer went on, he continued to supply Hendrix with Octavias and fuzz boxes for the rest of the legendary guitarist's career. According to Roger, "When we went into the studio there was nothing we wouldn't do to get a sound. It wasn't like — 'Oh, well that hasn't been done before.' Because if you are on the forefront of trying to set trends you obviously can't think of anyone else."

Roger worked closely with Jimi developing the distortion devices. "It was a personal friendship. If you are around someone eight hours a day for quite a period of time you get to have an idea of where you're both going. You can knock something up on a breadboard and say, 'Well what do you think of this?' and get something like, 'Oh yeah, I like this part of it, but let's go further in this direction.' That's how I normally work with an artist; you give them a variation on a theme. I mean, you might pick a sound off of a record and want something like that but a little different, or more moving. It's almost impossible to say, 'Oh yeah, what we need is a voltage controlled this or that,' because you don't really know until you've made it. Listening to some guy play and then experimenting is the only way that you can get to the next step."

Through experimentation with Hendrix, Mayer came up with various unique distortion devices; some sounding extremely smooth like the one used on the song "Axis: Bold as Love," and some sounding more like a saxophone. Since the rate of losing equipment was so high while on tour, Hendrix would use the Dallas Arbiter Fuzz Face for most of his live performances. With audiences storming the stage after the gigs, fifteen or twenty fuzztones were lost a year, so Hendrix saved the two or three custom devices that

Mayer supplied him with for studio use, or for specific gigs such as the *Band of Gypsies* album.

Roger Mayer was not interested in producing his effects commercially in the late Sixties. "I was never happy with the state of switching," Mayer says. "What always bothered me about all the boxes was the switch, and back in those days to make one commercially there was virtually no type of switch that was mechanical that would stand up without making a click or something." So Roger began making recording studio equipment and doing some custom guitar effects as sort of a sideline. He has worked closely with Ernie Isley of the Isley Bros. and Bob Marley and the Wailers, helping them maintain their equipment and their guitars. Roger starts by selecting the best guitars available. According to Roger the most important factor that contributes to the sound of a guitar is the quality of the wood. For this reason he prefers a guitar that is not painted with a color that hides the grain. When he tries out a guitar in a store he doesn't even bother to plug it in; the electronics don't interest him at that point. "If it doesn't sound good unamplified, it will never sound good" is Roger's theory. Once the guitar is selected Mayer goes to work on the fretboard, leveling out the frets to within five one thousandths of an inch. Then he makes the neck slightly concave around the 5th or 7th fret by adjusting the truss rod. Roger says, "People do a lot of funky playing around there, and it's important to open the fretboard up a bit so you've got more room for the strings to vibrate at that part of the neck."

As far as the electronics of the guitar are concerned, Mayer is satisfied with the stock pickups and wiring. He doesn't believe in onboard preamps or other circuitry built into the guitar itself; he also feels that pickups have really remained basically the same over the years, and that changing the pickups can't change the sound of the string. He attributes the different characteristic sounds of pickups to the way they are affected by the loading of the amplifier.

Roger feels that some very interesting things can be done electronically to a guitar tone to make it sound impressive, powerful, even religious. His distortion devices have been designed to create a magic sort of quality. He explains, "One of the most important things is the transition between the notes — that it's absolutely smooth. That's what I listen for in all fuzz boxes. If a guy is playing a solo and as he is changing from one note to the next, it goes glitch-glitch, it sounds metallic and it takes away from the magic of what's actually going on. It's because the distortion is too simplistic. We have one device that goes through several stages where it rounds the signal off successively, almost like putting it through a series of tubes. We put it through one preamp then another one then another one, so that when you hit the note it doesn't snap into distortion, it just gently envelopes itself in. It normally sounds better when it's like that, rather than the note being immediately chopped off or squared once it reaches a threshold. Almost all the fuzz boxes on the market are built to just square the signal with a couple of diodes; whereas I'd rather design a transistor amp that's working incorrectly, so that as the transistor turns on you get the distortion. It isn't just like building an amplifier and saying, 'Oh yeah, a fuzz box is just a square wave, so do this. You want a sub-octave; okay, we'll put a flip-flop in here.' This is



Mayer with Ernie Isley

what some people are doing, whereas if you look at the waveform of an Octavia on a scope you won't understand it by looking at it, because it changes dynamically as you're playing. The actual signal is re-biasing the whole circuit and changing it as you're playing it, so a static investigation is only half the answer."

While he was designing and building recording studio equipment Roger realized that the musician was being left behind as far as electronic equipment was concerned. The recording studios were getting the latest innovations, but nothing much had changed as far as the musicians were concerned. This led to Mayer's decision to go into production with his guitar devices.

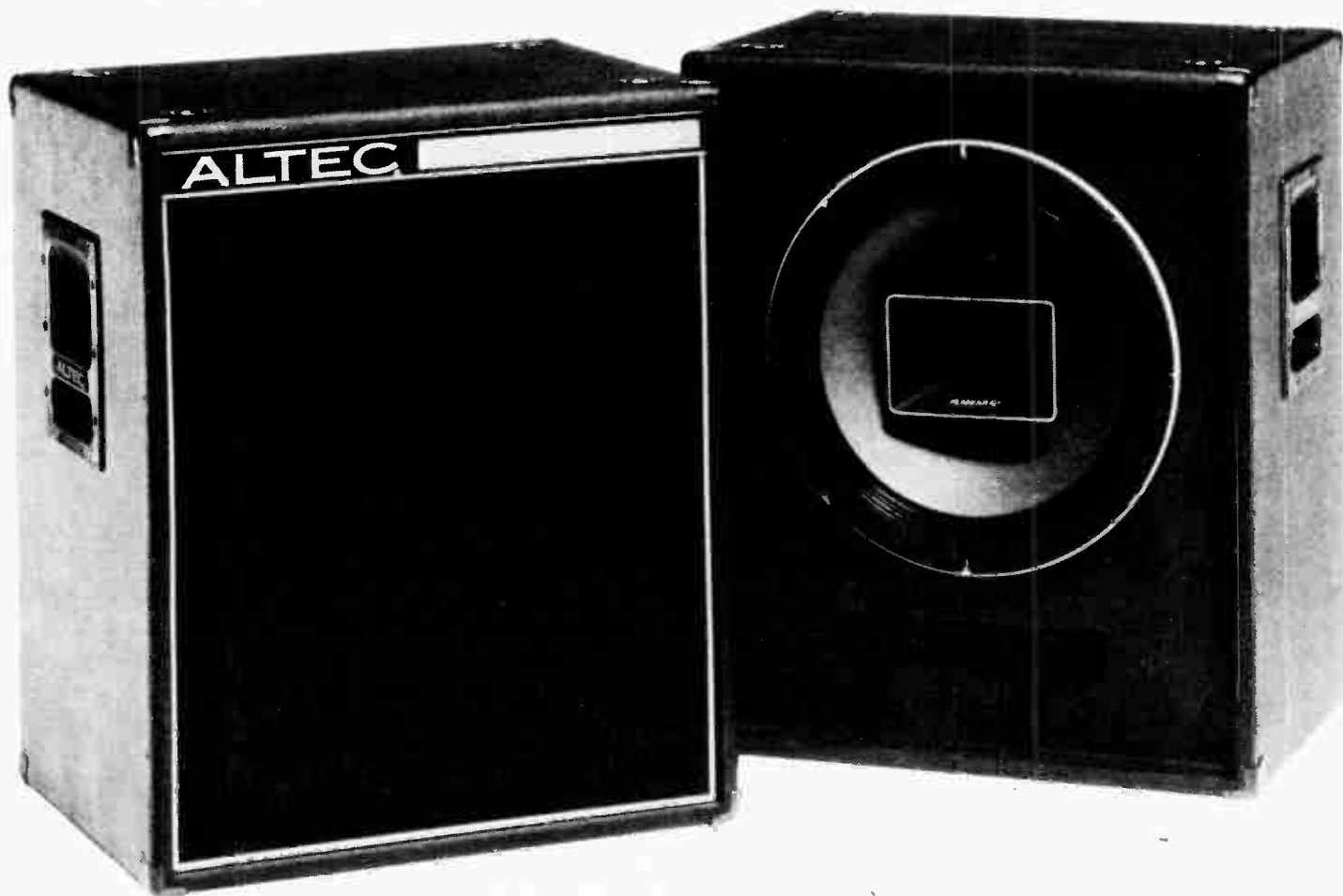
"Just recently I thought that it would be nice to make it in a really good looking enclosure," he explains, "and at the same time the apparatus to make the switch became economical enough. So now we can use an infra-red switch and a button which allows the enclosure to be made indestructible. The light hits the plunger; bounces back into itself, and there's a digital circuit that allows the electronics to change backwards and forwards. We use FET's so that there aren't any clicks, and we've set it up inside so that it's like a perfect crossfade that happens in about a tenth of a second. What happens as you touch the box is, the original sound decays down while the other is fading up so you get a perfectly smooth transition. With this type of switching method, it's going to enable someone to use the actual effect while they're recording by turning it off and on. It can become more of the instrument, because the mechanism is so improved that it just feeds right back to the player's mind."

This approach to switching is reminiscent of the way Jimi Hendrix would use his pickup selector switch to change the tone color while sustaining a note.

With the new switching and his unique enclosure design (see the New Products listings) Mayer is producing the Octavia now, and will be releasing his fuzz boxes early this year. Later he plans to introduce a compressor, a form of power booster, and a pedalboard to plug in multiple effects. With new products being released every few months, 1980 looks to be a very busy year for Roger Mayer, and an opportunity for every guitarist to experience some magic. M.I.



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**I** by Robin Tolleson

It has been over six years since a 21-year-old Narada Michael Walden was offered the job of filling the vacant drummer's seat in John McLaughlin's Mahavishnu Orchestra, and since that time he has toured and/or recorded with Jeff Beck, Weather Report, Jaco Pastorius, Devadip Carlos Santana, Alphonso Johnson, Robert Fripp, Tommy Bolin, Roy Buchanan, and Alan Holdsworth. He has also produced LPs by the group Nova and avant-garde trumpeter Don Cherry. With his fourth solo album, *The Dance of Life*, recently released, Narada is showing signs of breaking into his own as an R&B performer. Initially known for his drumming ability, he is now building a following around his singing, keyboard playing, and composing as well. He wants to keep no side of his complex talent hidden.

Walden's spiritual teacher, his guru Sri Chinmoy, prescribes a very pure life for his followers, inwardly and outwardly, and Narada is a true believer in the importance of daily meditation for holding on to that purity. It was Sri Chinmoy who gave Michael Walden the name "Narada," which means "Supreme Musician." The guru then told him "Narada's soul brings light, delight, and compassion from heaven to earth, and takes back to heaven from earth all of her sufferings." The drummer makes no secret as to the source of his inspiration and his immense joy, and feels that his purpose on earth is to inspire joy within others.

Narada launched his solo career with the 1976 Atlantic release *Garden of Love Light*, joined by David Sancious, Ray Gomez, Beck, and Santana, among others. The result was a set mixed with blistering instrumental work and Narada's refreshing and breathy vocals. Spurred by the success of one of those vocal tunes, "Delightful," the emphasis of the next album, *I Cry, I Smile*, was switched from instrumental to vocal. Although the instrumental arrangements were by no means forsaken, the joyful lyrics were in front, delivered with gospel conviction.

Where *I Cry, I Smile* left off in terms of commercial appeal, Walden's third album, *Awakening*, picked up and made the full step to dance music with a far from subtle disco kick. Narada's driving style fits disco very well, although the role of drummer in disco is pretty much defined to that of "groove machine," and Narada has said that he would like to "do more playing." *Awakening* was not without a couple of slow ballads as well, and features Devadip Carlos Santana on the more progressive "Awakening Suite." The single "I Don't Want Nobody Else (To Dance With You)" enjoyed some commercial success, and this blending of rhythm & blues and rock can also be heard on Walden's most recent release, *The Dance of Life*.

In tune with his desire to get back to more playing, Narada's next project will be an album entitled *Celebration of the 80's*, "dedicated," as Narada says, "to the Supreme."



# DRUMMER WITH A VISION

# NARADA MICHAEL WALDEN

**M.I.:** Narada, you're from Kalamazoo, Michigan. Is Kalamazoo noted for its aspiring musicians?

**Walden:** No [laughs]. Most people think it's someplace way off in the boondocks, some kind of fantasy place, you know. It's a nice place to be raised, because it's right between Chicago and Detroit, so you have the influences of both places. You have the blues-rock influence of Chicago, and then from Detroit you have more of the R&B influence, the Motown rock. For me it was really great living in Kalamazoo with both influences.

**M.I.:** You have said before that Jimi Hendrix was a big influence. What was it that he brought to music that inspired you?

**Walden:** His spontaneity and his dynamic power. And his soulfulness. Outside of Jimi being a great showman and whatnot, I liked his ability to go very high and to play very strong. And being a drummer, you always look to find a guitarist who can take you very high, who could help you

to make ten years progress in six months.

**M.I.:** Were there differences or similarities that attracted you to both Hendrix and McLaughlin?

**Walden:** Well, it's just, you know, great players. I just admire great musicians — people who can put their hands on what they feel. Because of the depth of their soul, they're doing something innovative, they're doing something new, something fresh. They're pioneers, in a way, and I admire that spirit. I admire that strength of character.

**M.I.:** Were you a disciple of Sri Chinmoy before you joined the Mahavishnu Orchestra?

**Walden:** Yes, before. I had met with John McLaughlin towards the end of the Mahavishnu Orchestra and Billy Cobham and Jan Hammer, and I told him that I wanted to meet his teacher. I was in love with Sri Chinmoy's writings, and watching John McLaughlin I felt that if he loved Sri Chinmoy I had to meet this man, and he made it possible for me. After seeing Sri Chin-



moy I knew where Mahavishnu was getting that power and inspiration from. So I asked if I could be a disciple. Sri Chinmoy can say anything to you, and it's right on the money. I think that's one of the things that drew me to him the most.

**M.I.:** *One month after you joined Mahavishnu, the band went to London to record Apocalypse. The concept of that album — recording it with the London Symphony — seems like one of the most challenging of the Mahavishnu Orchestra's history.*

**Walden:** Well, each album is challenging, really. Each step is challenging. That one was difficult for me, because I had never made a record before. Ever. I mean, I didn't know my up from down. We were communicating with video cameras; in other words, in one room would be Michael Tilson Thomas conducting the symphony, and I would have a television screen with him on the screen. And Michael would also have the same in his room with me on the screen, playing drums. So we would try to sync up both rooms, the rhythm section in one room and the orchestra in another, to make it work. On some tunes it worked, on some tunes it didn't work. On the tunes where it didn't work, we ended up recording the orchestra first, and then I had to go back and overdub drums and rhythm section over what the orchestra had already laid down. Because for the orchestra to play in, say, 11/8 or 13 over 7 or something, was very difficult for them to do it with us playing.

**M.I.:** *You said not too long ago that you feel you were overplaying on these albums with the Mahavishnu Orchestra. What do you mean by "overplaying"?*

**Walden:** Well, when you are young and inexperienced in making records and things, everything is just emotional, what you feel at the moment. It was spontaneous, which is great, but not everything spontaneous is always the best. You become really good at making records after you've made a lot of records, I think, and you know what works and what doesn't work. I'm proud of my achievements on those records, but now, looking back with a little more wisdom, I feel I was a little bit young and crazy. But if I had to do it all over again I wouldn't change it. After the *Apocalypse* album we did a tour. Then the next album was *Visions of the Emerald Beyond*, and we did a tour with Jeff Beck.

**M.I.:** *Beck asked you to play on his *Wired* album after that. Did he know from the first that you would be writing four of the songs on that album, or did it just happen?*

**Walden:** Just happened. I knew that Jeff needed material, so I started writing songs. The first song I played for him was called "Play With Me," then "Come Dancing," then "Sophie." He fell in love with all the songs, we recorded, and it worked out great.

**M.I.:** *You worked in Weather Report's *Black Market* album and introduced them to Jaco Pastorius, and then you left the group.*

**Walden:** I had just finished playing with Mahavishnu, and if I had joined Weather Report I would have been playing for the same audience, the same feeling. I wanted to expand my career, and I wanted to get back into more rock. After talking with Tommy Bolin, I decided I would rather go out with him than stick with Weather

Report. I stayed with Bolin about four or five months, and then a little later on he died. Tommy was a very sweet cat, but insecure. Which is a problem a lot of us have — we just can't face ourselves. But, you know, on the other side, Tommy had an enormous sense of music — very, very talented. And when he wanted to, he could burn. I think some of his best playing is on Billy Cobham's *Spectrum* album. He loved Hendrix, which I've got to tell you is my favorite kind of guitar playing. I love to hear a Stratocaster bend and squeal and just go crazy. For that kind of stuff Tommy was amazing.

**M.I.:** *Your third album, *Awakening*, introduced a definite disco flavor to your music.*

**Walden:** Right, because at that time disco was huge — still is huge. The thing about me that you have to understand is that God has given me the capacity to do many kinds of music, and sometimes it can be very confusing, because I'm not really sure what I want to do. I can't only do one thing. I can't only do progressive music, or



ROGER RESSMEYER

only Latin music, or only R&B. I can do all those things, and sometimes it gets confusing as to what I want to do. So I say to myself, "Well, I'll take a stab at this, I'll take a stab at that, to see what it is, to see what sticks, what people like." "I Don't Want Nobody," or anything that's commercial, is like a vehicle. It's like my car. If we want to go from San Jose to San Francisco, we have to have a car, or a plane, or a boat to get there. So "I Don't Want Nobody" is my vehicle that gets me to the people. Because once they buy the album, then they listen to "Awakening," then they listen to other things. Then they might want to go back and listen to *Garden of Love Light*, or they might want to check out the Mahavishnu Orchestra or something. But without "I Don't Want Nobody" there is no interest, there's no spark. But the radio doesn't play Mahavishnu Orchestra; radio doesn't play progressive music.

**M.I.:** *What kind of drums are you currently using?*

**Walden:** The drums are Gretsch, my trusty Gretsch drums. They have wooden shells with Pearl and Slingerland hardware. Those are the same drums I bought in New York when I first joined the Mahavishnu Orchestra, and all of my recording has been done with those drums. I am using two 24" bass drums; 12", 13", and 14" mounted tom-toms; 16" and 18" floor toms; and right now for recording I am using a 5 x 14 Ludwig snare. In a "live" situation I like to use clear Ambassador drum heads, and in the studio I use the coated heads to cut some of the drum's ringing. Really, my drum set is simple. As a matter of

fact, I'm not using as many cymbals now as I did when I was playing with Mahavishnu. Then, all I had to do was play, but now I have to be more visible. For cymbals I am using a 22" Med-Heavy A Zildjian ride, a number of A Zildjian crashes, a 20" Med-Thin, 16" Paper-Thin, 18" Medium, an authentic Chinese cymbal, and sometimes a 40" gong. I use A Zildjian 14" New Beat hi-hat cymbals, with a heavier cymbal on top, and on top of my hi-hat I have a very thick 8" Paiste cymbal that cuts through everything.

**M.I.:** *I have heard you use bells in a number of recordings.*

**Walden:** Yes, I like the sound of bells. I play the glockenspiel. And lately in the studio I have tried filling Perrier bottles with different amounts of water and then tapping them. That gets a nice sound. I also play the sleigh bells and lots of other light percussion. I hope someday to have the chance to try out more of the electronic drum equipment on the market; some of that is very interesting.

**M.I.:** *Have you ever considered doing an album with another drummer?*

**Walden:** I want to do an album with Steve Gadd and call it *Zebra*. Someday I hope it comes about.

**M.I.:** *Have you ever considered doing what Steve Gadd is doing, becoming a studio drummer?*

**Walden:** Yeah, I did. In fact, when I lived in New York about three or four years ago, I couldn't get anybody to call me. Nobody wanted me. They were so paranoid of me, because they thought I could only do stuff wild and crazy. They thought, "Well, this guy is from the Mahavishnu Orchestra. He doesn't know how to play a groove. He doesn't know how to play a simple backbeat." So I couldn't get work to save my soul. Weather Report will call me,

because they want me to do what I do. Or Alphonso Johnson or Jaco. I just finished doing Ray Gomez' new album, and working with Robert Fripp on his *Exposure* album was a real delight, because he gave me a lot of freedom to play. But my place in life is to be an artist, and to get my music out there, more so than trying to be a session musician. Composition is where it's at, and playing drums. I love playing drums. Sometimes I feel a little underrated in the world of drummers. I mean, you can look in any category where they have drummers, and you'll never see my name.

**M.I.:** *Would you classify yourself a rock drummer?*

**Walden:** A progressive rock drummer. Absolutely. I didn't come from jazz, I came from rock, and then I learned to adapt myself to the Mahavishnu Orchestra. But still my most prevalent quality is my rock attitude, in everything I do. I want to make that clear, my roots are really in rock. Playing drums is an art. Doing anything well is a divine art. The thing is to be inspired, to take everything to the limit, take everything to the sky. Take every talent that God has given you and blossom it — aspire, use your heart. Use your heart's cry to become all that you are; that's very important. Then, when the time comes for the body to die, you can say to God, "I did my best. I lived the fullest life I could lead. I did the best I could do for humanity, to inspire humanity." And then God will say [with a faraway voice, as he breaks into laughter], "Very good my son, very good." **M.I.**



# SYNERGY Larry Fast

by Kirk Austin

Synthesizer music has been with us for about ten years now, and it seems to be taking longer than expected to really have an impact on popular music. Maybe this is because most of the earlier electronic music albums were intentionally esoteric. The people involved with synthesizers at that time were into experimental music and avant-garde styles, and apparently didn't much care if the music lacked a broad appeal. Also, the cost of early synthesizers was so great that only colleges and universities could afford one, and these institutions are not particularly noted for their contributions to contemporary popular music. Another factor that has held back popular acceptance of electronic music is the problem of finding someone capable of learning the instrument. Most musical purists hesitate to learn the electronic aspects of the instrument out of the fear that its analysis will encroach upon their intuitive approach to composition. Some electronic technicians are capable of understanding the electronics, but fail when they use the same analytical approach towards composition. This has resulted in some accomplished piano players who play the synthesizer as a one-note organ with pitch bend, and some excellent technical people who create great sounds and do little with them, musically. What electronic music has really needed is someone with a mastery of electronics and an intuitive approach to composition.

Enter Larry Fast—recording under the name Synergy, Fast has devoted four albums, [*Electronic Realizations for Rock Orchestra*, *Sequencer*, *Chords*, and *Games*] to original compositions for synthesizer. He has played on record and on stage with Peter Gabriel and Nektar, and he has played and/or programmed synthesizers in the studio for recordings by Hall & Oates, Boz Scaggs, Ian Lloyd, Barbra Streisand and jazz/rock guitarist John Tropea. Fast's professional involvement with synthesizers dates back as far as the use of the instrument itself in rock music: At 20, he built synthesizer modules used by Rick Wakeman of Yes, and at 25, he helped Moog Industries, Inc. develop the polyphonic synthesizer.

Raised in Livingston, New Jersey, Larry was dissecting tape recorders to see what made them work in the fifth grade. As a high school student in the late Sixties, he was following the developments taking place in electronic music experimentation at graduate composition departments of large universities by reading electronic journals. Meanwhile, he "dabbled in building circuitry that made noises." Then he heard Walter Carlos' *Switched On Bach*, the first commercial album recorded exclusively on Moog synthesizer, and suddenly, the practicality of the things he had imagined was confirmed. "It was one person handling a multi-track project with finesse and control," Fast recounts. "He proved it could be done."

Synergy's new album, *Games*, represents Larry Fast's most far-reaching exploration into combining computer and synthesizer technology in musical composition. Fast's unique "partner" on the project is a multi-million dollar computer housed at Bell Labs in Murray Hill, New Jersey.



## HIGH-TECH CREATIVITY

**M.I.** How did you get started in music?

**Fast:** I got started with electronic music. Although I had taken lessons in grade school there was very little that I did until I started working seriously with electronic music.

**M.I.** So you were never seriously into any acoustical instruments?

**Fast:** No.

**M.I.** What was your first synthesizer like?

**Fast:** Well, when I first worked with electronic music it was before the days of a lot of commercially available synthesizers. There were no small ones, only big synthesizers, so I was in a position where I had to build everything myself.

**M.I.** So you sort of kludged your first instrument together?

**Fast:** Yeah, it grew in bits and pieces of little circuits that would make interesting sounds. It was crude, but it was an instrument—it worked.

**M.I.** Did it have a keyboard controller?

**Fast:** No, I couldn't find a way to make a keyboard work with it properly, so I used sliders. It was a set of sound generating devices and modulators.

**M.I.** Sort of like the older Buchla systems?

**Fast:** It was that kind of thing. It was in that period, so I think that was an acceptable approach then, too.

**M.I.** What is your equipment like these days?

**Fast:** It's come along quite a bit. It's still heavily modular oriented; there's a lot of Moog equipment; a substantial amount of Oberheim and Sequential Circuits; and a lot of computer control by Apple Computer and PAIA Electronics.

**M.I.** So you've got the Apple Computer interfaced with your modular system?

**Fast:** Yes, with that and with the Prophet, although it's really not running the way I'd like it to yet. But it's in its early stages, and I'm working with Sequential Circuits.

**M.I.** Tell me how you go about putting an album together.

**Fast:** Well, it happens a number of ways, but the normal thing that happens is, I just start collecting ideas. I either get an idea for an interesting

sound or an interesting approach sonically, and I'll jot down something that strikes me in the middle of the night or something. Or the other thing that I'll do is collect musical ideas over a period of time, and I'll usually stick little musical bits on a cassette recorder, and the ideas begin to form and grow and string themselves together. That becomes the earliest part of putting a piece together.

**M.I.** I noticed that Robert Fripp was credited on your *Chords* album. How much have you worked with him?

**Fast:** I've worked with Robert on and off on a number of projects—Peter Gabriel's album and *The Roches* album, and there's been a number of things that we've crossed each other's path on. But that was just credit to him for turning me on to some of the possibilities of tape loop technique.

**M.I.** What was it like touring with Peter Gabriel?

**Fast:** It was a rock and roll band where I covered the electronic corner, more or less; electronic effects and a good deal of playing, but not anywhere near as electronic as an electronic music album.

**M.I.** What sort of thing did you do on the *Roches* album?

**Fast:** It was just some very ethereal, way in the background, chordal things that were done on a Polymoog with just a touch of phasing and flanging to it. It was one of those very subliminal things that went on the album. It's not the kind of electronics that hits you over the head. It was Robert Fripp's idea to put some of that on it.

**M.I.** I really liked the bass drum sound you got on your *Chords* album. How did you get that?

**Fast:** I think it was a fairly conventional low-frequency resonant percussive patch. It wasn't anything very exotic, just finely tuned filtering to give it the character that it should have, and I imagine I probably mixed in a little low-frequency sine wave to give it a little more meat. I don't think there was anything special about it, but musically it had a lot of impact.

**M.I.** There's a sound on the new album that

Cont'd on page 20



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## Larry Fast

*Cont'd from page 18*  
seems a little more difficult, and that's the solo violin tone.

**Fast:** Right, that's digital synthesis, and that was done at Bell Labs on their experimental digital synthesizer. That's really a whole new can of worms to deal with. It's a new field. You can't say that it was filtered or VCA'd or whatever, because it's frequency modulation synthesis, and I don't remember what the harmonic ratios of the modulation components relative to the carrier were. You're dealing with a whole different area of sound creation, and, of course, the precision with which a sound like that can be

**M.I.** Have you tried any other instruments with frequency modulation synthesis?

**Fast:** Well, the funny thing is that that kind of synthesis has been available on the analog machines all along, but very few people would explore much more than just the clangorous tones of it. It's funny, because it can be done with analog, but I guess the patterns of thought that have prevailed for the last decade haven't led in that direction.

**M.I.** Have you gotten into using controllers other than the standard keyboard?

**Fast:** On the *Chords* album there was some experimental guitar synthesis, but now we've really been more and more computer based, and using an AGO keyboard, set up as a data terminal to enter data to deal intelligently with the computer. It's just musically more relevant to enter data that way than to key it in with the standard computer arrangement. But I think the more exciting things that I've been doing involve setting up a general purpose system—either the smaller hybrid digital-analog or the all digital system at Bell Labs—and then getting real creative with all the software control that you have. It opens up so much, again, that it's hard to describe the circuitry.

created using digital technology is really incredible. The whole thing was under computer control. The program was set up ahead of time in the computer control section. There was a dynamic change within the sound as each note was played, but also the piece was set up painstakingly ahead of time and executed with one command, so it wasn't really played; and it was actually an execution of a computer program pre-ahead of time. I'm very impressed with the machine and all the possibilities that it opens up. That's just a simple exercise in what can and will be done in the future, and it's just mind boggling.

**M.I.** Have you tried any other instruments with frequency modulation synthesis?

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**M.I.** Could you elaborate a bit about the way you have your computer interfaced with your Moog equipment?

**Fast:** Well, the basic interface, obviously, is a

digital to analog converter that I built up. The first one that I put together was a few years ago, and I keep revising it, so I'm on my third one right now, which is a very precisely made unit that is trimmable down to a few hundredths of a percent for note accuracy. That gives me at least single-voice capability right out of the Apple, and I've adapted that digital-to-analog converter to work in conjunction with some of the voice assignment multiplexing system that PAIA Electronics has come up with for their smaller synthesizer systems. It's a fairly universal circuit that they've got, so I've customized on that, and that enables multi-voiced production through the use of the Apple.

PAIA has got some good little computer peripherals and a little computer system of their own which works on the same processor as the Apple, so the whole system integrates fairly nicely on a digital level. Most of making the thing work is a matter of creating the software, because the electronics are fairly straight ahead. Once the digital-to-analog converter is there then numbers become voltages, and using PAIA's little multiplexing system enables that one digital-to-analog converter to be time-shared across a couple of different channels and therefore, in effect, produce a handful of different control voltages happening so quickly that the synthesizer isn't aware that it isn't getting a voltage constantly.

**M.I.** This is an eight-bit system that we're talking about, right?

**Fast:** Yeah, it's an eight-bit microprocessor system. It's not fast enough or effective enough for pure digital synthesis—the actual creation of sounds digitally—it would get too hung up in its own housekeeping. It's just too slow to do a real effective digital synthesis. It can do it, but it's more on an experimental level. It is very good at controlling analog synthesizers.

**M.I.** So you don't have it set up to do automatic patching or anything like that?

**Fast:** No, not really. In order to get into that would require building a whole lot of other forms of external equipment onto the existing modular equipment, and you get into something that when you're finally done is like a very kludgy version of what Sequential Circuits has already built into the Prophet or Oberheim's built into the OBX. They started with that concept in mind, and they've made the appropriate break points in the electronics to do that. You have to go in and really do a number on an existing synthesizer in order to make it come up to that kind of patchability. What I'm more interested in with my digital control of the synthesizers started out with trying to design my own personalized ultimate sequencer a few years ago, and it has evolved to the point where it is something like a word processing system would be in an automated office or a newspaper composing room—except rather than the digital blocks representing groups of words or sentences, here they're musical phrases.

**M.I.** So you'll play something into it on the keyboard and then go back through it and edit it?

**Fast:** Right, that kind of thing; close up spaces, delete parts. It's still a little awkward, and it's got a lot of my own personality involved in it. It's probably not really useable by somebody else at this point if they don't know the system real well, but it does help me quite a bit. It saves me a lot of writing things down on little pieces of paper.

**M.I.** You also have the computer wired into the Prophet, right?



# Larry Fast

**Fast:** Yeah, that's not working real well yet, but it's coming along. One of the things that has been done is I've added two sets of interfaces to the Prophet. One is just a couple of control voltage taps for the five voices, hitting them at some logical points: control voltage to the oscillator; the gates to the envelopes; the filter. There's just a handful of points going in there that can be used with the voice multiplexed time sharing just as though it were a rather compact but still modular voltage controlled synthesizer. The other taps that I brought out are the ones that I think are going to be more exciting and more usable in the future, and they're the data and address lines off the processor that's controlling the Prophet. What I haven't had time to do, and I need to do, is go in there and get a good understanding of the firmware that's controlling the Prophet internally right now. Then I'll be able to make use of that; break into its control, and then let the Apple take over quite a bit of what's going on—because once you're on the data buss then the programs are available to you, stored, and that means that I can keep quite a bit more in the way of the automated patching under control of the disc controller or whatever, and also, that data buss is the same one that's controlling whatever notes are going out. It would enable the Apple to get into much more dynamic control over what the actual patch is, related to the musical thing, so that it wouldn't just be the 40 of them that are stored in there. As the note goes down the patch could be changing dynamically during it.

**M.I.** Sort of like some of the sounds that you were getting out of the digital synthesizer?

**Fast:** Right, so it's kind of a hybrid way of doing some of the things that are only possible right now under complete digital synthesis. It will allow for a more personalized stepping point between analog and digital, but without getting into the extremely high cost of really versatile digital synthesis.

**M.I.** Sounds like quite a bit of modifying to the Prophet.

**Fast:** Well, it's not really a whole lot, because you're really only talking about sixteen address lines, and eight data lines, and a couple of strobe points, so it's really only about thirty connections on the Apple and the Prophet. The real work comes in the software development, and getting a good understanding of what Dave Smith has designed into his program in the Prophet. It's not the kind of thing that every musician is going to go and do, but I've got my Z-80 [Zilog 80 microprocessor] manuals, and it's not that difficult. It makes a nice project to be playing with on airplane flights. I like to think of it as about as challenging as a crossword puzzle except that you've got something to show for it when you're done.

**M.I.** I noticed on your albums that there was a lot of attention paid to spacial positioning.

**Fast:** Yeah, there has to be in an all electronic recording, because there is virtually nothing happening with ambience. There's not even the little bit of room sound that you get when you mike a conventional instrument, so you get something that's so dry that it's almost painful. That can be used to advantage sometimes, too, just because it's drier than you could possibly get out of any other instrument, but when you do want ambience it has to be put in there so-called "artificially." It's a whole field of programming that I don't think is recorded properly in most elec-

tronic music, but that ambience creation that you do get with different types of delay lines and a certain amount of introduction of random phase error are the kind of things that create psycho-acoustic properties.

**M.I.** Could you tell us specifically what equipment you use to get that ambience?

**Fast:** Well, I've got two areas where I work. One is an 8-track studio at home which is MCI-equipped, but limited. It's a good place to work things out and get them arranged. All I have there is a DeltaLab DL-2 and an Eventide Harmonizer. The two of them together are a very flexible pair for the creation of a number of different ambience controls. The other thing is that the DL-2 has a continuously variable phase interference control which gives you stereo imaging with phase content. And rather than it being in-phase or out-of-phase there's a variable sweep on it, and I think that's very important. Phase combined with time combined with pitch change gives you very good localization, because there's a lot more to localization of a source than just level being louder on one side or the other. All these elements are combined to create location cues, so it's a pretty versatile little package. Then when I'm done with my 8-track stage of getting the album done, I use a whole arsenal of things—everything from conventional EMT plate echos and AKG chambers to live chambers and EMT and Lexicon digital chambers.

**M.I.** What sort of equipment do you use live?

**Fast:** It was a very similar lineup as what I use in the studio. The smaller, less rugged pieces weren't taken on the road, but I had the Polymoog, the Prophet, and a collection of modular equipment, and again the old harmonizer-delay line combination.

**M.I.** I was curious as to whether you would take your modular equipment on the road.

**Fast:** Oh yeah. It sounds great, so why not?

**M.I.** In the event that the Games album really breaks for you in a big way, do you plan to pull a band together and go on tour?

**Fast:** No, not really. I've never really envisioned myself as a touring rock act or anything like that. I do a lot more work in studio production and in computer work and electronic music as more of a studio oriented thing. I'm not really using the album hoping that it breaks so that I can become a pop star. I'm really not the entertainer type, so I think that the chances of that happening are pretty remote.

**M.I.** Where do you think electronic music is going to go from here?

**Fast:** I think as far as the technology is concerned we're so close to the beginning, and we've got so far to go. The digital synthesis area is real exciting for me, so I think we'll see a continuing growth in that. Of course, with the high speed 16-bit and 32-bit microprocessors becoming more available at the beginning of the next decade, the digital machines will become very inexpensive, and they will be much more versatile and more powerful machines. In terms of the artistic end of electronic music, that's anybody's guess.

**M.I.** I know I always thought that electronic music would catch on much more than it has.

**Fast:** No, I think the compositionally-based stuff is far too demanding on the listener, and people aren't in the mood for that these days. It carved out an area of people that were interested in it, and they still do follow it very closely, and it grows slowly, but it's not an overnight popular thing. **M.I.**

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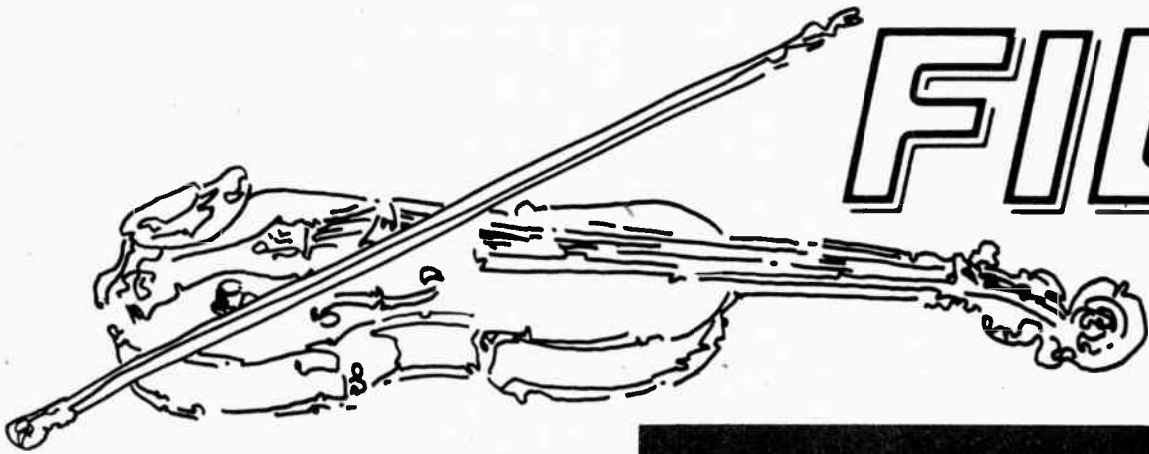


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# FUTURISTIC FIDDLE



# G

by Dan Forte

Get into a conversation on the subject of jazz violin and only a few names come to mind—Joe Venuti, Stuff Smith, Ray Nance, Stephane Grappelli—and then the list thins out awfully fast. Change the subject to *electric* violin and a single artist comes immediately to mind—Jean-Luc Ponty.

In the mid-Sixties, when Ponty hit the European jazz scene, the violin was, for all intents and purposes, still locked in the Thirties or Forties. Ponty almost singlehandedly took the instrument out of the swing era and brought it to the Seventies—and to the masses. Ponty's name has been coupled with that of Jimi Hendrix on many occasions. And while comparisons with Jimi Hendrix seem almost sacrilegious, regardless of who's being discussed, the similarities are too strong to be denied. Like Hendrix, Ponty is a master of electronic wizardry. And like Jimi, he has coupled that electronic expertise with virtuosic technique to virtually redefine the instrument he plays.

MARK MANDER



The mastery Jean-Luc has achieved is best explained by his formative background. Ponty was born in Normandy, France 37 years ago. His father, a violin teacher, began showing Jean-Luc the fundamentals of the instrument when Ponty was only five years old. At fifteen, Jean-Luc entered the National Conservatory of Music in Paris. After two years with the Concerts Lamoureux, Ponty quit to pursue a career in jazz.

After gaining popularity and notoreity in Europe, Ponty came to the U.S., and was soon hired by Frank Zappa, as a member of the Mothers of Invention, appearing on *Hot Rats* and *Overnight Sensation*.

Following a tour with John McLaughlin's Mahavishnu Orchestra, where he was featured soloist, Ponty began a solo career and an

association with Atlantic Records that has yielded seven albums—*Upon The Wings Of Music*, *Enigmatic Ocean*, *Imaginary Voyage*, *Aurora*, *Cosmic Messenger*, *Jean-Luc Ponty: Live*, and the newly released *A Taste For Passion*. In addition, he has appeared on sessions with Elton John, recorded an LP with fellow countryman/jazzman Stephane Grappelli, and played in tandem with Cajun fiddler Doug Kershaw and classical master Itzak Perlman, on a PBS TV special entitled "Fiddlers Three."

Jean-Luc currently leads one of the most dynamic bands in jazz/rock, with Allan Zavod, keyboards; Joaquin Lievano and Jamie Glaser, guitars; Ralphe Armstrong, bass; and Casey Scheuerell, drums.

Ponty is not only an innovator on his chosen instrument and a pioneer in the field of elec-

tronics, he is a prolific and inventive composer, not to mention a major concert attraction all across the country and in Europe.

**M.I.:** Your father was your first violin teacher?

**Ponty:** Yes, he was the director of a music school in a small town in France, and he was the violin teacher. He was teaching every instrument—clarinet, sax, trumpet—and my mother taught piano. But his main instrument was violin, so he taught me. He put the violin in my hands and just showed me how to hold it when I was three years old and started me on scales and exercises at five—which I'm not sure was the best idea, because you can start wrong that way.

**M.I.:** Were you a quick learner?

**Ponty:** Yeah, I think so, because by nine or ten years old I was playing Mozart in public—again, in that small town. I was a prodigy there. I was the best there, and later on I was one of the two



or three best in the whole West of France. When I went to Paris it was another story. I discovered there were 50 or 100 violinists from all over France who were more experienced than I was. Even then I advanced faster than them and passed them.

**M.I.:** Was it hard in the beginning to discipline yourself to practice the things your father showed you?

**Ponty:** I don't remember very well. I'm sure that they had to push me to practice several times, rather than riding my bike or playing football. But most of the time, no, I really enjoyed it—because there was so much music happening around me. My father was giving lessons every day; when I'd come home from school I was hearing violins on the second floor and piano lessons on the first floor, and it lasted until late at night. And sometimes there were even chamber music rehearsals at home. So I had so much music around me that it was very stimulating. I convinced them to let me quit school and really get into violin when I was 14 years old, to prepare to go the conservatory. They were not enthusiastic about it at first; they were worried about my future, knowing how insecure the future of a musician can be. They would have rather seen me take another path, becoming a teacher or something. I had a very strong motivation and I really wanted to do it. So they finally agreed to let me quit school when I was 14 years old.

My father sent me to a better teacher than he knew he was, because he knew that if I really wanted to become involved very seriously a father is not the best teacher. So he sent me to a bigger city with a better teacher, and this teacher was the director of a conservatory there. His name was Capoulade, an excellent violinist. He was my first master, really. And then I had to practice between five and six hours a day. That was difficult at times, psychologically. Suddenly I was not going to school with my friends as usual; I started being cut apart from all the kids of my age. I was just alone at home left in a room practicing five to six hours, and twice a week I'd take the train to go to that big city for my private lessons. I did that for one year. Then the next year my father decided that I had to go to Paris which was the highest education in music. It was very hard for me, because I had become very attached to that first master. But my father was right; I had to move on to more stimulation and competition. Because, as I explained before, when I was in the big city we were only two or three, who were really excellent. And then he sent me to Paris, and suddenly I wasn't the leader of dozens of other young violinists. When I arrived in Paris, I was 15 years old. There were six teachers in the conservatory and everyone has his own schooling, everyone has his own style, so you really try to pick the one you really want to study with and then you have to wait till there is room in that class. Then you have to pass a competition to enter the conservatory, with a jury—closed, not public—and it's very difficult. So you already have

to be a professional classical violinist to enter the school. When I came at 15 years old, the teacher said it would be three years until I would be at the level to enter the conservatory. And he couldn't believe that, in fact, in one year I worked so much that I was ready.

**M.I.:** What sort of things did you practice for that year?

**Ponty:** I would practice three to four hours pure technique and only one or two hours of music. Like Sevcik—you know, it's like a bible of scales and all kind of finger movements and bowing technique. It's very complete.

**M.I.:** Did you have any favorite composers when you were playing classical violin?

**Ponty:** Yeah, when I was a kid I loved Bach. I loved to play Bach and Mozart on violin. Outside of that, Chopin was the first music that really had an impact on me, because my mother was practicing piano and playing Chopin. That moved me a lot musically, but I didn't play Chopin on the piano yet, because when I decided to become a professional musician and I quit school at 13 years old, I chose my violin to become my main instrument. Piano remained in the background and I didn't study anymore, really.

**M.I.:** So when you quit school your ambition then was to be a classical concert violinist?

**Ponty:** I didn't really know. I thought maybe I'd like to conduct. I wanted to become a conductor. That's why I was also learning other instruments as well. Then I started studying harmony.

**M.I.:** Did you have any favorite classical violinists?

**Ponty:** Well, yes, I did at the time. David Oistrakh was one of the top two or three violinists in the world. He died a couple of years ago, I believe. Oistrakh was living in Russia and created a whole school of violin playing there. Also Isaac Stern, American violinist. And for sheer vir-

tuosity Heifetz. And Frances Catpi, Italian-French. Nowadays, still I love the same people, Nilstein. Leoniv Kogan is a Russian still alive who's amazing. And now I would add Itzak Perlman. Unbelievable. He's maybe my favorite classical violinist nowadays. Really good, beautiful.

**M.I.:** When you started to get more involved in jazz, did your classical training inhibit your ability to improvise?

**Ponty:** Yes. First when I started improvising I wanted to forget all my training that I had learned, and so it sounded like I had no technique. I don't practice as much anymore, and I don't even want to. I mean, I was really a classical violinist. So I was playing very fast, too often, and it sounded like Bach and a bit stiff—not enough of rhythm feeling. In order to swing, I had to really forget my training. This was once I graduated from the school and left, and I didn't care anymore about it.

**M.I.:** How did you train your ears to play jazz?

**Ponty:** Playing with the albums and jamming with bands, I got my phrasing within about a year. I did my first solo album when I was 21 years old. I was playing jazz for two or three years. When I listen to it now, it's really bebop phrasing—better than I can do it today.

**M.I.:** In switching from classical to jazz, has your technique suffered much? Or could you go back and play classical?

**Ponty:** No, I probably couldn't. See, the very first times I started playing jazz on violin, I was hearing things which I couldn't really synchronize technically on my violin. So it sounded like I didn't have much technique. But after a while I found a way to use things I had learned, mostly for the left hand, and relearn my bowing totally. But once I could assimilate my technique to a new way of playing, to a new phrasing, once I was able to use my technique and my training,

Cont'd on next page



Ponty (left) with John McLaughlin





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then I was able to play bebop.

**M.I.:** So your technique didn't really suffer in the long run?

**Ponty:** No, what happens now is I developed a technique to play with my music. And I can still play classical music but I wouldn't. When I moved to Los Angeles five or six years ago I met Daniel Heifetz; and he's a young concert soloist [not related to Jascha Heifetz]. He's very talented. Every Saturday night he has a small chamber music session, and I went there once and he asked me to join him. I played a Brahms quintet, and he said I was doing real good. But, for me, it was an extreme effort to concentrate on the style and I don't enjoy it anymore. I still love classical music and enjoy listening to it, but for ten or fourteen years I have trained myself to develop a new technique for a new style, for what I'm doing. And it's contradicting in many points. I don't want to go back to classical music; on the contrary, I want to develop more of my own technique.

**M.I.:** Where do the techniques contradict each other most?

**Ponty:** Mostly in the phrasing, in the bowing—more than the left hand. The left hand is your fingers; and you have to move them on the violin to play the notes. Except for slides and blue notes, you know, all the funky rock and roll effects maybe like shaking my arm and stuff like that, which, of course, don't exist in classical music. But if I want to play a fast run or just play the pretty lines from writing, I just have to use my classical technique. This is the same. But the right hand, the bowing, that's where the whole phrasing comes in. Rhythm, inflections, accents, or the mood, but mostly the rhythm feel. No doubt about it, it's in the bowing. And, fortunately, my bowing was the strongest. All my teachers I had when I was growing up in classical music were praising my gift for bowing technique. I was learning bowing techniques twice as fast as left hand. So that helped me a lot, when I had to learn the jazz phrasing.

**M.I.:** How did you come to make the decision while you were still in the conservatory to break away from classical and pursue jazz?

**Ponty:** Well, it happened by accident. While I

was studying in Paris, friends of mine were jazz fans, and they took me to clubs and introduced me to records. That's how I developed a taste for jazz. Also I was playing clarinet as a third instrument, and an amateur school band in Paris was looking for a clarinet player for the jazz band, so I went there and these guys taught me the first notions of jazz. At first it was a hobby. Then when it became more serious I switched to the violin, because that was my instrument; I had so much more technical ability to play. It was a slow transition; it didn't happen over night.

**M.I.:** How long before you heard some other jazz violinists?

**Ponty:** Very quick. I had seen Stephane Grappelli on TV and was aware of him in France, because he was already famous before I became involved in jazz. But after I switched to jazz violin I went out into a store and tried to buy as many albums of violinists as I could. All I could find was a lot of Grappelli and Stuff Smith, so they were the two I listened to at first.

**M.I.:** Did you have an ambition at that time to become another mainstream jazz violinist like them, or were you always trying to pioneer your own style? Did you play jazz standards?

**Ponty:** Yeah, I was playing jazz standards. But, right away I was hearing a more contemporary style that I wanted to achieve, like a normal evolution and progression from their styles.

**M.I.:** Did you listen to other instruments too, like saxophone?

**Ponty:** Yes, that's why. Having Grappelli and Stuff Smith was an incredible stimulation. But by choice and taste I was attracted to the more contemporary style of jazz. They were playing, and Grappelli's still playing, a swing style. And I was listening to Miles Davis already—I'm talking about the early Sixties. The music had evolved much more, and so that's what I wanted to bring to the violin.

**M.I.:** Sometimes you get a sound and a temperament real close to a tenor sax. Is that a conscious thing you tried to do, or is that just the way it comes out?

**Ponty:** It's the way it comes out. Now I'm really thinking violin. I mean, I am thinking me. At first I was listening to horn players. But when I hear my sound I never think of a horn anymore. The

only thing that might do that is because an electric violin sounds fatter than a traditional violin, especially in the low register, and therefore it can make you think of a sax.

**M.I.:** When did you first start electrifying violin?

**Ponty:** Right away, because I went a few times to jam in clubs in front of the mike of the PA, and I was getting so stiff trying to play as loud as the drummer that I went right away to buy an amp. My first amp was 40 watts. I still have it at home; I didn't want to throw it away. It looked like an old radio from the Forties, and I was carrying it by hand when I went to the clubs.

**M.I.:** What kind of pickup was on the violin?

**Ponty:** A DeArmond.

**M.I.:** In the bridge?

**Ponty:** No, on the table. You put that on the table of the violin, anywhere you want to place it—the closer to the bridge, the more edge you would get; the further away, the more bass. But it was very boomy on the low strings, and it didn't pick up very well. The highest notes were disappearing. You know, I feel better about using my electric violins than I did putting a pickup on a good old traditional violin which was not meant to be played that way. So in 1969 I met John Berry; he came to meet me in a club in Los Angeles, a rock club called the Experience where I was playing, and he gave me the bridge that they make for violin. He gave me an electric violin, too, and it was a relief because it was the best system I'd ever had. I was using the DeArmond until then. Barcus-Berry's instruments have improved since 1969, and in my own opinion they're still the best available today. And it was good for me, because I finally had a real electric violin which was conceived by somebody who knows violin—he's a violinist himself—and it's meant to be plugged into an amplifier.

**M.I.:** All your violins that you use onstage are Barcus-Berry?

**Ponty:** Yes. Also the quality of the amplifiers and electronic devices has improved a lot since the late Sixties. And all this opened my mind to approach a violin as a real electric instrument, with its own identity, as opposed to the traditional violin. And I started to separate the two very much—approaching the electric violin like a new sound, a new instrument, a new approach.

**M.I.:** Your 5-string is like a viola and a violin all in one?

**Ponty:** Right. It has a low C string, a fifth below. Originally, I didn't think of using a 5-string much, because I had what Barcus-Berry calls a "baritone violectra," which is a 4-string tuned one octave deeper than the regular violin. It's tuned the same—E, A, D, G [high to low]—but one octave lower. So the range is very deep, between a viola and a cello.

**M.I.:** Do you have the violectra onstage with you?

**Ponty:** Yes, it's the black one. But a 5-string is very handy to have, too, because sometimes I want to go only a few notes, and just to have that makes a lot of difference.

**M.I.:** So onstage you have a 5-string, a violectra, a regular 4-string, and one more, right?

**Ponty:** There's also a 5-string traditional finish, and I use it for a more acoustic sound. You know, they put on that heavy coat of paint on purpose, to eliminate feedback—and it really does. But, also it's a different sound, it's more electric. But that's good; it's different—and the signal output is stronger to trigger electronic devices than the traditional finish.

**M.I.:** What kinds of effects devices do you use?

**Ponty:** I'm using devices which are all put

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together in a rack for me by my main electrician who follows me on the road, Allan Gelbard, and he's very talented in electronics, although he's self-trained. He also plays keyboards and guitar. He built my rack that I have onstage, where I have all my devices. I have two MXR Digital Delays, which are studio units, which are echo as well as dubbing and sequencer flanging. And so I have two of these. I have two different kinds of phase-shifters, MXR and bi-phase Mu-tron. I'm also using the Barcus-Berry pre-amps. Each violin is plugged into a pre-amp, which improves the sensitivity of the output, and there's an EQ too. Then I use a mixer, a Yamaha stereo mixer. Then to trigger all this I have a pedal-board, again put together by my man, Allan Gelbard, where I have my on and off switches as well as a volume/wah-wah pedal by Morley.

**M.I.:** *The album you did with Stephane Grappelli was surprising, because you wrote all of the material, and it wasn't the swing type of stuff Grappelli normally plays. Were you surprised that he handled it so well?*

**Ponty:** I thought he could handle it. I was approached by the director of the label [Inner City] to do this album with Grappelli and it was a series where they had him record with other artists. We had played together before, on TV and stuff, and every time I was doing the compromise to go with his style. I didn't want to record an album with him until I would come up with some original material, and have him make something different. And at first he was a bit confused; he had never heard about meters like 5/4 and 7/4. I told him when we started the recording, I said, "Stephane, if you don't feel it's comfortable, we can change it and play standard stuff." And he refused. He said, no, no, no. He wanted to go all the way. And I'm not sure he understood yet really what happened, but he did great.

**M.I.:** *Do you use any special type of bow?*

**Ponty:** I'm not very familiar with modern bows, although I'm going to experiment with that. But otherwise bows are a bit like classical violins, you know; the best are made by masters who aren't alive anymore. Like violins, they are kind of antiques, and they can run very expensive. So I have a collection of a few French and German bows, and they are excellent.

**M.I.:** *Do you both record with them and travel on the road with them?*

**Ponty:** I use the totality of the exact same equipment live as on the album.

**M.I.:** *Even all the amplification?*

**Ponty:** Yes. Oh yes, exactly, everything. But for a while I have been using the viola bow.

**M.I.:** *Why is that?*

**Ponty:** Sugarcane Harris was doing that to play with an electric band, because of the volume. So when I played with Zappa I thought of doing that; and even before, in France, in fact. We played together, with Sugarcane Harris at the Berlin Festival in 1970. That's where we talked a lot, we were exchanging ideas. I tried that, because of the volume I needed to play at. Recently I've switched back to normal bows, because I want to bring down the volume of my band onstage. We have a lot more dynamics. The lows need to play back with a lot more finesse.

**M.I.:** *Do you experiment also with the strings on the violin?*

**Ponty:** Yeah, but basically there is not a big choice. I use metal strings on all the electric violins, by Thomastik. They are probably the top

quality metal strings in the world. They are very expensive. I still use the Pirastro, for the acoustic. They are gut, but they're wrapped aluminum or steel. It has the warmth of the gut string somehow but is more durable. The problem with the gut string is it's extremely sensitive to temperature changes, and it gets wet very quickly, if you perspire, for instance. And they break very easily. Nobody really uses pure gut strings.

**M.I.:** *Did you have any particular rock favorites or influences?*

**Ponty:** No, except for Hendrix and the Beatles, but I wasn't influenced by either of them.

**M.I.:** *Why did you move to the States?*

**Ponty:** The reason I came to the States was the musical environment. I went for an exchange of musical idioms between rock and jazz, and I thought it was in the States that I could find the most fertile musical environment for that, because it was really developing here more than anywhere else.

**M.I.:** *How were you influenced by your stints with Frank Zappa and John McLaughlin?*

**Ponty:** With Zappa, I didn't have enough affinity and I didn't stay long enough to really be influenced. The thing is, I could realize the way he was composing, but I already had so many other sources of learning before that. When you live together as musicians you play together almost every night. Without knowing it you exchange, you take little things from musicians around you, and it works both ways. I could hear a change in my playing and in McLaughlin's playing after we played together for six months, but without changing each other's personality at all. You know, it's like in a marriage; when you live with somebody for years, you might borrow a few expressions, but inside you still have your own personality. I was already too strong myself as a personality and a grown man to be influenced. I was very influenceable in my late teens and my early twenties, but by the time I played with other people who could have influenced me because they were strong musicians, like Zappa or McLaughlin, I was already matured and formed as a musician, too much so to be influenced to a point where I would drastically change my style.

**M.I.:** *When you're composing, do you have any particular regimen or method? Do you work with chord changes or a melody line or anything in particular?*

**Ponty:** No, I don't have any method at all. I just take it as it comes. I wait for inspiration to come. When it doesn't come, I wait. That's why there is a bit of an irregular timing for my albums.

**M.I.:** *And you're only recording your own compositions?*

**Ponty:** Yes, so far. I might look for a change; I might need stimulation from outside writing. But for the past four or five years I had too many things in mind to achieve, to write. The reason I don't chose a technical way of writing is I don't care for proving anything with my writing; except, to me, it's a vehicle to carry out my emotion. The music is really a means of transferring my emotions to people and that's why I take this way. Sometimes I even look for simplicity.

**M.I.:** *When you're soloing, do you think of the melody or the chord changes themselves or do you work through certain modes?*

**Ponty:** I don't know; I don't analyze my solos. I just play, just by feeling. No, I never improvise thinking of the relation to a chord change, for instance, I never thought that. I did for a while when I was in pure jazz, you know. But I rather

reject that technical aspect of playing.

**M.I.:** *Do you find that you work out of any particular fingering positions?*

**Ponty:** No, they just come out that way—I really don't think of fingering while improvising. I have achieved enough experience where my techniques follow my ideas. That took a while, but like when I started improvising in the beginning I was using only the first position or third, very, very easy positions, and I didn't take any risks. But with the years I got used to taking more risks and going all over the violin. The only thing that I have to work out is the part. Sometimes, since I don't write on the violin—maybe if I wanted to write a fast line for me to play with a synthesizer, I might use a violin, but it's a rarity. So, many times I come up with a fast run which just came off my head, and then it's hell for me and the guitar player, so we have to work like hell on that; we have to figure out what kind of fingering to use. I have to practice and work on it, like when I used to work a concerto in the past and try to figure out what was the best bowing and fingering. But when it comes to improvisation and the solos, no, I don't work anything out in advance.

**M.I.:** *Do you have any practicing schedules on your own just with the violin?*

**Ponty:** No, it's very bohemian now. As for me on the violin, it's pretty erratic. There are times when I would work every day for at least an hour, and on the road in the band sometimes I don't practice, but I play every night. I guess most important of all is that I have practiced many, many hours when I was young, and I recover my chops very quickly thanks to that. I have new ideas, a concept of playing, of improvising, that I want to come up with and I need to practice to do that. You know, a lot of times in my career, everytime I wanted to go a step beyond, it was by practicing my instrument that I was able to achieve that.

**M.I.:** *What do you feel is the most distinctive element in your style of playing?*

**Ponty:** [Pause] It's hard for me to answer that [laughs]. I don't even know. I don't spend my time analyzing what I am doing; I just do it.

**M.I.:** *But when you say you're attempting to go another step beyond and you've done that in the past several times, are you making steps that other people haven't made?*

**Ponty:** Oh yeah, sure. Because I hear a way of playing, and I don't hear anybody else doing it. My style is a blend of my classical training with the jazz phrasing, which I had incorporated, more rhythmic phrasing, with some blues influence—and also the fact that I've worked so much with an electric sound. I realized that I had come up with a sound which makes the electric violin an instrument apart from the traditional violin or even country fiddle. The electric violin has not been used in any style of music before. It makes me think a bit of Eric Clapton with the electric guitar, you know. Suddenly there is a new sound, you know; it's a new sound that you have never heard before, and therefore it's extremely fresh. **M.I.**





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## (THE INSIDE STORY)

### TUBES ROLL 'n ROCK

It started soon after TV, and just before "dual headlights". Musicians discovered something new with a sound all its own — *Rock'n Roll*. Just who, when, and where, no one seems to agree. But we do agree on the "how". At a minimum it took drums, a bass, and, of course, the electric guitar and amp . . . a tube amp. Almost twenty-five years later it still takes those same basics to Rock'n Roll. The music has evolved, but the "sound" is much the same . . . and players still love tube amps. Despite millions spent to "convert" them to transistors, the overwhelming choice of musicians is tubes. Why? If you listen, you'll *hear* the difference. If you play, then you can *feel* it. Tubes have the "sound" and the "touch". Many transistor amp companies have given up and now offer tube amps (or soon will). So it would seem that the tube amps' future is at last secure. **Wrong, it's looking worse than ever, and here's why.** Tube amps need tubes. The "tube sound" comes from tubes, not a Brand Name, and that's the big problem. Tube quality is at an all time low, and the reason is obvious. The few remaining tube makers today sell a lot more transistors and simply don't care about tubes. As a result, less and less is spent each year on re-tooling. Without tight tooling, consistency is impossible. Sound hopeless? It was. Now there's a company in California who does care, and they've got the problem solved.

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# RODDING

Musicians often complain about the quality of instruments not being as good as they once were. The reasoning for this is that more personal attention was given to each instrument back in the days of small scale production. The mass manufacturing of modern instruments has necessitated a drop in quality control, according to some people. This has created a market for older "vintage" instruments selling for three or four times their original price.

There is a way to get around paying these kinds of prices,

though, and come out with a superior instrument in the process. It involves buying a stock instrument and taking it to a person who specializes in custom modifications, or hotrodding. This approach restores the personal attention that was characteristic of the earlier instruments, and in many cases produces an instrument far superior to any similar vintage axe.

We've contacted a few of these "little guys" across the country and asked them to give you an idea about how they got involved in the art of hotrodding.

## GUITARS

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While I was playing in clubs in Reno, Nevada I began to wonder if there was a way to improve on the design of the vibrato tailpiece on my Fender Stratocaster. There were a number of problems with the stock design: the bar itself just isn't hefty enough. They often break off right at the bridge leaving a piece that is very difficult (sometimes impossible) to remove. This led to stainless steel replacements, but they also break off. The pressure on the bar also quite often will strip the threads that hold it in the bridge. The bridge itself is made up of six separate saddles that rest on a plate; a design that is inefficient in transferring the vibrations to the body. But the biggest problem is the fact that the tailpiece will throw the guitar out of tune when it is used.

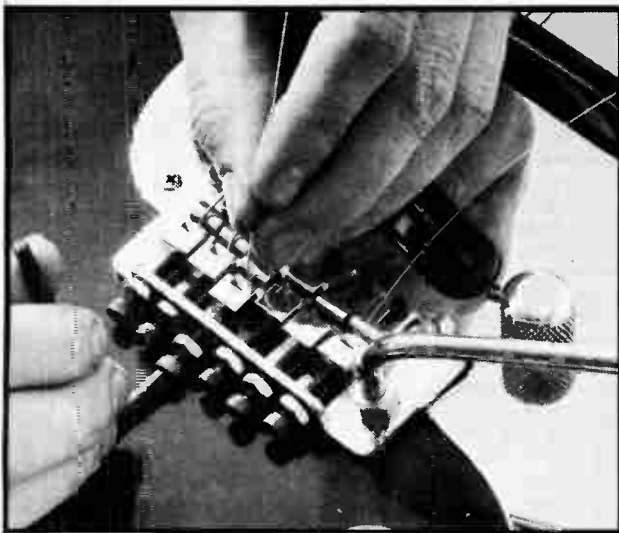
Once I sat down to see what could be done it became obvious that if I could just hold the strings down so that they couldn't slide at the nut it would solve the problem. I had been making jewelry, and had some lapidary equipment, so I whittled a crude nut out of brass. It was big and awkward, but it worked well enough to tell that I was on the right track. After further experimentation I realized that it had to be a combination of both the nut and the bridge in order to make it work. This is what I eventually had patented—the concept of locking the strings down at both the nut and the bridge to prevent slipping. I was warned against patenting any specific shape or design that could be slightly modified and manufactured by another company.

I've always done all my own work on my guitars, but I've never actually worked as a guitar repairman. The only reason I got into making

these was because I got tired of paying machine shops to do it and never get it right. The first set I made out of steel I had done at a machine shop and it cost me four hundred dollars, and that design was very simple compared to what I'm making now. I make everything out of hardened steel except the bar itself. It's made out of stainless steel so that it can be polished and won't tarnish. It's also made out of quarter inch stock so it can't be broken off. The bigger stock has a better feel as well, and the way that it's attached to the bridge has solved a couple of problems. The bridge plate is not threaded, so the bar spins free with its tension being adjusted by a locknut on the underneath side of the bridge. This allows you to spin the bar around as many times as you want without changing the tension or stripping the threads.

The bridge is made up of six little vices that are locked down with Allen screws. This arrangement is very solid, and much more of the strings' vibration is transferred to the body of the guitar, giving greater sustain. The intonation is adjusted by loosening the Allen screw and moving the vice backwards or forwards by turning the chrome nut on the back of each one. To put new strings on you cut the ball off of the end of the string and tighten it in the vice using the Allen screw that comes out the back. If string companies ever start selling strings without the ball on the end I'm sure it would result in a considerable savings.

The way the bridge pivots on its two supporting screws is a great improvement on the stock design. This setup is designed more like a knife edge balance, which is what Leo Fender originally meant his to work like, but he never followed through with it. With my design you can drop the note down over an octave or you can raise it an interval of a minor third and it always comes



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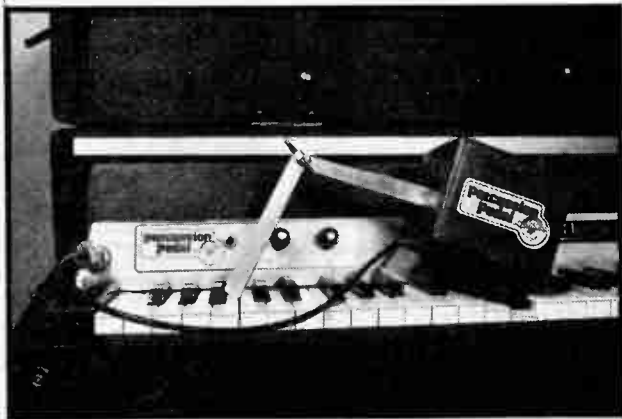
back to the same place when it is released. In fact, it's not unusual for a guitar to stay in tune for days.

Once the guitar is tuned up the strings are locked down at the nut by tightening the three Allen screws. This is actually where the most slipping occurred on the stock design, and it is what causes most tuning difficulties on guitars. Since the string is held at the nut and the bridge it makes it easier to bend strings in the normal fashion as well.

One of my big concerns when I started making these was the cosmetic appearance. When I made the first one it looked really big, and I knew it could look pretty ugly, but eventually it turned out really good looking.

Over the years I've installed the nut and tailpiece on many guitars: Les Pauls, SGs, Strats (of course), and even 335s. All the installations require routing of the guitar and milling the neck where the nut is installed. The turnaround time is two to three weeks for most guitars, and the price is \$350.00 plus shipping.

## KEYBOARDS



**Dyno-My Percussion Pedal**



**Chuck Monte (L) with Tom Coster.**

**Chuck Monte**  
 Dyno-My-Piano  
 2940 Folsom St.,  
 San Francisco, CA 94110

# RODDING

I started my business, called Dyno-My-Piano, five years ago. After extensively researching the inner workings of the Fender Rhodes, I developed techniques to modify the instrument to different clients' particular specifications.

One of the first custom modifications I developed was the "action acceleration design"—adjusting the keyboard action to the wants of the individual keyboardist's technique. This coupled with my "blueprint adjustments" of the Rhodes harp (tone generator and pickup inter-relationship adjustments), gave an even tone quality and volume throughout the keyboard register along with maximum dynamic range capabilities. These adjustments resolved one of the major problems with the Rhodes piano. My research then expanded to the development of the Dyno-My-Piano equalizer. This, an application of massive amounts of boost to certain critically pre-tuned filter bands, led to the development of the Pro Piano design for the Rhodes, which provides variations in timbre and dynamics control.

Next came the Percussion Pedal design for the Rhodes. I found that relocating the harp of the Rhodes (changing the point where the hammers strike the tines), produced a more percussive sound. Then I developed a knee lever control to shift the harp (rather than just relocating it) so that the percussive effect could be variable, repeatable, and controllable. Hence, the keyboard player is no longer limited to the stock "Rhodes sound." The primary uses of the Percussion Pedal are:

*Volume or swell pedal.* This use is achieved by striking and holding of the note or notes and the movement of the pedal resulting in increased volume and delay of decay.

*Variable tonal and percussive sound changes.* These are achieved by the simultaneous movement of the knee pedal and the playing of notes. This will create a shifting of the harp resulting in a variety of percussive and tonal changes. These are dependent on the amount of throw on the pedal and on the settings of the EQ.

*Simultaneous mixing of the original and modified sounds.* This effect can be achieved by striking a note(s) and by moving the knee pedal prior to the decay of those notes; the percussive sound will be superimposed on the original sustained notes.

My new Dyno-My-Piano developments continue to keep the "Rhodes sound" as well as add to it. The Tri-Stereo Tremolo adds a stereo pan to the piano, incorporating two stereo outputs in conjunction with the already existing mono output of the Rhodes. It allows the keyboard player intensity, pulse rate, and pan control, creating the illusion of three keyboards playing simultaneously. Adjustable settings of the three output levels create an added ambience along with the movement of sound. Tri-Stereo Tremolo offers unique versatility in its uses with accessories before and after the stereo outs. Tri-Stereo is designed to be compatible with all existing effects, and it can be inboard (on piano rail) or outboard, installed by Dyno-My-Piano or by anyone, in kit form.

Dyno-My-Piano offers other modifications in the form of kits, such as the Flat-Top Conversion kit and Shielding kit. These enable a keyboard player to inexpensively modify the removable lid (provided with piano) into a shielded, protective, flat-stacking surface for additional keyboards.

Dyno-My-Piano offers personalized service to professional keyboardists. Every "first time" customer is taken through a detailed "tour" of the instrument, demonstrating all of the adjustments to be performed. At the end of this "tour" a price estimate is given to the customer. These costs include the necessary adjustments required by Dyno-My-Piano to insure quality performance and "roadability" of the keyboard. The customer at this time also chooses which action design or modification would best suit his or her particular needs and budget.

## DRUMS



**Weather Report's Peter Erskine with his Elek-Trek/Slingerland kit.**

**Dave Donohoe & Dan Hunt**  
 Elect-Trek  
 2454-G East Fender Ave.,  
 Fullerton, CA 92631

*With all of the progress in recent years in pickups and amplification of guitars and keyboards, drums have pretty much remained the same, and stayed in the background. Although some really advanced miking techniques have been developed for recording drums in the studio, it has been a recurring and inconvenient problem trying to duplicate this setup in live performance situations. The Elek-Trek drum miking system is an unobtrusive, easy-to-use solution to this problem. By mounting the microphones directly onto the drums and cymbal stands, the clumsy mike stands have been eliminated. Also, special microphones have been designed to achieve faithful reproduction of drum sounds.*

Dave Donohoe and Dan Hunt have between them 20 years of experience working for Fender Musical Instruments—Dan in the technical publications department and Dave in R&D (where he designed the Rogers memory lock system). In 1978 the two joined forces to develop the Elek-Trek drum miking system.

Elek-Trek microphones are high-quality condenser types, with a wide frequency response, and are specially designed for drum miking application. Elek-Trek mikes accurately reproduce





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# RODDING

Cont'd from page 30

the entire spectrum of drum sounds, from bass drum to cymbals. Special mike clamp mounts, compatible with all manufacturers' hardware, eliminate the need for costly cluttered mike stands and booms.

The microphone system is designed for on-the-road durability; the high impact housings will withstand repeated shocks without failure. The mixer and expander are steel—not aluminum—and the surface finishes are baked epoxy.

The Elek-Trek system used in conjunction with special electronic effects—such as phase shifters, analog delays, or echo devices—can add a world of new creative possibilities for the performing drummer.

## SYNTHESIZERS



**Ron Rivera (L) and Jim Robinson**

**Rivera Music Services**  
48 Brighton Ave., #11  
Boston, MA 02134

While I was working in a studio in New Orleans I realized that the engineer and the musician were isolated by a lot more than just the control room glass. These two groups of peo-

ple often work on entirely different levels; they have different vocabularies, different ways of viewing the same things, and even different goals for the same projects. It occurred to me then that I needed to function in both disciplines—I wanted to be the interface. But the possibility of doing this in New Orleans was small, so I came to Boston. I started teaching at the Boston School of Electronic Music and composed in the studio there. I attribute a lot of my success to the fact that I'm a musician first and an engineer second. When I worked at ARP my responsibilities included talking to the musicians when they came into the service department to find out what was really wrong with their instruments. In those days musicians who knew much about their synthesizers were rare. I served as a sort of translator and guide.

Just after leaving ARP I started developing modifications for the 2600. I had a 2600 and wanted to do some musical things with it which were beyond its capability. Most of the modifications were developed for my own instrument, and for my own use. People would come by, see the instrument, and want the mods for their own synthesizer. We can do pretty much whatever a client wants. We've been involved in electronic music for a long time, and we know what the various instruments are and are not capable of. We developed modifications for a number of synthesizers that increase these instruments' musical versatility. Of course, sometimes we get requests for exotic modifications—things which we hadn't thought of. We've been successful in achieving many things which at first seemed esoteric or too costly to pursue.

One of our most popular modifications has been the Phase Modulated Sync on an ARP 2600. To describe this modification I'll begin with an explanation of typical sync. As the master waveform begins a new cycle it produces a sync pulse which causes the slave, or synced VCO, to begin a new cycle. The slave is interrupted in its normal oscillation and forced to the same period as the master VCO. Now with Phase Modulated Sync you have the option of setting a phase difference between the two VCOs. You could specify that the master waveform be, for example, half-way through its cycle before producing the sync pulse which resets the slave. If this were the case, then there would be a 180° phase difference between the two VCOs. In addition, we permit this phase angle to be voltage controlled from 0° through 360°. Sounds are available which simulate the attacks of bowed stringed instruments or the vocal quality of the human voice—and generally have an exceptionally rich and varied harmonic content. The Phase Modulated Sync permits voltage control of the spectral balance which can provide a number of interesting sounds. This is only one of many mods that we do; some of these are convenience features, and others are sophisticated additions to existing circuitry.

The modifications to the 2600 include:

1. Voltage control of the internal clock, with

input attenuator.

2. Slow random voltage.

3. Three-position switches for normalled connections on selected inputs.

4. Pulse width modulation on oscillator 1, with input attenuator.

5. External triggering of electronic switch.

6. Voltage controlled comparator.

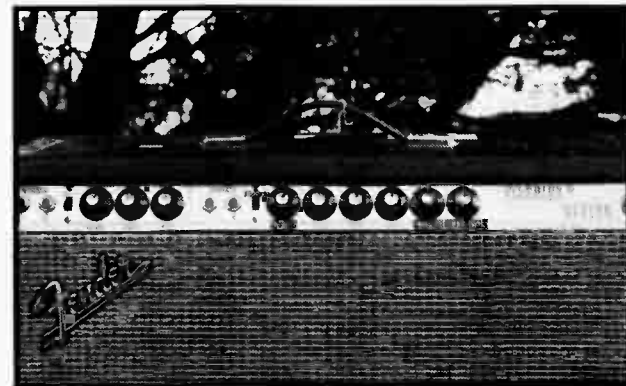
7. Voltage controlled Q on VCF, with input attenuator.

8. Foot pedal signal attenuator with +10 volts normalled to input.

9. Phase Modulated Sync.

There are also a number of standard modifications we do on Mini Moogs including chromatic transpose, multiple keyboard triggering, and sync on oscillators 2 and 3. Again, I would like to say that these are just some examples of what we can do for existing instruments. The scope of our capabilities is limited only by your imagination.

## AMPLIFIERS



**Sal Trentino**

**Sal Trentino**  
Prune Music  
10 Locust Ave.,  
Mill Valley, CA 94941

I began my involvement with tube amplifiers when I was fourteen by building my own hi-fi amp from some schematics of my neighbor's Olympic phono. I continued to work with audio electronics while I was growing up in New York,

Cont'd on page 34



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# RODDING

Cont'd from page 32

and in 1969 I moved to California and began working with individual musicians, modifying guitar amplifiers. By experimenting with various tone colors I developed some custom modifications that greatly improved the sustain and distortion characteristics of tube amplifiers. Working closely with Neil Young and the Jefferson Starship I helped them create instrumental sounds that are unique and individual.

A typical modification would be one where I add a stage of gain [an extra tube] to a stock Fender Twin Reverb. Channel 1 is left as is, for the normal sound, and Channel 2 is overdriven with the extra gain stage, utilizing three volume controls to obtain the desired amount of sustain/overdrive. There is a footswitch included so that either channel can be selected, and the master volume only affects the second channel. With this setup the two channels can be balanced so that the sustain/overdrive becomes independent of volume making for a smooth, popless transition between the two sounds. This is just a general description, and the actual modification is done by working with each individual musician to arrive at the specific tone that is pleasing to him or her. Everyone has their own idea about what the ideal guitar tone is. Some people, like Roy Buchanan, want an extremely bright tone, while others desire a thick, sustaining overdrive, like Alan Holdsworth's. It is very difficult to make a satisfactory modification to someone's amp without working with them personally to find out what sound they want. This is why I take the time to discuss every amp modification with the individual musician. Remember, the amplifier is as much a part of the total sound as the guitar.

Again, this is a description of one possible modification, and, as is the nature of any custom work, anything is possible. Whatever your needs are concerning getting the right sound out of your tube amp, they can be satisfied; it's just a matter of working out exactly what it is that you're looking for.

Typical turnaround time for this type of modification is about one week, and the price is usually around \$250.00.

## EFFECTS

**Hunt Dabney**  
JHD Audio  
1370 Logan Ave, Unit E  
Costa Mesa, CA 92626

I built my first electronic project at age six, and began as a musician at eight. Throughout school I played actively in a number of bands in the Los Angeles area. Concurrently, I developed my skills in electronics, and designed and built most of my own and my friends' equipment.

After winning several awards, including awards from NASA and McDonnell Douglas Astronautics, for projects ranging from medical electronics to state-of-the-art power amplifier design, I founded JHD Audio, in 1973, to further pursue my research and develop products closer to my own interests in musical electronics. Many of the modifications that I performed in those early days have become commonplace in today's music market.

Until quite recently, good high fidelity amplifier design technique took only into account operation in the linear mode. That is, how the amplifier acted before the onset of clipping (distortion) was considered of primary importance. The musician, however, recognized quite early in the game that by operating his amplifier in the nonlinear region he could greatly expand the variety of sounds available to him. Signal processing, or sound effects, evolved out of this need for nonlinear signal conversion and has resulted in such varied effects as phasing, envelope modifiers, fuzztones, ring modulation, and other pitch-shifting devices.

It took little time to see that the characteristic sound of tubes as used in these amplifiers was a more universally musical sound than those produced external to the amp. Thus evolved the master volume control, and thus the Ice Cube was born.

A number of factors affect sound and feel, but they can all be traced back to the importance of some amount of feedback. Long before the instrument will actually freely oscillate or "feed back," a great deal of coupling may exist between the guitar and amp. This is in part responsible for the warmth of tone we get when playing at high volume levels.

The string, when plucked, decays rapidly, and without any regeneration (which simply means adding energy to the string as it vibrates) will sustain rather poorly. By acoustic coupling of the amplifier back to the string, the decay occurs much less quickly, because the amplifier feeds more energy into the string and keeps it vibrating longer. The extreme case of this is when energy is fed to the string faster than it is dissipated and the instrument feeds back.

By simply using a master volume control to limit the loudness, we sacrifice system gain and in so doing lessen the ability to create this sustain.

Loosely translated, this all simply means that most amplifiers need much more gain than they have to play well at low levels, and could probably use more gain for high levels as well.

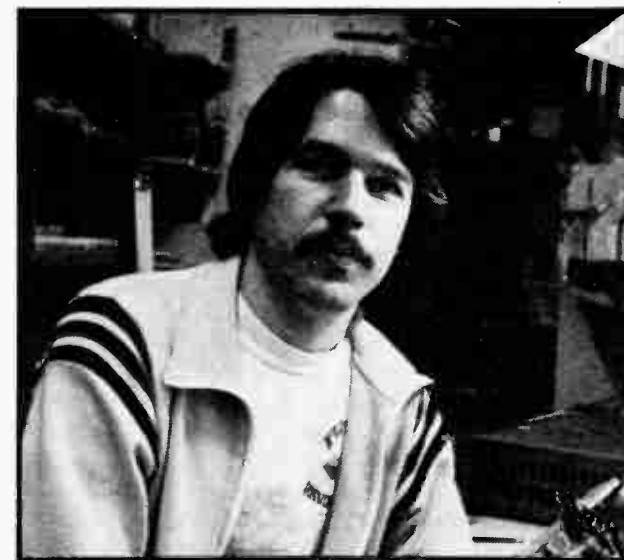
The JHD Ice Cube was developed to solve this problem. The Ice Cube is a simple modification to Fender tube amps with reverb. It adapts the reverb electronics to act as a gain boost preamplifier, which is controlled by the amp's built-in controls. Because it makes use of the existing circuitry, it integrates well into the amp and greatly enhances the warm tonality inherent to the amp. While the reverb control adjusts the amount of boost, the reverb footswitch turns the effect on

or off. When the boost is switched out, the amp works normally, as if the Cube were not there at all.

There is a Super Cube available as well, which allows an even greater variety of available effects. The blend control on the Super Cube allows the user to blend between reverb and boost, for an even wider range of sounds. The footswitch, when used with the Super Cube, turns the boost on or off, leaving the reverb unaffected. A volume pedal may be used in place of the footswitch to create a very musical swell pedal.

The Ice Cube and Super Cube fit all Fender tube amplifiers with reverb built prior to January 1978. For those amps built after that date, identified by the presence of a 'Hum Balance' control to the side of the reverb jacks, there are the Ice Cube II and Super Cube II.

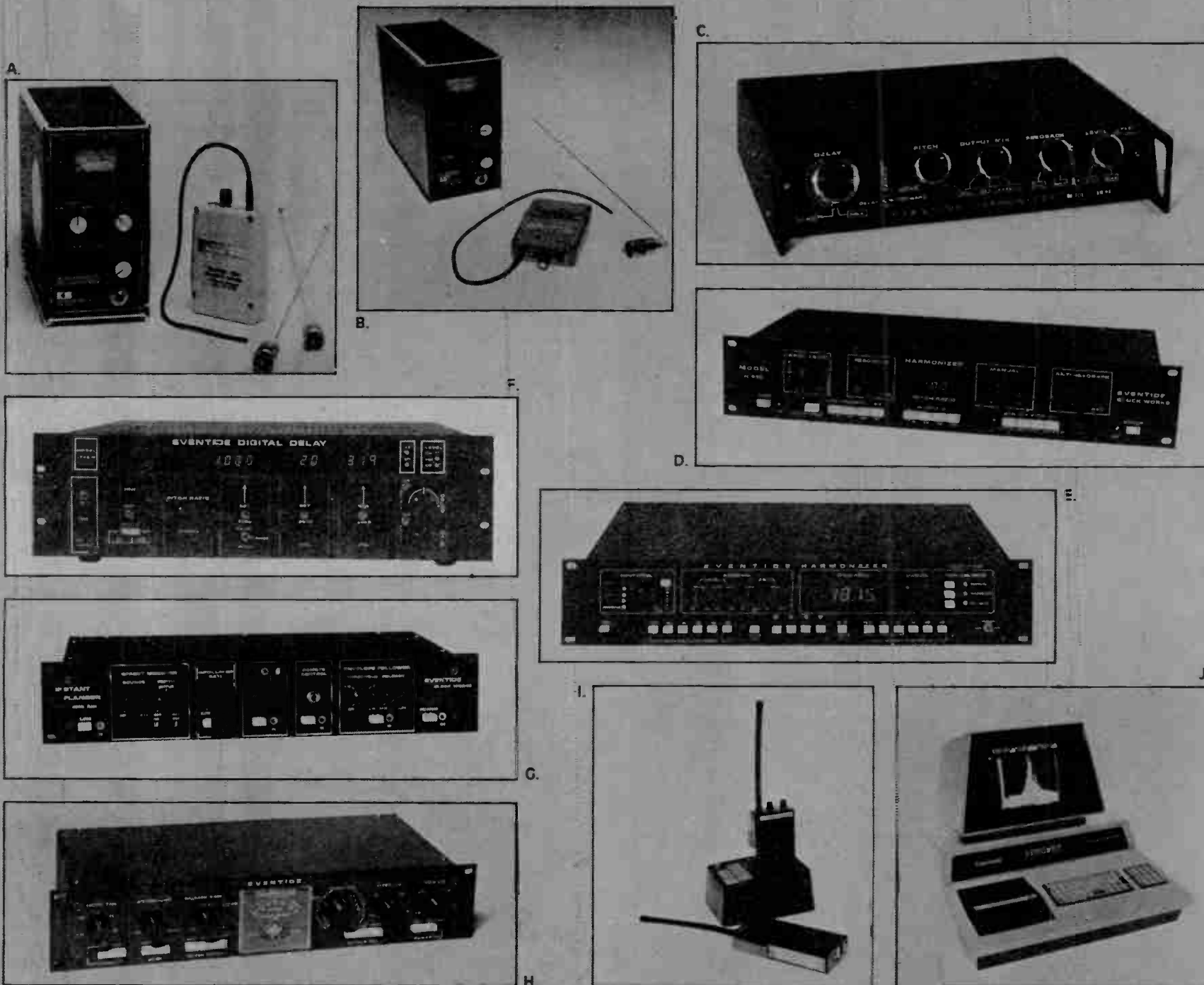
The Cubes are simply installed by the user, by plugging them into the back of the amp where the reverb springs normally connect. The Cube line starts at \$19.95 and is available from most full-line music dealers, or write JHD Audio.



**Hunt Dabney**



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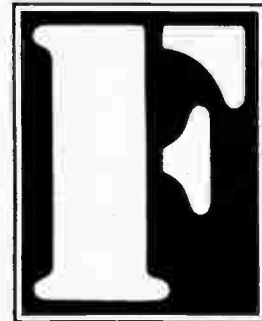




# RECORD & TAPE

# PIRACY

by Bruce C. Pilato



or those of you who don't know it yet, there's a war going on. It's being fought in nearly every developed nation and it first began almost forty years ago. However, in this conflict there are no tanks, no battleships, and probably few guns and bullets. It is, rather, a battle between all the music industry related companies around the world and a group of audio outlaws—in other words, the fight against record and tape piracy.

Record and tape piracy is unquestionably the number one menace to the world's music industry. According to the FBI, in the United States alone it has cost record companies, artists, publishers, managers and retail outlets an estimated \$350 million a year. And that figure keeps rising at an alarming rate.

Record and tape piracy, or music thievery (as the industry refers to it), comes in two forms: counterfeiting and bootlegging. Counterfeits are just that; they are exact duplicates of popular records and tapes, copied so exact in most cases that only an expert can tell the difference upon plain sight. The audio quality, however, is often not as good as the legitimate copy. With counterfeits, everyone gets ripped-off; consumers get bad merchandise and record companies and artists usually end up getting the blame for something they didn't put out. Not to mention the fact that no one gets a single penny, except the thief.

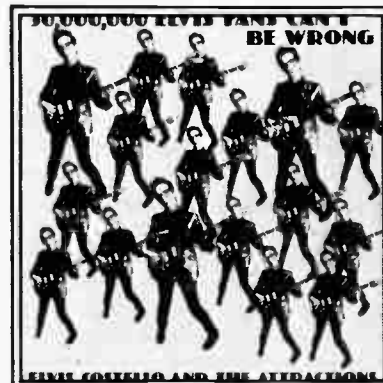
Bootlegging, on the other hand, is the unauthorized recording of an artist manufactured into a product and sold for profit. Bootlegs



Bootleg of the "Great White Wonder," Dylan.



Counterfeit copy of "Blood On The Tracks" (L) with official Columbia release (R).



Cover courtesy Peter Evans collection



usually consist of live concerts, studio outtakes, or other rejected material that the artist didn't wish released. They are usually sold discreetly to fans who are not merely satisfied with an artist's legitimate releases. Although the industry considers this form of piracy just as serious, it is not nearly as financially damaging as counterfeiting.

### Counterfeit Records and Tapes

Counterfeit recordings first appeared in the 1940s with the hits of Frank Sinatra. However, back then it was a very costly process and profit margins were very thin. Counterfeiting seemed to disappear until the early 1960s. By then, modern technology made it much easier and cheaper to duplicate a record and sell it to an unsuspecting retailer. At this point, single 45 rpm discs were hit the worst.

Many early hits that appeared on independent small record labels in the early and mid-Sixties were counterfeited. The labels on the singles were usually simple and easy to reproduce. They were also distributed by several wholesalers, which made it simple for a pirate to come off as a legitimate record salesman.

As soon as a pirate was sure a song was going to be a hit, he'd run out and buy a copy and reproduce it. He would then sell it to record and department stores at a slightly cheaper price than the legitimate distributor. The McCoy's hit "Hang On Sloopy," released by Bang Records in 1965, was among many that were counterfeited. Out of three million copies sold, it is estimated that at least one third of them were counterfeits.

Tape counterfeiting is a much bigger problem to the industry than record counterfeiting. It is easier to do, more profitable, and more widespread. Tape counterfeiting got going around the same time that 8-track cartridge and cassette tapes first hit the market. In the beginning, the counterfeiters didn't bother duplicating labels and they were easy to pick out, but in recent years they have become so identical to legitimate products that they are almost impossible to tell apart.

In the late Sixties and early Seventies, when tape counterfeiting first got moving, tape duplicating machines were available to anyone for \$49.00 and up. A pirate could tape any popular record and produce a tape of it, which he in turn peddled just about everywhere except record stores (this being because of the counterfeit's poor packaging). They mostly appeared in gas stations, drug stores and department stores.

These tapes cost a counterfeiter between \$.88 and \$1.00 to manufacture, and were sold to retailers for about \$2.75. Retailers then sold them to consumers (who believed they were buying official releases) for \$3.99, which, back then, was about \$3.00 less than a legitimate 8-track or cassette.

Large scale counterfeiters used very sophisticated equipment to duplicate tapes. These machines, which cost up to \$35,000 could duplicate one hour of music in four minutes and do so with twelve blank tapes at one time. The overhead was high, but the demand was much greater, and the counterfeiters of this period made huge profits.

In 1971, pioneer rock and roll star Jerry Lee Lewis was on tour when his entourage bus stopped for fuel at a gas station. He spotted counterfeit copies of his 8-tracks, pulled a sledge hammer out of the bus and destroyed the entire display rack. Walking out of the service station, he told the bewildered gas station attendant to tell the counterfeiters that "The Killer, Jerry Lee Lewis was here."

Record and tape counterfeiting has become a major concern to the music industry mainly in the last five years. As mentioned earlier, it is the total accuracy which is the biggest concern. As far as records go, just about any album that is a popular catalog item—such as The Beatles' *Abbey Road*, *Saturday Night Fever*, or even *The Sound Of Music*—is a likely target. Other hard to find albums, such as *Introducing The Beatles* (which was an official release on Vee Jay Records in 1963) and Todd Rundgren's *Runt LP*



## PIRACY

have also been counterfeited numerous times and sold to retailers.

Counterfeiters are not choosy about what tapes they put out; basically, anything that sells. The FBI and The RIAA (Record Industry Association of America) brought illegal copies of *Saturday Night Fever* and *Grease* to RSO Records president Al Coury while they were at the top of the charts. "But our demands for the legitimate product were so great," Coury said recently, "that we had little time to contend with the counterfeits. It was a disaster." It is estimated that 25 to 40 percent of RSO's returns of *Fever*, *Grease*, and *The Sgt. Pepper* soundtracks were fakes.

At the International Music Industry Conference, which was held in Monte Carlo in June of 1979, record and tape piracy was the major issue at hand. Referred to as "the cancer of piracy," most industry leaders believed that record companies would have made healthy profits during 1979 had it not been for piracy, and counterfeiting, in particular.

At the conference, Warner-Elektra-Atlantic International president Nesuhi Ertegun, urged all record companies, publishers, artists, managers and recording studio owners to contribute to help battle the music thieves. Ertegun estimates the record industry is currently losing 15 to 20 percent to pirates.

Another spokesman at the conference was Stephen Stewart, outgoing president of the International Federation Of Phonograms and Video-

grams (IFPI), who talked of piracy on an international level. Singapore is suspected to be "the hotbed" of counterfeit records and tapes. It has been estimated that over ten million pirate cassettes were exported from there and ended up in retail stores in Britain and Germany.

Stewart said that the majority of product sold in Greece is pirate. Turkey is entirely pirate, and Spain, Israel, Portugal and Egypt all have been flooded with counterfeits. Only in the U.S., the U.K., Japan, Germany and Australia has any progress been made in attacking record and tape pirates thus far.

The FBI and Elektra/Asylum president Joe Smith have publicly stated that there is little doubt about organized crime's involvement in record and tape piracy. Smith has also said that certain individuals involved in investigating the problem have had their lives threatened.

The music industry is also concerned over the dramatic increase in home taping. The industry claims that by consumers taping someone else's copy of a record or by taping off the radio, it loses \$4 to \$5 million per day. With the decision in on the recent Betamax law suit, there seems to be little doubt in the legality of home taping; however, the industry's stance on this issue is understandable, since their profits took a nose dive and those of blank tape manufacturer's soared during 1979. Elektra/Asylum president Joe Smith even took out a full-page ad in *Billboard* to ask FM programmers to discontinue the popular practice of playing albums uninterrupted.

The ironic twist to this whole thing is that now even the blank tape manufacturers are being hit by counterfeiters! Maxell recently took out full-page ads in some of the trade magazines that warned of thousands of counterfeit Maxell tapes that are currently in circulation. The ad described in detail how these fakes could be told apart from legitimate blanks. Counterfeiting of blank tapes is brand new, and very little is known about how widespread the problem currently is.

### Bootlegs

The other form of record and tape piracy, bootlegging, has really only been around since 1968. Although they still sell in large numbers, bootlegs are more of a threat to artists than they are to record companies. In the late Sixties and early Seventies, most bootlegs were of live concerts and featured shoddy packaging and, often, terrible sound quality. Today, however, some bootlegs are better products than legitimate records. Often, they consist of rare, high-quality studio material or excellent sounding live performances.

The average run of a bootleg is usually no more than 2,500, and sometimes as little as 500. However, some of the more popular ones have sold as many as 10,000 units. Since most bootlegs are limited editions, many record collectors view them as items that will become extremely valuable as time progresses.

There are usually only four or five active bootleggers operating at once in the U.S. (These are *manufacturers*; there are also several *distributors*, who buy their product from this

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small handful of pirates). Most manufacturers put out a half dozen new releases each month, while maintaining a catalog of about one hundred or so past releases.

Certain popular bootlegs have been further bootlegged by less reputable pirates; however, there seems to be a strong code of ethics in the pirate industry which is not often broken. When some of the huge bootleg labels of the late Sixties and early Seventies (such as Kornyforne, Trade Mark of Quality, Wizardo and Rubber Dubber) were busted, their best products fell into a sort of "public domain," in which almost any bootlegger could re-release them.

Bootleggers often take immense pride in their work, seeing it as a labor of love which yields historical musical documents. They believe their product generates interest in an artist's career, much in the same way a legitimate live album will often move an artist's catalog.

They see themselves as Robin Hood-type outlaws. Stealing from record companies, they rationalize, is like not stealing at all. Bootleggers view the legitimate labels as corrupted corporations, anyway. They feel the records they're putting out never would have appeared in Columbia's or Warner Brother's catalog, so these companies have no right to charge the bootleggers with stealing from them.

The first "official" bootleg was *The Great White Wonder*, a double LP that featured demo tapes of Bob Dylan and the Band that were stolen out of the basement of Dylan's home in Woodstock, New York, in 1968. Two months after the tapes were stolen, the album appeared and its impact was phenomenal. Dylan had been in a motorcycle accident and had not released an album in a long while. People were hungry for fresh Dylan and *The Great White Wonder* gave it to them.

The album was a huge success, selling almost enough copies to certify it gold. It sold anywhere from \$10.00 to \$12.00 a copy and featured a blank white cover.

Within a year, nine other Dylan bootlegs appeared, mostly of his most recent concerts. Then came the Rolling Stones' *Liver than You'll Ever Be*, The Beatles' *Live At Shea Stadium*, Crosby, Stills, Nash & Young's *Wooden Nickel*, and a series of Jimi Hendrix bootlegs.

From 1969 until 1972, bootlegs of live concerts, studio outtakes, TV appearances and radio concerts sold briskly in thousands of record stores across the country. The major retail chains never carried them, but the majority of independents did. They ranged in audio quality from horrible to excellent and sold for anywhere from \$4 to \$20.

As early as the appearance of *The Great White Wonder*, record companies were fighting to stop the bootleggers. At this time, however, there was little they could do. They would often catch the pirates, but the cases would get thrown out of court, because the 1909 Copyright Law had no provision in it for sound recordings.

The bootleggers started getting so big that the legitimate record companies were forced to

release albums they hadn't planned on. Elton John's *11-17-70* was in direct retaliation to the popular *Radio Cord* bootleg, and Atlantic Records had to release CSNY's *Four Way Street* to combat the dozen or more bootlegs of the group that were out and doing well.

Some of the pirate labels of this period grew incredibly large in virtually no time at all. One company, Rubber Dubber Records, employed over 75 people and enjoyed healthy profits before its demise during the summer of 1972. Bootlegs on this label were often of excellent quality. In many cases, someone from the label would place wireless microphones near the sound equipment onstage at an auditorium. The wireless mikes would transmit the concert to a van that was parked outside the concert hall. Inside the van, the show would then be recorded on sophisticated audio gear. Within weeks, the album of that show would be in the stores.



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Since the 1972 amendment to the Copyright Law (more on that later), the bootlegging industry has become much more discreet, but it is still very much around today. One New York State distributor of bootlegs, who can only be referred to as Mr. B., discussed with me the current state of bootlegging.

"At tops," he stressed, "there are only 50,000 hard-core fans who are willing to buy bootlegs." He said many bootlegs are of cult artists, where fans hunger for more product after digesting all the legitimate releases. Such is the case with The New York Dolls' *Live In Dallas '74*, The Sex Pistol's *Spunk* (studio outtakes), or Quicksilver Messenger Service's *Live In San Jose 1966* (which is selling for a whopping \$50.00 a copy!).

However, bootleggers also make sure they cover the popular artists, as well. "It pretty much follows what's selling in the music stores. If Blondie, Supertramp, or Led Zeppelin are selling, that's what the bootleggers are doing. However, it doesn't get into stuff like the Doobie Brothers or Captain & Tennille.

"Beatles and Elvis are always big items," according to Mr. B., "except they've pretty much saturated the material that's available, and it's rare that new material comes along. When it does, new bootlegs appear immediately."

"Another company has just popped out of Canada, which I know very little about. It's a very inexpensive job they're doing. It's like, a bi-fold cover, very, very simple, with a nicely printed cover. The quality is excellent. What

they've done is taken some of the old classic bootlegs and remastered them; it's sort of a reissue series. They've done an old Neil Young, an old Hendrix, an old Stones. There's about eight titles altogether, and I sell them for about \$6.00 each. They go real well."

One artist, Bruce Springsteen, has decided apparently that enough is enough. He, along with CBS, has gone to court and is suing certain individuals accused of manufacturing and distributing several different Springsteen bootlegs.

"Today," said Mr. B., "Springsteen is absolutely the hardest bootleg to obtain. I don't know exactly what happened there. Springsteen, for a long time, almost encouraged bootlegging (with a lot of FM concerts). And if anyone was due to be hit by bootleggers, it was him. Just by the power of his live performances, being so much better than his conventional releases. Secondly, he made so much stuff available; he did so many live concerts. Thirdly, Columbia never released a live LP; they really missed the boat. They were so stupid! They could have made so much money. I have many customers that don't even buy his retail albums—they just buy his bootlegs."

Mr. B also spoke of the economics of the bootlegging industry. Apparently, it is a very profitable business to be in: "The people who are bootlegging these records are making a lot of money on them, because it's an inexpensive operation where a guy can maybe do five or ten titles and press maybe five or ten thousand of each title and get out of it quick. He can sell them for \$3.00 or \$4.00 apiece wholesale, and he makes a lot of money because the actual pressing costs him about \$1.00. So, he's making a real good profit margin; not the kind of profit margin regular record labels make."

Recent bootlegger busts on the West Coast haven't stopped most of the them, because their investment usually isn't too great. Therefore, many of them just allow their stock to be confiscated, they lay low for a while, and before long, they're back at it again.

According to Mr. B., it seems as though bootlegs seem to improve in quality after each series of crackdowns. One reason for that is the more legitimate a bootleg looks, the less chance of a bust. The slick covers that dress many bootlegs today are a direct result of FBI raids in retail record stores. Most stores won't carry bootlegs at all anymore, and the ones that will want them packaged nicely. Bootlegs displayed in retail stores sell about 5 to 8,000 more than the under the counter or mail-order ones, therefore, the extra expense to the bootlegger is worth it.

Another reason for the improved quality in bootlegs is the growing sophistication of the fans who buy them. The music is no longer enough, the public now wants rare photos and indepth liner notes.

"I've got a Supertramp," says Mr. B., "with a full color cover, a new Blondie, a new Zappa, a new Robert Fripp, a new Talking Heads, three new Stones LPs and a new Roxy Music. And they're just so professional!"

Despite efforts from the record industry and



the FBI, as stated before, bootlegs are readily available today. All one has to do is check the ads in the back of most rock magazines or record oriented publications, and many of the one inch ads offering "rare records" will often yield a bootlegging operation.

Also, many bootleggers and bootleg distributors, such as Mr. B., do a great deal of their business through word of mouth. When the heat is on, that is often the only way the records get sold.

Distributors like Mr. B., make their connections usually through other bootleggers they're already established with. The pirate community is quite small, and everyone seems to know each other.

"I just got a call from a guy who's very, very secretive about it," Mr. B. recounts. "He just simply says, 'Call this number, leave your number, and I'll get back to you whenever I can.'"

### Retaliation

The first concentrated effort by the music industry, the FBI, and the Justice Department against record and tape pirates occurred when the bootleg boom of the late Sixties and early Seventies happened. But, as stated earlier, there wasn't much recourse then.

Some artists, such as Crosby, Stills, Nash & Young hired private investigators to track down their bootleggers. Several record companies did the same. But it wasn't until the Anti-Bootleg Amendment was added to the Copyright Law in February 1972, that any of the pirates were prosecuted. (By the way, that little P with the circle around it and the date next to it, on the backs of record albums is the copyright notice for sound recordings that was created by this amendment.)

By early 1973, the FBI had shut down most of the major bootleg operations in the United States.

In recent years, music industry associations and corporations have lobbied for tougher legislation against record and tape pirates. They're more concerned over counterfeiting, but are trying to nail the bootleggers as hard as possible, as well. At present, Vermont remains the lone state which does not have anti-piracy legislation. Eleven states have even added anti-bootleg statutes which prohibit unauthorized recording and taping of live radio concerts.

The problem that remains, however, is that music thievery is only a misdemeanor for a first offense. The maximum penalty is one year in prison and a \$25,000 fine on each count. It becomes a felony on the second offense. Because it is only a misdemeanor, many FBI agents and District Attorneys don't see it as a major priority. The RIAA is now lobbying to make record and tape piracy a felony on first offense. In the meantime, the federal government has had to use tax evasion, mail fraud, wire fraud and other similar violations to nail the big bosses behind these operations.

But the federal government is making a substantial effort to crack down on the problem, at least with counterfeiting. From 1974 until 1978, the office of Los Angeles FBI Supervisory agent

Homer Porter alone netted:

- \$150 million worth of tape duplicating machines—seized or destroyed.
- 2.2 million counterfeit tapes; cost to the counterfeiter of \$.56 each; street value of over \$5 million—destroyed.
- 40,000 reels of counterfeit films and video cassettes.

Another man who has become a major figure in the fight against record and tape piracy is the FBI Supervisory Special Agent in the White Collar Crime Section of its Washington office, Ronald Wetherington. The FBI has gone underground in the last four years, with undercover agents opening up and running retail record stores which contain hidden close-circuit TV cameras and body recorders. These are used to gather evidence against suspected pirates.

At the IMIC Conference, Wetherington said, from the cases that his office has been involved



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in there seems to be little doubt as to the major presence of organized crime in record and tape counterfeiting.

At present, there are over 700 FBI investigations into music thievery. The Bureau has conducted three major assaults since 1974. The first was called Operation Coptape. It lasted nine months and scored thousands of fake tapes and several machines. In 1978, there was Operation Modsound, which busted 23 locations in five Eastern states. It netted \$100 million worth of counterfeit tapes and resulted in two convictions and one three-year sentence.

But the largest FBI bust was in May of 1979. Named Operation Turntable, it was the result of an eighteen-month, four-state investigation funded under a \$250,000 grant from the Congressionally financed Law Enforcement Assistance Administration. Based in Jacksonville, Florida, it confiscated over 33,500 counterfeit 8-track and cassette tapes. The syndicate that was busted was alleged to have been scoring over \$40 million a year.

Another counterfeiter, jointly sued by Warner Brothers and ABC Records, had been busted three other times and defaulted each time. This time, however, his factory was raided and \$80,000 worth of equipment was taken—not to mention sixteen boxes of master tapes, 80 boxes of labels and thousands of tapes (mostly country and western artists).

The FBI and the Justice Dept. are now probing ties between counterfeiters and legitimate

record company employees. They are also looking into alleged connections between counterfeiters and major retail record chains who are buying products they know are fakes. Slowly but surely, the industry and the FBI are doing all they can to combat the counterfeiters. In 1978, they landed 113 convictions for illegal sound duplication.

With bootleggers, however, the Feds seem to be more relaxed. One bootlegger has said that the Feds know who all the bootleggers are and usually don't hassle them, "unless a huge record company gets bent out of shape over a new, hot release." The Feds, according to most bootleggers, are concentrating their efforts on record and tape counterfeiting, where the real piracy is.

"A lot of times the FBI will come in with a big bark," says Mr. B., "but when it's time for a bite, there's nothing." However, that's not the case in England, where this past August the British Phonographic Industry Association headed an investigation which yielded Operation Moonbeam. In the country's largest crackdown on bootlegging, the 40-man raid arrested a half dozen suspects and confiscated thousands of David Bowie, Bob Dylan, Deep Purple, Patti Smith and other bootlegs. One of the men in the investigation posed as a record presser and had to press 2,000 copies of an illegal Bowie master tape in order to keep his cover.

And back here in the U.S., one Harlem retailer was recently handed a 22-count indictment for manufacturing and selling R&B and Gospel bootlegs.

The music industry itself realizes it has to get involved in order to fight record and tape piracy effectively. It presently has several investigations of its own going. The RIAA has had an ongoing four year investigation led by Bud Richardson. Their budget is presently \$1.4 million yearly. \$500,000 was recently given to the International Federation of Phonograms and Videograms to help them fight piracy abroad, by the American National Music Publishers Association. The IFPI, however, feels that they need a budget of \$2 to \$3 million to do their job effectively.

In addition to these investigations, some artists and companies, such as Springsteen and CBS, are now taking the time and money to track down pirates and have them prosecuted in court.

And finally, in an effort to diminish counterfeiting, many companies such as RSO, RCA, CBS and WEA are working on hard to duplicate labels and covers for their records and tapes. RCA, in particular, is experimenting with embossed lettering.

Record and tape piracy, now entering its fourth decade, is by no means about to be licked. It is incredibly widespread, and efforts to try and stop it are, at present, only encouraging at best.

Like all other crimes, it will continue, for where there's a demand, there's always a method to get the product out. All the music industry can do is hope that it can be contained so that it won't eat up too much of the market. And at the rate things are today, it's going to take a lot more than hope. M.I.

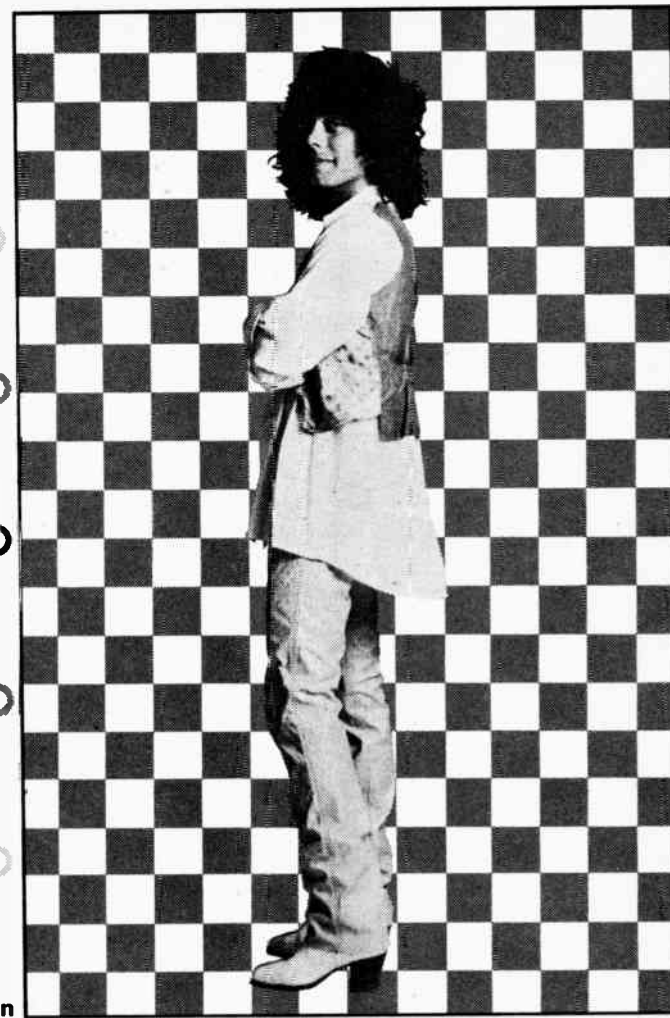




JIM HOUGHTON

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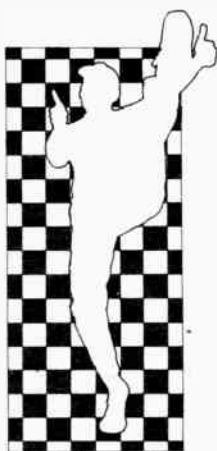
by Steve Caraway



JIM HOUGHTON

Rick Nielsen

Tom Petersson



Success has hit the members of Cheap Trick square in the face. After three critically acclaimed LPs [*Cheap Trick*, *In Color*, *Heaven Tonight*] they achieved mass acceptance with the release of *Live At Budokan* last summer. This album captures the excitement missing from the earlier studio efforts, and the Japanese fans make it sound like the Beatles at Shea Stadium—the music riding on a wave of constant screaming.

As well as producing some very tasty music with occasional references to the Beatles and the Who, this band is extremely entertaining to watch. A combination of two comic strip characters and two pretty boys, Cheap Trick has all the bases covered. Guitarist Rick Nielsen is as much a comedian as he is a musician, and his antics have become the most talked about aspect of their stage show. All of Nielsen's zaniness is backed up by the incredibly solid rhythm of bassist Tom Petersson and drummer Bun E. Carlos. Petersson's playing often sounds like both bass and rhythm guitar due to his use of the Hamer 12-string bass, and Carlos manages to maintain the rhythmic intensity of the band while keeping a half smoked cigarette in his mouth at all times. Added to all of this is the excellent vocal technique of Robin Zander. He has impressive control, and is capable of belting it out ("Hello There") as well as singing sweetly ("I Want You To Want Me").

Their latest album, *Dream Police*, is already high on the charts, and Cheap Trick seems well on its way to becoming one of the major rock music forces of the Eighties.

**M.I.:** Who were you listening to when you were growing up?

**Nielsen:** I started off listening to a lot of Roy Orbison, and the Ventures came in there eventually. I would also listen to a lot of the TV shows, like Gabby Hays and Hopalong Cassidy. I would sit at home and play along with the *Gunsmoke* theme or *Have Gun—Will Travel*. Those shows had heavy guitar riff themes compared to a wimpy *Hazel* or something like that! So I really enjoyed more of a ballsy sound at that time, more of a rockin', Duane Eddy sound.

**Petersson:** I listened to pretty much the same things—Duane Eddy, Bo Diddley. I really liked Dave Davies! I played 6-string guitar at first, and my style evolved out of Dave Davies, even on bass. If Dave Davies played bass he'd use those Kinks riffs with a lot of two-note chords. I've always loved his solos. I eventually got into Rockette Morton, who was with Captain Beefhart's group. Live, he was incredible! He used to do solos using fingerpicks and thumb-picks, and the people would just be transfixed watching him. This was around 1971 and '72 in the "Clear Spot" days. I don't like to watch or listen to bass players, because they usually bore me. But I really like the playing of John McVie; I love how steady he is. I like John Entwistle's playing, he's very good!

**Zander:** It started for me real young. My older sister loved to dance, and she used to buy all the records—like Sam Cooke's "Twistin' The Night Away," Chubby Checker's stuff. When I really started taking an interest in it, it was the Beatles, the Stones, the Who, the Beach Boys, and the Bee Gees. Those were my early influences—just listening to the AM and FM radio, really. I never started really playing guitar until I joined Cheap Trick. Before that it was mainly piano.

**M.I.:** Before *Cheap Trick* what kind of music were you all making?

**Petersson:** Well, I used to play in the subways and in the streets in different countries. I did that

for about a year. I played a Martin, but I also had this little amp and I'd play bass. It must have looked pretty odd, this street musician playing bass, but it was fun. I'd deaden the strings and use the instrument as a percussive device. You'd get the high-end of the strings so the percussion wasn't muddy and the notes would come through, too; it was a unique effect!

**M.I.:** Do any of you know how to read music?

**Nielsen:** I can read really badly! Bun E. can, though!

**Carlos:** Yeah, I've studied French horn and took some music courses.

**Nielsen:** Bull!!! Bull!!! No, that's true. In the union book, he gets a lot of calls to play French horn. Not many for playing drums, though; we're always on the road. You can imagine how many union French horn players there are in Caracas, Venezuela!

**M.I.:** I hear a lot of Who influence in your music. Did you all listen to the Who a lot?

**Petersson:** Yeah, at that time you couldn't even get their albums in the States. A friend of mine went to England and came back with their first album, *My Generation*. It was a great album, filled with some odd stuff. All their early material was really refreshing, like "Pictures of Lilly," and "The Kids Are Alright."

**Nielsen:** To every one of us it was powerful stuff. It was hot, and new, and fresh, and still sounds really great today.

**Petersson:** Of course, when Jimi Hendrix came out he just knocked everybody for a loop.

**Nielsen:** For people like us, we followed them before they were popular. We followed the Move and the Who, the Yardbirds, and the Jeff Beck Group. Everyone knows about these groups now, but we'd been following those people for a year or so before anybody else did. We knew about them because we wanted to know! We'd demand their records! We'd force dealers to carry the records or we'd search the LPs out to get them.





Bun E. Carlos

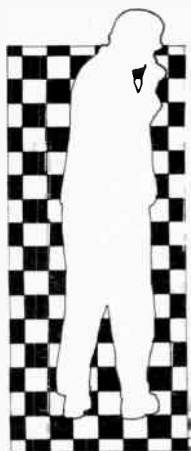
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Robin Zander

JIM HOUGHTON

JIM HOUGHTON



**Petersson:** Yeah, "Eric Clapton? Who's he? Never heard of him." "Well, he's in John Mayall's group!" "John Mayall?" "Come ON!" Rick and I went to see Led Zeppelin billed as the Yardbirds in London in 1968. But we already knew about Jimmy Page from the older Yardbirds. I saw the Yardbirds with Jeff Beck, Chris Dreja, Paul Samwell-Smith—the original band after Clapton left. *Nobody* would go to see them! We've seen the Who backing up Herman's Hermits, and the Who weren't even billed!

**Nielsen:** We saw the Blues Magoos billed over the Who!

**M.I.:** What artists do you listen to now and enjoy?

**Carlos:** I collect, so I listen to everything. I have all Peter Townshend's demos, "I Can See For Miles," stuff like that. I have a solo job he did in Charlton with just his tape recorder, some stuff at the Roundhouse. I just know all these people from collecting, and I can get that type of material. I am still running across stuff by the Who and Hendrix all the time.

**Zander:** I like Roxy Music, and I think Brian Eno's pretty different. The *801 Live* LP is a nice one.

**Petersson:** You know who is great, is John Wetton. When King Crimson was together, what a group! Wetton is a great bass player.

**Nielsen:** I listen to more basic stuff. I like the old Gary Glitter and Alex Harvey stuff—he's not basic by any means, but it's real rockin' stuff that just didn't seem to catch on in the States! Gary Glitter never toured the States, and Harvey did a couple of times and just went zero. But he's got great records; I like the excitement. I like exciting records! I can enjoy some of the more laid-back stuff, but I really like the more

flashy, more rockin' stuff. Somebody like Alex Harvey and Gary Glitter, they just didn't catch on; and I kind of see that they're not going to catch on, because they're not touring. When we used to go see the Who at first there was an underground cult about them. Then a year later the normal underground heard about them, and then a year and a half or two years later everyone heard about them! Then if you go and say, "Hey, I used to know them!" it sounds like you're name dropping, so we don't even talk about it anymore.

**M.I.:** Are you a disciplined band? Do you rehearse a lot?

**Nielsen:** Any time we have off, we rehearse, but we've been playing 300 nights a year for a long time, so there's not much time for rehearsals. A lot of the days off, we're going from one place to another, so our band is pretty much 24 hours a day. Between doing interviews, doing radio shows, recording, doing live shows, and traveling...it's what we all enjoy. It's not like it's hard, but it's physically very demanding.

**M.I.:** Robin, you're a pretty strong belter. Is that kind of work demanding on your vocal chords?

**Zander:** It hasn't been hard this whole tour. I haven't missed a date!

**Nielsen:** You're the answer—you heard him! He was belting tonight, just like he has been for years!

**M.I.:** Rick, how long have you been playing guitar?

**Nielsen:** Oh gee, a real long time! My parents are real musical. My father and mother both sang opera, so I've been around music a lot. They really didn't encourage rock and roll music, but it was something that I enjoyed ever since my first listen to early radio shows. I've always enjoyed exciting music. But I don't just listen to rock—I listen to orchestras. In fact, we're getting into utilizing some orchestras in our arrangements. Not wimped-out stuff either! We've even thought about trying out the Vienna Boys

Choir to do some of our material; and not in a wimpy way! We're also thinking of doing some "guitar" orchestras. Tom with his basses, me with my mandocello, and Robin on some 12-strings. We've got a lot of things that we're working on. **M.I.:** You seem to get most of the writing credit on the LPs. Are you more active as a songwriter? **Nielsen:** Everybody writes in the band; it's just that I write more stuff. It just happened that working with the producers we have worked with, those were the tunes that we picked. It's not like saying that I have to have a certain amount of songs on an album. The next album could all be Robin's and Tom's songs—they do write great songs. And when I write a song, it's not like the rest don't have any ideas about it. Everyone interjects their own parts here and there.

**Petersson:** Rick doesn't come in like Pete Townshend with all the parts laid out on a demo. He brings in something with an acoustic guitar and him humming in the background and some dopey metronome—that's it! It's fine, but it takes work to create a finished song.

**Zander:** If Bun E. has a suggestion like, "Okay, Robin, this part just doesn't sound right to me; if you'd sing it this way I think it would work out better." If it would be better, then okay.

**M.I.:** Listening to your first LP, it sounded very straight ahead with little or no dubbing.

**Nielsen:** You're right. A lot of the cuts on that album were done in one take. We like to experiment with sounds, though; with each instrument we experiment. Sometimes the mike is right on the speaker or instrument, sometimes it's twenty feet away to get a room sound. We've tried a lot of techniques. I know that anybody who is interested in how records sound today will try everything. Being in a studio, there are so many methods that haven't been touched. You've got to try it, because if you didn't try it, you'd be mad you didn't. So the best thing for a musician

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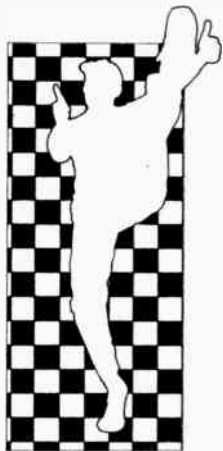
to do when they're going to make a record is to use the best studios you can, which we have done. Also a musician has to search out and find the best engineers and producers. You can make a big mistake on that level.

**M.I.:** Jack Douglas produced your first LP. How did he interact?

**Nielsen:** Well, we knew what we were doing and we used our own gear, except I did use some of Joe Perry's Aerosmith amps in the studio.

**Zander:** Basically, what he wanted to do was to capture the band live and get that raw sound of the group. And he did!

**Petersson:** He didn't change anything as far as the group was concerned; he just let us go. We didn't know things like what mike to use to get certain sounds, so he really helped in the technical end.



**Nielsen:** The second and following studio albums were done with Tom Werman. Tom has done a lot of work with Jeff Beck and Ted Nugent, so it became a little different from the first LP. Each album so far has been a complete and separate project. We're real proud of all our albums; to come out with as many good albums as we have in such a short period of time is a real feather in our hat.

**M.I.:** Rick, you have a hell of a guitar collection.

**Nielsen:** Yeah, I collect and I really enjoy the guitar—plus it's a good investment! I've got every year of Les Pauls, several old Flying V's, every year Strats—just a lot of nice instruments. The earlier Hamers I have are a serial #0000 prototype plus #0004, and my mandocello is also #0000. A lot of the instruments in Hamer's old ads were my guitars that Paul Hamer had made for me.

**M.I.:** What guitars do you have at your disposal on stage?

**Nielsen:** It really depends on the night. I really like playing fine guitars, so it changes from night to night. I have a lot to choose from. I'll even use my LaBea 2x4 guitar live! I am not so technical that I have to have a certain guitar to play; I'll play on just about anything decent.

**Zander:** I usually use a couple of Telecasters from Rick's collection; one is a 1950 and the other is a '51.

**Nielsen:** Really, I feel so lucky that we can afford to have actual guitar roadies. To keep track of my collection is impossible, so we have a guy who handles my instruments and a guy who handles Tom's, too!

**M.I.:** Can you recall your first guitar?

**Petersson:** Yes, I had an old hollowbody Gibson with a single pickup and no cutaways. Then I had a red Gibson ES-335, like B.B. King's, and a Fender 12-string solidbody. I eventually bought a Hagstrom 8-string bass, which I still have. I would have used it on stage earlier except it was too weak. In fact, that's why I have had my basses made.

**Nielsen:** Well, one of my first electrics was an early Gretsch. I have really had almost every model of any decent electric guitar ever made. Piles of Country Gentlemen, piles of Les Pauls, and every Fender imaginable. I've been collecting so long that I've sold guitars to a lot of people. When Peter Green was in Fleetwood Mac I



BOB ALFORD

sold him a 1958 and a 1959 Strat. I sold Jeff Beck an old sunburst Les Paul for \$350.00, which was a good price then. I've always enjoyed nice guitars. Even back in 1960 I'd be critical of guitar's designs and of stuff they were making then compared to five years prior. But now I look at a Sixties guitar and say, "Gee, a 1963. This is not bad." I've been around guitars and amps for years and I've met some of the greats. Jimmy Page asked to see some of my guitars while he was in the Yardbirds. I met and talked with him, but I never sold him anything.

**M.I.:** Do you ever use any effects on stage?

**Nielsen:** I have a wah-wah, but I only use it once in a while. I don't like most of those gizmos!

**Petersson:** I don't like effects, because every time your signal goes through an effect it takes away from the overall tone of the signal. The original punch is lost, and you end up getting buzzes and things break down. It's bad enough just keeping a few amp heads together without having everything else.

**Nielsen:** If I had just one amp to run I might experiment with some effects, but it's just too much of a risk on the road. In the studio we'll use all kinds of stuff!

**M.I.:** What happened to your Sound City cabinets?

**Nielsen:** Those are vintage 1967-68 Sound City 4x12s that I bought in 1968. Whenever I had troubles with the speakers, I am no technician and I only know one thing—my foot goes right in the speaker that's buzzing! That's how they have gotten to the shape they're in now. That's one way of quieting a speaker that's sounding bad! They will stop right away!

**M.I.:** Do you prefer any special style pick?

**Petersson:** I used to use a metal pick. They were metal thumbpicks, and I really didn't like using them, but it was the attack I wanted. I switched over and started using the hardest standard pick I could find. CBS made me some extra heavy picks, but they're so thick it's hard to get used to. It seems that companies are wimping out on the picks now; they're so thin, it's ridiculous!

**Zander:** I mostly play rhythm, so I like a heavier pick to get the bite that I need.

**Nielsen:** I use a medium, and I go through a lot of picks. I play them about thirty seconds, and I throw them into the audience. I throw them out there and luckily they have my name on them so people will send them back, or at least know where they came from! "Hey, you left this at the Cow Palace!" We have our picks made for us so they are pretty much what we want. You can't

really go into a store and buy what you want and need anymore, or what we need! The style of pick we use was common four or five years ago, but today the quality has gone down. But if you pay for it, you can get whatever you want.

**M.I.:** Any string preferences?

**Nielsen:** Yeah, the ones on my guitar! [laughs] Like any touring band we go through sets and sets of strings. I know I see Tom's being changed all the time!

**Petersson:** I use a new set every show. I use Rotosounds, and I could use them two nights, but in these big rooms we play I lose the edge I'm looking for. I break strings a lot, like I always break the A string. I have a heavy attack, and it's hard on the A and D strings.

**Nielsen:** I use a lot of Stratocasters, and I don't play them straight like a "country" type Stratocaster. When I use them I bend them like mad—twang them like nuts! I bend the neck, I bend everything. I have broken necks just by playing them, because I have really strong hands. But I like playing a Strat with the vibrato bar. Not many people use the vibrato bar; I don't know why, either.

**M.I.:** Do you have any problems with the intonation?

**Nielsen:** Did you notice any? I think I use heavier gauged strings than a lot of people do, so I can bend them like nuts and still come back and play the whole song in tune. I can play a whole set on a Strat and it won't go out of tune. Some people use them half a set and they're out of tune. I just love the vibrato bar! It's like a new instrument. Besides playing the guitar, you have this extra thing! It's not like playing a "guitar-gergan" or whatever those things are called, one of those outfits that makes you play a certain guitar nobody else can play!

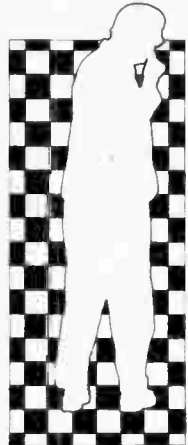
**M.I.:** What amplification setups do you use in the studio?

**Nielsen:** No one setup in particular. I've used loads of stuff—a tiny amp, I've even gone direct. It just depends on the song and the sound that's needed; I use anything to get the desired sound. As I said, I used some of Aerosmith's stuff on the first LP, and we've gone to SIR [Studio Instrument Rentals] and had stuff half a day and some we didn't even use. So you have to experiment. The studio is completely different from playing live.

**Petersson:** I'll use partial setups of what I use on stage, because I like to get that sustain. I used to use these old Ampegs I saw Dee Murray [Elton John Band] use, these old VT-140s that just sounded great! I used those for a while, and then



they just couldn't take it anymore and they went out! I used them on the first LP with different combinations of speaker cabinets. When we recorded the first LP I had the amps out on the street and in the hallways, anywhere to get the right sound. But lately I have been using different HiWatt combinations.



**M.I.:** Do you ever do anything to warm up before going out onstage?

**Zander:** If we can we'll do a long soundcheck and jam. Backstage a lot of times we'll do some obscure stuff!

**M.I.:** Rick, do you ever run scales backstage to loosen up your hands and fingers?

**Nielsen:** What's a scale? [laughs]

**Petersson:** I don't run scales, but I have to play some beforehand. I've got to get my right arm warmed up and get the strength in the fingers going for the chording with my left hand. I also have to stretch my strings a lot before a final tune and going on stage.

**Nielsen:** Yeah, I've really got to work a long time on the strings. I doubt if you can hear us go out of tune that much with all the string-banging we do. The bass solo Tom does, he just pounds the shit out of the strings. We've got strobe tuners on stage, but the guitar tunings stay pretty much together.

**M.I.:** Rick, you seem to work off chording patterns a lot. Can you elaborate on your style?

**Nielsen:** You know, on the first album I really



JON SIEVERT

didn't get to play very much of any solo. Beginning with the second LP I feel I was able to play a little bit more. I do know how to play! But I avoid playing for no sense. It bores me when I see guys up there just playin' away and they're not doing anything! "All right, GUITAR SOLO!! da-da da-da da... Oh, brother!.. Why did you play that?" You really don't need any of that!

**M.I.:** Tom, prior to using the custom Hamers, what basses did you use to get your sound?

**Petersson:** I used Gibson Thunderbirds made back in '63 and '64. I used one on stage that had the finish worn off, but I have a couple at home that are just mint and they've never been played.

**M.I.:** You have a unique aggressive attack on your

strings. Do you ever damage your hands using that method?

**Petersson:** Yes, in the days when I used the Thunderbirds I'd catch my thumbnail on the pickups. The pickup edges were like razor blades, and I'd rip up my hands pretty good. I used to tap Robin on the shoulder and show him my bloody hand, and he'd have to turn away, he couldn't look!

**M.I.:** What does the future hold for Cheap Trick? What would you like to do?

**Nielsen:** We've got a lot of material and a lot of ambition, and we have a lot of projects we'd like to work on. We want to expand on what we do live. **M.I.**



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# basic tracks

## WHEN IS EIGHT FOURTEEN? or getting the most out of 8-track.

by Hillel Resner

Just about any group of musicians, given the choice of recording on an 8-track or 24-track tape machine, will choose the latter. More tracks mean more freedom in recording and overall better sound quality; that's why multi-track was invented. Unfortunately, as anyone who's ever gone shopping for recording time knows, more tracks also cost more money. And money is the one thing that a new group, no matter how talented, usually lacks—and why said group most often winds up recording its initial demo tapes (and even albums) on 8-track equipment.

The first thing to remember when planning any recording session—whether 8-track or 48-track—is to map out track assignments to some degree *before* the session gets underway. To neglect this is like starting to build a road without deciding where it's going. This is especially true when planning an 8-track session with numerous parts to put on tape. Figure out in advance *all* the parts, and the order in which they will be recorded. In this way, the necessary tracks can be reserved and/or opened up.

The first part of any session is the basic, or rhythm tracks. The number of tracks employed for these will be determined by the number of instruments comprising the rhythm section, as well as the number of overdubs anticipated. It is readily seen that a small group (say a four-piece rock band) that is planning no more than three overdubs, will find eight tracks to be a virtual "hog heaven." If the bass guitar is placed on track number 1, the drums recorded in stereo on tracks 2 and 3, a rhythm guitar on track 4, and a second guitar or keyboard on track 5, there still remain three whole tracks for vocals and/or additional instrumental parts. However, when we get past the four-man format, a little more imagination may be required.

Let's suppose we are recording a contemporary funk or jazz group, and that the rhythm tracks feature—in addition to bass, drums, and guitar—both a keyboard and conga drum. In this case, if two tracks are devoted to the traps drummer, we are employing a total of six tracks for the basics. Let's say we want to overdub a horn part, a lead guitar part, and a vocal. In this case, we wind up with nine parts—or one more than we have tracks. What are our options within the 8-track format? Probably more than you think.

First of all, let's make absolutely certain that the drums really need to be recorded in stereo. If the song in question features a fairly simple drum part (kick/snare/high-hat), without a lot of fills and cymbal work, it may be perfectly feasible to place the drum set on a single track without appreciable loss of quality.

A second possibility is recording two of the rhythm parts—say the conga, with either the rhythm guitar or keyboard—on a single track.

(Don't forget that before the introduction of multi-track recorders *all* mixing was a matter of balancing microphones. A competent engineer can do this with ease.)

Yet another way of saving tracks is to make creative use of a single track for recording more than one overdub. In our hypothetical session, it may very well be that the horn part and lead guitar part do not occur at the same time during the song. In that case, the two instruments can easily share a track. Or, if the lead guitar part is limited to a solo on one of the verses, it might be recorded on the vocal track while the singer is laying out. Of course, when recording more than one part on a track, it is often necessary to take great care when "punching in" the second part—but that is one of the skills that the engineer is paid for. So trust him—as you would any good session man.

The point of all the above is just this: If you can't find a fairly easy way to record nine or ten parts on eight tracks, somebody hasn't done his homework. Of course, you may find yourself faced with a greater challenge. You may wish to record *fourteen* parts on eight tracks. In that case, it will probably be necessary to "bounce" or transfer tracks in order to open up new ones for additional overdubs.

So okay—let's say we've recorded our five-piece funk rhythm section on six tracks—having laid down the drums in stereo. We don't want to bounce to adjacent tracks, so we'll leave the keyboard alone (on track 6) and we'll bounce the bass, drums, conga, and rhythm guitar from the first five tracks over to tracks 7 and 8. (In the process, we'll pan these instruments exactly as we want them in our final stereo mix.) We now have five open tracks on which to record additional overdubs.

Let's say the overdubs include all the following: lead guitar, sax and trumpet, synthesizer, miscellaneous percussion, lead vocal, and three background vocals. (Don't leave—this is just getting interesting.) The horns can be recorded together on a single track, as can the background vocals. Once recorded, the synthesizer can be combined on a track with the original keyboard, or with the percussion. On the remaining two tracks, the lead vocal and lead guitar can be laid down by themselves in solo splendor. If you count 'em, you'll see we've now committed fourteen instruments and vocals to our 8-track tape.

Admittedly, the foregoing scenario is extreme—but it is possible. And most importantly, with contemporary equipment, such a recording can be produced with remarkably clean quality. So before you sell your car and clean out your old lady's savings for 24-track time, get an 8-channel track sheet and do some doodling. You may be pleasantly surprised. **M.I.**



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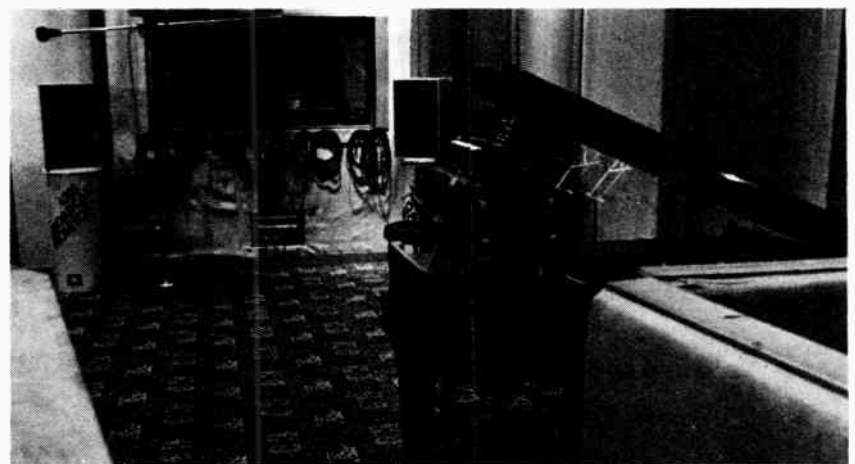
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# Off the Record



## The Fabulous Thunderbirds Takoma, TAK 7068

Produced by Denny Bruce;  
engineered by Bob Sullivan; recorded  
at Sunset-Bernet Sound Studios,  
Dallas.

"Attention: United States, Mexico & Canada!" "11 Great Songs!" "Girls Go Wild!" The Fabulous Thunderbirds' debut album gets my vote for Best Album Cover Of 1979. This mock-up of a card-board boxing-type poster says, "To hell with what's fashionable," in the same way that the T-Birds' crude, roughhewn blues does.

In the three and a half years since their inception, Austin, Texas' Fabulous Thunderbirds have already become widely regarded as the best of the "Blue Way" of young white blues bands. This is probably due in part to the fact that they don't seem intimidated or self-conscious in the least about the music they play. Jimmie Vaughan not only plays blues guitar idiomatically correct, he takes chances, he goes for it 100%, in the extroverted, self-assured manner of a Freddie King or a Magic Sam. Yet he still plays solid and inventive rhythm and doesn't seem to resent that role—necessitated by the quartet's harp-guitar-bass-drums instrumentation. Likewise with southpaw bassist Keith Ferguson and drummer Mike Buck, who not only knows the meaning of simplicity in blues drumming (an all-but-lost art) but is aware of the sound itself—plenty of slack in that snare drum. And as one rival bluesman once described Kim Wilson, "He plays harp like Little Walter and sings like Otis Rush." He is also a showman on a par with James Cotton.

The Thunderbirds' brand of blues eschews for the most part the predominant Chicago sound churned

out by far too many bands and feeds off the Southern electric style—Slim Harpo, Lazy Lester, Lightnin' Slim—once prevalent in Louisiana and Texas. Producer Denny Bruce sought to record their sound as live as possible, and he nearly succeeded. The album sounds almost too straightforward and far too subdued.

As for the material, again they stuck close to standard 12-bar shuffles and slow blues, with Wilson writing a half-dozen in tried-and-true molds. Mercy Baby's "Marked Deck," which stretches a standard three-chord shuffle over 36-bar stanzas, is the LP's strongest hand, but unfortunately some of the more distinctive songs in the T-Birds' club repertoire are left out—R&B tunes like Cookie & The Cupcakes' "Mathilda," and their "punk blues" reworking of Juke Boy Bonner's "Runnin' Shoes."

Still, it's better to play it safe with the blues than to shoot for the moon with a rock and roll production, as so many bands are tempted to do once they enter a studio. For a debut album, *The Fabulous Thunderbirds* is most impressive; and, like any seasoned road veterans, they are even more awesome in person.

—Dan Forte



## No Nukes Asylum, ML-801

Produced by Jackson Browne,  
Graham Nash, John Hall and Bonnie  
Raitt.

This may be the most rapidly-produced 3-record set in modern recording history, which only shows how quickly and well something can be done given the proper motivation. These six sides

document five nights of benefit concerts in Madison Square Garden, September 19-23, 1979, and the motivation is contained in the title. The musicians on this album have gathered under the banner of MUSE (Musicians United for Safe Energy), and all the proceeds from the concerts and upcoming film, and some of the proceeds from the LP (about \$3.00 per record), will be distributed to anti-nuclear/pro-solar groups throughout the country.

The concerts were organized by Jackson Browne, Graham Nash, John Hall and Bonnie Raitt (all long-time anti-nuclear activists) and, naturally, their music is well-represented in the 27 cuts presented here. They have used their influence to gather a troupe of mega-stars that includes the Doobie Brothers, James Taylor, Carly Simon, Bruce Springsteen, Tom Petty & The Heartbreakers, Nicolette Larson, Poco, Jesse Colin Young, Ry Cooder, Chaka Kahn, Raydio, Gil Scott-Heron, and Sweet Honey In The Rock. If the energy poured out during these performances could be somehow harnessed, nuclear or even solar energy would become a moot point.

Despite the motivation for these concerts, there is very little proselytizing present. Only three songs deal directly with anti-nuclear sentiments: Scott-Heron's "We Almost Lost Detroit" and Hall's movement anthems "Plutonium Is Forever" and "Power." The latter is performed by the Doobies with Hall and Taylor, and provides one of the many high-points here. That's not to say that other appropriate selections are not included. There is, for instance, a haunting version of "The Times They Are A-Changing" by Taylor, Simon, and Nash that opens Side 2 and Jackson Browne offers a strong rendition of "Before The Deluge."

The remainder of the album presents a pallet of old rock hits and some more recent successes. Particularly strong are Raitt's "Runaway," Ry Cooder's "Little Sister," and Tom Petty's brilliant cover of the Rolling Stones' classic, "Cry To Me." Bruce Springsteen and the E Street Band bring the crowds to perhaps their highest emotional pitch with "Stay" (with a vocal by Browne) and a scorching "Devil With The Blue Dress Medley." James and Carly fans will also be

delighted by their joyful rendition of "Mockingbird." A more poignant moment features Jesse Colin Young leading the audience through the anthem of the "hippy" generation, "Get Together."

One of the true joys of an all-star album such as this is the chance to hear the expert skills of the musicians that make up the supporting bands of the superstars showcased in different settings. Some of the more prominent ones here include guitarists Waddy Wachtel, Will McFarlane, and Phil Upchurch; bassists Freebo, Tim Drummond, and Leland Sklar; drummers Russ Kunkel, Jim Keltner, and Dennis Whitted; and keyboard players Bill Payne, Craig Doerge, Don Grolnick, and Jef Labes. David Lindley merits special attention for his fiddle and guitar backup.

The package carries a hefty list price at \$17.95 and includes a 16-page booklet that features a message from Ralph Nader and statements from the musicians about their motivations for participating. If you want to support the anti-nuclear/pro-solar movement and get six sides of fine music, this package is well worth the price.

—Jon Sievert



## Just As I Thought David Sancious

Arista, AB 4247

Produced by Eddy Offord and David  
Sancious; engineered by Rob Davis  
and Eddy Offord.

When a composer can develop his own writing style, and then express that composition with his own unique sound, he truly has a gift. This can be said for David Sancious, one of the brightest young composer-instrumentalists in contemporary music.

Sancious toured for a year as keyboardist with Bruce Springsteen before being offered a solo recording contract at the age of 21. His fourth solo release, *Just As I Thought*, is a bit more instrumental than his previous efforts, but the vocals included are nonetheless memorable. Kabir Ghani's vocals on "Again" and "Suite (For The End Of An Age)" are strong and poised, and Brenda Madison's "female choir" on "Again (Part II)" is angelically



# Drop off the record

blended into the music. Sancious' ability to write music for the human voice, as well as very fine lyrics, gives him an added bit of credibility in terms of reaching his audience—commercial appeal, you could say—and he does it without sacrifice. Even his vocal material is often quite progressive, yet the melodies are the kind you might find yourself humming after only a few listenings. In the song "Again," Sancious' slow and arresting melody is repeated over and again, by the voice and then by the synthesizer. Still, he has not exhausted that melody, and when "Again (Part II)" comes back to close the album, his arranging talent brings it to a strong finale, building from a sole acoustic piano to a fully orchestrated combo sound by the end.

The brief and lovely interlude "The Naked I" gives us a brief chance to hear Sancious play solo acoustic guitar. His use of overdubbing makes for the sound of a choir of guitars. And his use of the electric guitar on this album also contributes to the difference in sound from his previous album. On *True Stories*, Sancious stuck exclusively with his battery of keyboards; on his new album he features his guitar playing on four songs, once again using studio technique to swap four- or eight-measure solos between guitar and keyboards.

There are moments on *Just As I Thought* that remind me of some of Bill Bruford's latest work, with U.K. and since. One reason is the guitar playing of Sancious, which sounds a lot like that of Alan Holdsworth at times, another is Sancious' use of the Prophet V synthesizer, a favorite plaything of Dave Stewart, Bruford's keyboard player. A third reason is his use of bassist David Berlin on two tracks. Berlin, who replaces Sancious on two of the more rhythmically complicated tunes, adds a formidable bottom punch and unhesitating knowledge of what he should be doing. What makes David Sancious' music a bit more appealing than that of Bruford and his counterparts is a somewhat hard to define underlying spirit and feeling. It is progressive, and clear, and not overarranged. The overall

music is still more important than the individuality of the players. It is U.K. with soul.

Since becoming acquainted with David Sancious, I have come to expect good things from him. *Just As I Thought* is a thorough collection of new ideas from the man. And as the music fades from this record, each player adding finishing touches freely out of tempo, I get the feeling that Sancious has given us a lot of himself, and that he has saved much, much more for his strong future. That should also be something to hear.

—Robin Toffeson



## In The Skies Peter Green

Sail Records, 0110  
Produced by Peter Vernon-Kell

Someone hearing this album over the radio might believe that Dire Straits has released a new album. Or, they might think that this sort of guitar playing is due to the influence of Mark Knopfler. But both assumptions are wrong. This remarkably pure guitar playing is performed by none other than Peter Green, and he has been playing this way a lot longer than the sultans have been swinging.

Green played his haunting guitar style with John Mayall's Bluesbreakers (remember "The Supernatural"?), and later with the original Fleetwood Mac. His beautifully melodic phrasing is unique and identifiable, even though he has released only one record since leaving Fleetwood Mac (*End Of The Game*). The clean, singing tone with a slight touch of reverb has been characteristic of Green's playing throughout his career, and

he shuns the heavy vibrato of the Clapton school which makes his musical statements sound purposeful and deliberate.

Compositionally, the tunes are simple vehicles for outstanding guitar playing. Green sounds like a cross between Eric Clapton and Carlos Santana on the first cut, and in fact Peter Green captures some of the excitement that has been missing from much of the recent product of these two guitarists. The tune that is receiving the most airplay is "Slabo Day," but the lead work on this cut is played by guitarist Snowy White. This cut has a relaxed jam feel to it, as does a lot of the other material on the album.

The most memorable track on the album is "A Fool No More," reminiscent of the classic days of Mayall's Bluesbreakers. This is great stuff, and Green really sinks his teeth into it. Not only is his playing superb, but he is also a terrific blues vocalist, as evidenced here. I would have liked to have heard a bit more of this kind of thing on the album, but I guess it has become a bit dated by now.

This is one great album, and I would recommend it to people who just like pleasant music to listen to as well as blues guitar fanatics. This is one of the most *listenable* guitar player's albums to come out in quite a long time (a must for people who tired of John McLaughlin three years ago). And, although little has been heard from Green recently (*In The Skies* was recorded about three years ago), this renews hope for the return of one of the finest English guitarists to date.

—Kirk Austin



**Replicas**  
Gary Numan & Tubeway Army  
Atco, SD 38-117  
Produced by Gary Numan;

engineered by John Caffery;  
recorded at Gooseberry Studios,  
London.

Can a strange new album that made No. 1 on the English charts have a chance in the States? Will Gary Numan and the Tubeway Army take America by storm? Is *Replicas* just do-it-yourself rock, or is it a visionary approach to music? I tend to agree with the latter. This album is the newest and freshest music that I've heard in years, and it marks the decline of that overused rock workhorse—the power chord.

This is an album of elemental music. For the most part there are no chords; just drums, melody, bass, and a synthesized background "wash" of either filtered noise or phased oscillators. The lyrics show confusion and alienation, and are sung in a style reminiscent of Roxy Music, Devo, or David Bowie.

Synthesizer is the predominant instrument on this record, but it's used in a new way. Instead of the lavish multi-tracked orchestrations I've come to expect from synthesizer-based music, this album has a raw primitive sound to it. There was very little polyphonic synthesizer used in this music creating a very linear style. Arpeggios and the "wash" replace traditional chording, although there is a token power chord song, "It Must Have Been Years," that has more of an identifiable pop sound to it. The guitar, when used, is distorted and processed to blend with the other electronic sounds.

Gary Numan sings, plays guitar and keyboards, and writes the material. He is accompanied by Paul Gardiner on bass and Jess Lidyard on drums. Most of the material sounds as though the bass and drums were overdubbed after Numan put down the basic tracks.

"Are 'Friends' Electric?" was the No. 1 single in England and contains all of the elements described above. It has a bizarre sort of urgency, as it examines the quality of human relationships. "Praying To The Aliens" may seem like the only logical thing to do in the world of Gary Numan. It's a view of contemporary society by a confused and innocent observer. The speeded up tape instrumental section is simple, but effective.

A couple of tongue-in-cheek instrumental tracks finish Side Two: "When The Machines Rock" sounds like a circus calliope gone berserk; and "I Nearly Married A Human" is somber and deliberate.

This album, whether it makes it in America or not, will help establish the synthesizer as a major instrument in pop music. Indeed, I think this album is indicative of musical styles to come.

—Kirk Austin



# Live: the WHO

by Bruce C. Pilato  
BUFFALO

"We all know what happened yesterday," said Roger Daltrey as he stood before 18,000 completely silent fans. "We all lost a lot of family yesterday. We're totally shattered, but life goes on. This show is for them."

With that, Peter Townshend ripped into the opening chords of "Substitute," thus beginning the Buffalo Memorial Auditorium date on the Who's 1979 tour of twelve U.S. cities. It was a show that came with both anticipation and apprehension.

Just the night before, December 3, eleven Who fans had been trampled to death at River Colosseum in Cincinnati, in what has become one of the worst rock and roll tragedies ever.

It was decided almost immediately after the Cincinnati incident that the Buffalo show would go on, however, promoters and officials took every available precaution, including doubling the security force to 250.

The Who were understandably "shattered" by the events of the previous night, so much so that their manager said they had even wanted to speak personally with the parents of the eleven victims. But more so, it was obvious to everyone in the hall that the group saw this concert as sort of a test of survival. As with the tragic and untimely death of Keith Moon, the Cincinnati crisis served as an immediate act of inspiration to propel the group onward and upward, and they gave what must have been one of the finest performances in their entire 15-year history.

It was a great show for several reasons. To begin with, the Who were determined to give it everything they had. Secondly, the audience made an extra effort to work together; no rushing the stage, no pushing, no view

blocking, no firecrackers. And thirdly, the sound quality and the group's light show were excellent.

Following a ten-minute promotional film for the Who's newest picture, *Quadrophenia*, the Who took the stage. As stated the PA was excellent. The sound (by Showco) consisted of fifty elevated cabinets and six huge low-end boxes, placed below the stage on either side. The monitors were all over—onstage, off stage and overhead. Powered by two six-foot stacks of Crown power amps, the sound was extremely loud, yet crystal clear.

On stage, the group's setup was the same as usual. Townshend used his standard HiWatt stack and Entwistle appeared to have the Sunn setup he's been using for years. Townshend played a customized black Schecter guitar with humbucking pickups, as well as one of his old Les Pauls (#8, to be exact). Entwistle played a custom-built Alembic bass, complete with spider web engraving. New drummer Kenny Jones (who was outstanding throughout), played a massive set of Premier tubs, almost identical to Moon's set-up, minus one bass drum.

The group was augmented by a three-piece horn section (mainly for the *Quadrophenia* selections) and by John "Rabbitt" Bunderick on keyboards. The presence of the keyboards allowed the band to both expand their live sound and reproduce their LP tracks more precisely. However, even with the

keyboards and the horns, they still sounded like the Who that we all know and appreciate.

From "Substitute" the group went right into "Can't Explain." These early classics still held all the excitement they had when they were heard for the first time, nearly a decade and a half ago. In the first song to feature the keyboards, they played a spirited version of "Baba O'Reilly." The violin solo that appears on the recorded version was replaced here with an equally effective harmonica solo from Daltrey.

Next came the bombastic "Punk Meets The Godfather," the first of three selections from *Quadrophenia*. Townshend flailed his first round of "birdman" guitar chords at this point, and while watching him I couldn't help but think that every young rock guitarist must imagine themselves, at one time or another, as Townshend himself, giving eternal life to a meaty E chord.

In the only song to feature Entwistle's singing, the group went back to 1967 to play "Boris The Spider." Entwistle remained perfectly still while singing, as he did the entire evening. As the anchor of the group, his presence is rarely seen, yet always felt.

The next number was "The Music Must Change," one of three songs performed from 1978's *Who Are You?* In a more energetic arrangement than appears on the LP, the song featured frantic

drumming from Jones and an inspired organ solo by Rabbitt, as well as Townshend's first guitar lead of the evening.

"Drowned," another *Quadrophenia* song, followed—however, on stage it was sung by Townshend (as opposed to the LP's version with Daltrey). Unfortunately, because of the intensity of the song, Townshend's high voice was too weak for it and didn't quite work. The song was only salvaged by a bluesy jam between Townshend on guitar and Daltrey on harmonica.

The crowd went berserk as Daltrey sang the opening lines of "Behind Blue Eyes," which proved to be one of the highlights of the evening, especially during its explosive middle section. The group then broke into the infectious "Sister Disco," which was made even more exciting with a dazzling display of revolving spotlights. The group's 1978 hit, "Who Are You," followed and was played with unrelentless enthusiasm.

Then it was back to *Quadrophenia* for "5:15," followed by the Who's first selection from *Tommy*. The familiar "Pinball Wizard" sounded better than ever, and was segued into "See Me, Feel Me," in which the group brought up the house lights to expose a sea of hands clapping along with the music. The song, however, with its repetitive ending, was somewhat anti-climactic in the middle of the show.

Daltrey then put his arm around Townshend and the two sang "Long Live Rock" together. A blast from the past came as they flew into an audience singalong medley of "My Generation" and "I Can See For Miles." And before we could jump to our feet in response, they were already into their next number, "Underture," from *Tommy*.

In what was undoubtedly the most spectacular flash bomb explosion I have ever seen in my life (Kiss, eat your hearts out), the group began the awesome "Won't Get Fooled Again." Performed with true power and conviction, it appropriately closed the show.

After what seemed like an endless wait, they returned to play a rocking medley of "Summertime Blues," "Young Man Blues," and a new number, "You Can't Do It Alone." Daltrey and Townshend each said a simple "Thank you and goodnight," and the evening was over.

Walking out of the auditorium, I overheard a fan talking to one of his friends. "Man," he said, shaking his head in astonishment, "the Who are what rock and roll is all about."

Never were truer words spoken. M.I.



MARK MANDER



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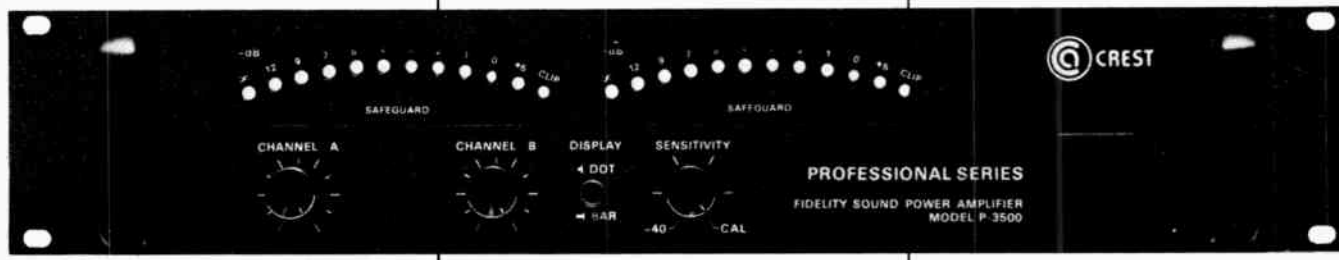
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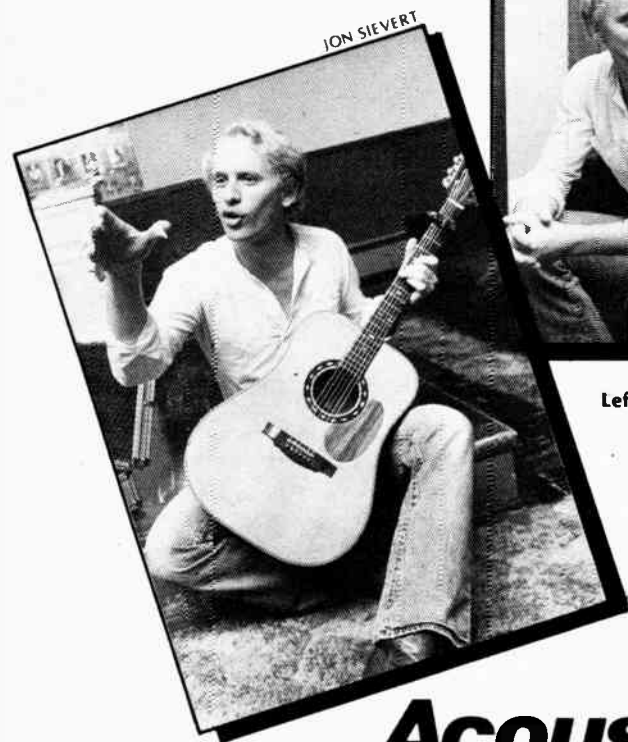
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# Live:



JON SIEVERT



JON SIEVERT



MARK MANDER

Left: Will Ackerman; Above: Ackerman, Robbie Basho and Alex deGrassi; Right: Stefan Grossman and John Renbourn; Above Right: Ralph McTell



JON SIEVERT

## Acoustic Guitar EXTRAVAGANZAS

by Dan Forte  
SAN FRANCISCO

An acoustic guitarist's dream. Two intimate concerts, only four nights apart, featuring six of the most distinctive fingerstylists in contemporary folk music—each with a brand-new album. And at the acoustically and aesthetically beautiful Great American Music Hall, no less.

The "Windham Hill Guitar Extravaganza" of December 5 (which was being recorded for a possible live anthology) showcased the Stanford-based label's three main artists—Robbie Basho, Alex deGrassi, and Windham Hill's founder and president, Will Ackerman.

Likewise, December 9 featured John Renbourn and Ralph McTell both presently recording for another independent Bay Area label, Berkeley's Kicking Mule, along with the company's co-founder, Stefan Grossman.

Robbie Basho opened the first show, with six guitar ragas from his two Windham Hill LPs, *Visions of the Country* and *Art of the Steel-String Guitar*, alternately playing a Wyman 6-string and a 120-year-old Yolapa 12-string. The material from *Visions*, mostly folk and country oriented, showed why players like Ackerman and deGrassi have often mentioned Basho along with John Fahey as a primal influence; the selections from the just-out *Steel-String Guitar* revealed a more classical approach, as in "Pavan India."

Listening to Will Ackerman play it's easy to see why Pat Metheny once

described him as "somewhere between Leo Kottke and Ralph Towner, but not derivative of either one. What impresses me about him is his originality." Although Metheny plays electric jazz and Ackerman acoustic folk, both composers share a strong sense of structure and a remarkable knack for coming up with a catchy melody.

While kids by the score were buying fingerpicks and trying to out-Kottke each other, Ackerman was apparently experimenting with open tunings and writing some very memorable original tunes. What resulted is a romanticism not to be found in any other acoustic guitar instrumentalist I can think of. Playing a custom-made Kellie Johnson 6-string, the 30-year-old ran the emotional and guitaristic gamut, from the spirited "Seattle" (from his latest album, *Childhood and Memory*) to the serene "Bricklayer's Beautiful Daughter" (from *It Takes A Year*).

While the similarities between Ackerman and Alex deGrassi are too obvious to overlook (they even resemble each other physically), each has developed his own individual style. It has often been observed that Ackerman is the stronger composer, while deGrassi is the more technically proficient fingerpicker, but that is a bit of an overgeneralization. While Ackerman may make light of his technical prowess, he can tear through a tune like "Rediscovery of Big Bug Creek" (introduced with: "I can't tell this from John Fahey; I don't know if you can") with the best of them. And

deGrassi is anything but a slouch as a composer, as he illustrated in his closing set with tunes like "Turning: Turning Back" (the title tune from his first album) and "Causeway" (from his more recent *Slow Circle*).

Throughout his set, the 27-year-old deGrassi alternated between a Guild F-50 and a custom Ervin Somogyi cutaway model made of Indian rosewood and sitka spruce. While he did display dazzling dexterity, it was the subtleties and intricacies of his technique that were impressive, rather than any unnecessary flash and showmanship.

While it is somewhat unfortunate that America's greatest living ragtime guitarist, Stefan Grossman, is currently residing in England and only tours the States once or twice a year, America's loss has definitely been the guitar world's (especially Kicking Mule's) gain. The transatlantic move not only resulted in one of the most fruitful guitar duos in recent history, (with John Renbourn), it has added more and more acoustic guitarists to KM's already bulging catalog (which now includes Ralph McTell).

In 1978 Grossman teamed his blues and ragtime licks with the neo-classical stylings of perhaps Britain's most popular folk guitarist, John Renbourn. Not only did their premier LP, *Stefan Grossman and John Renbourn*, bring the latter out of semi-retirement, it resulted in one of the most creative collaborations in modern folk music. If anything, their new release, *Under The Volcano*, indicates even greater individual and collective

growth, as the two continue to exchange musical and cultural ideas.

Although Grossman was born some 34 years ago in New York City, the sold-out Great American Music Hall crowd welcomed him like a hometown boy made good. His opening set owed as much to his formative years under the tutelage of bluesmen like Rev. Gary Davis as it did to his time spent in England. Playing a one-time Prairie State 6-string (actually an f-hole model that Berkeley's Jon Lundberg made into a flat-top), Stefan sounded equally at home playing the Scottish pipe tune "Boys, My Money's All Gone" as he did singing "Cocaine Blues," which he learned from Rev. Davis. The biggest highlights of the set were the dissonant "Tight Rope," an ode to the consciousness-altering effects of Newcastle brown ale, and a medley of ragtime instrumentals, proving once and for all who is king of the "six-string piano."

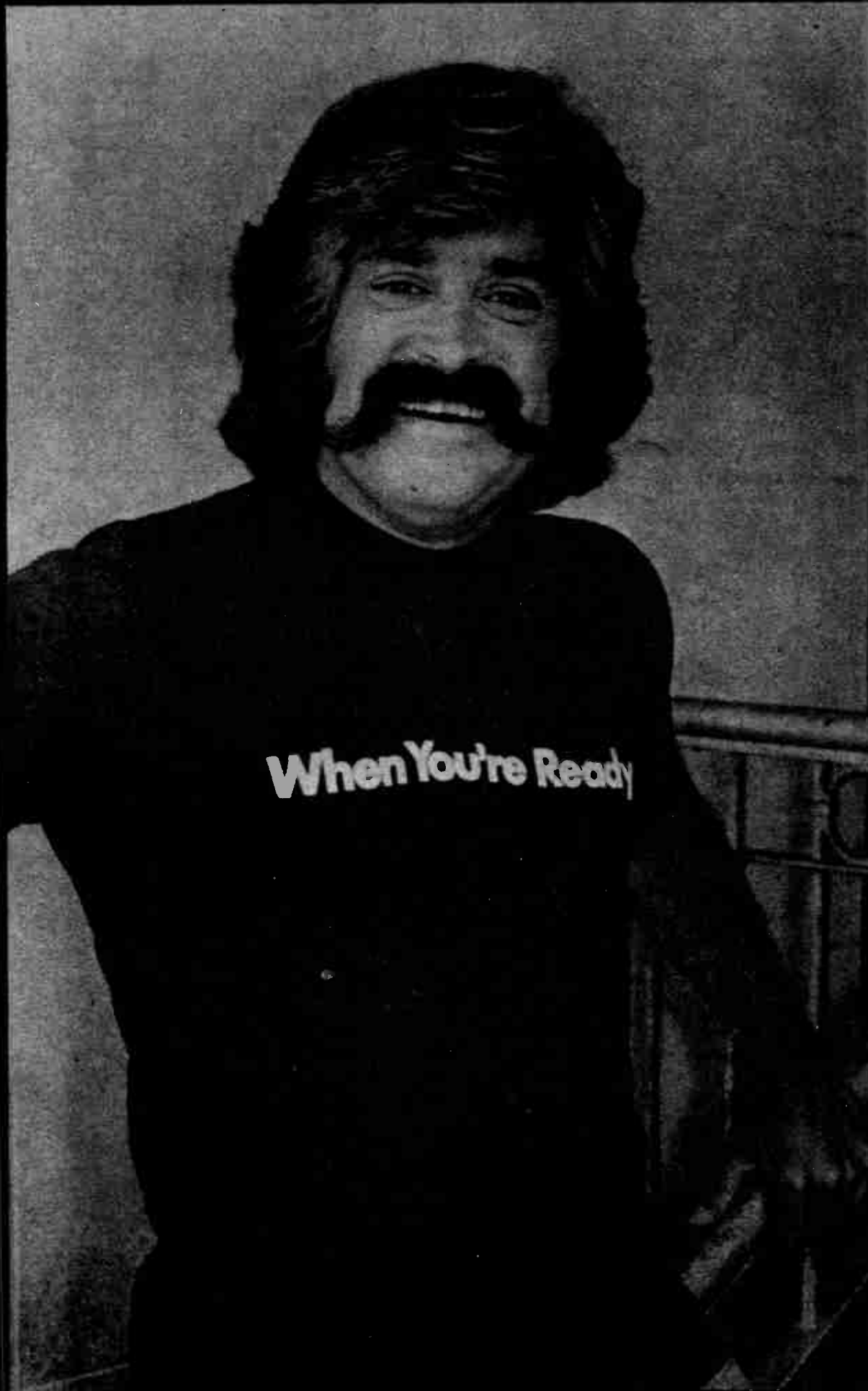
Grossman introduced England's Ralph McTell as a "singer/songwriter," and while that term is an accurate description of what McTell does, it seems almost insulting to lump him under the same banner as the hum-and-strum that passes for songwriting these days.

McTell is an extraordinary singer, with a deep, resonant baritone, and a tunesmith nonpareil. He writes simple, moving songs on a variety of subjects—not just unrequited love. His set included "Run, Johnny, Run," about a jail break, "When I Was A

Cont'd on page 54



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## Acoustic Guitar EXTRAVAGANZAS

Cont'd from page 52

Cowboy," about childhood fantasies, and "Michael in the Garden," about an emotionally disturbed boy ("They cannot see what Michael sees"). McTell is also an excellent ragtime guitarist, as he illustrated with Blind Blake's "Too Tight Rag," played on his Gibson J-45.

A phrase that often accompanies any mention of McTell's name in this country is "he's hardly known over here, but he's huge in England." McTell is probably the only artist to go from singing on the street in front of London's Royal Albert Hall to playing to sell-out houses inside Royal Albert Hall. The troubador's following in the States is, admittedly, still cult status, owing to his infrequent visits here, but it is definitely growing in strength as well as in number. Midway through his set, McTell asked if there were any requests and was barraged with dozens of song titles, some of which have never been released in America.

The crowd wouldn't let Ralph leave without singing his touching "Streets of London," which has been recorded by some fifty singers world-wide (including Cleo Laine and Glenn Campbell) and is the title track of his new Kicking Mule release (actually a reissue of his European Transatlantic LP which made the tune a hit in England a few years ago).

Closing the evening's festivities was the former leader of the eclectic Pentangle, John Renbourn. A true display of guitar virtuosity, Renbourn's set included his well-known arrangement of Booker T. Jones' "My Sweet Potatoe," Archie Fisher's "Lindsey," a medieval "English Dance," and "Great Dreams From Heaven," from the repertoire of Bahaman guitarist Joseph Spence.

John's delicate fingerpicking (on a Guild D-50) was then joined by Grossman (this time employing a flatpick) for a fiddle tune medley of "Bonaparte's Retreat" and "Billy in the Lowgrounds" and a variation on Charles Mingus' "The Shoes of the Fisherman's Wife Are Some Jive-Ass Slippers." For the evening's finale, McTell returned (with a harmonica), and the trio jug-banded their way through "Take A Whiff On Me."

Unfortunately, their tour only allowed for one-nighters in various major cities, but the reception they received should bring them back soon—either separately or together. In the meantime, check the Folk and Guitar bins at your neighborhood record store for their new albums, or write to Kicking Mule (Box 3233, Berkeley, CA 94703). And while you're at it, check out what's on Windham Hill (Box 9388, Stanford, CA 94305). There aren't enough labels like these two around, and they deserve your support. **M.I.**

# Live: Kitty Hawk



(L to R): Paul Edwards, Richard Elliot, and Dan Bortz.

by Melodie Bryant.  
LOS ANGELES

If you are bored with hearing some of technology's finest innovations used for the same old cliches, check out Kitty Hawk. You will be in for a pleasant surprise.

If Kitty Hawk were to be singled out for any one aspect, it would be for its instrumentation. To start with, it is fronted by two Stick players. The electric Stick, invented by Emmett Chapman, is a 10-stringed fretted instrument whose touch sensitivity combines the contrapuntal and harmonic advantages of a keyboard with the pitch bending possibilities of a guitar. It is a rare bird indeed. Rarer still, the person who can play it. But Kitty Hawk's Stick players also double on voice (Paul Edwards), as well as cello and guitars (Dan Bortz). Add to that a drummer and a sax player who also doubles on lyricon, and you have a four-piece band whose endless combinations of sound approach orchestral proportions.

In the band's eight-tune set at the Baked Potato, November 27, no two consecutive tunes had the same instrumentation, making for a continual variety of sounds. Cello contrasted nicely with Stick and sax; lyricon blended well with guitar and Stick. But most impressive were the pieces involving two Sticks. As anyone who has heard the instrument will tell you, one Stick by itself already sounds like

a band. Put two together, and you may easily have too much of a good thing. But under the careful supervision of Bortz and Edwards it works just fine.

This is in part due to their different orientations as players. While Edwards prefers a more electronic approach, putting his Stick alternately through MXR Phase 90, Yamaha Analog Delay and Echoplex, Bortz goes for a more natural sound, using no effects. Orchestration plays no small part, however; and I was informed afterwards that some of these pieces take up to three months to achieve their final form.

Equally refreshing was the band's material. From the Santana-like "Jazz Song," where cello was alternately plucked and bowed, to "Big City," whose polyphonic bass line was somewhat reminiscent of Stanley Clarke's compositions, Kitty Hawk demonstrated that they are one band which knows how to mine the possibilities in the realm of jazz fusion. But the showstopper was "Forgotten Folksong," a Stick and cello duet. Here the sparse orchestration highlighted Kitty Hawk's inventive approach towards timbre.

If you think cello is nothing more than a rich man's bass, you should hear what Dan Bortz gets out of it.

From single-note plucking to well executed passages of double stops to great rolling chords, he wrenched sounds out of the instrument which fell like welcome rain on the parched ears of electronic musicians. The contrast between cello and Stick was inspired.

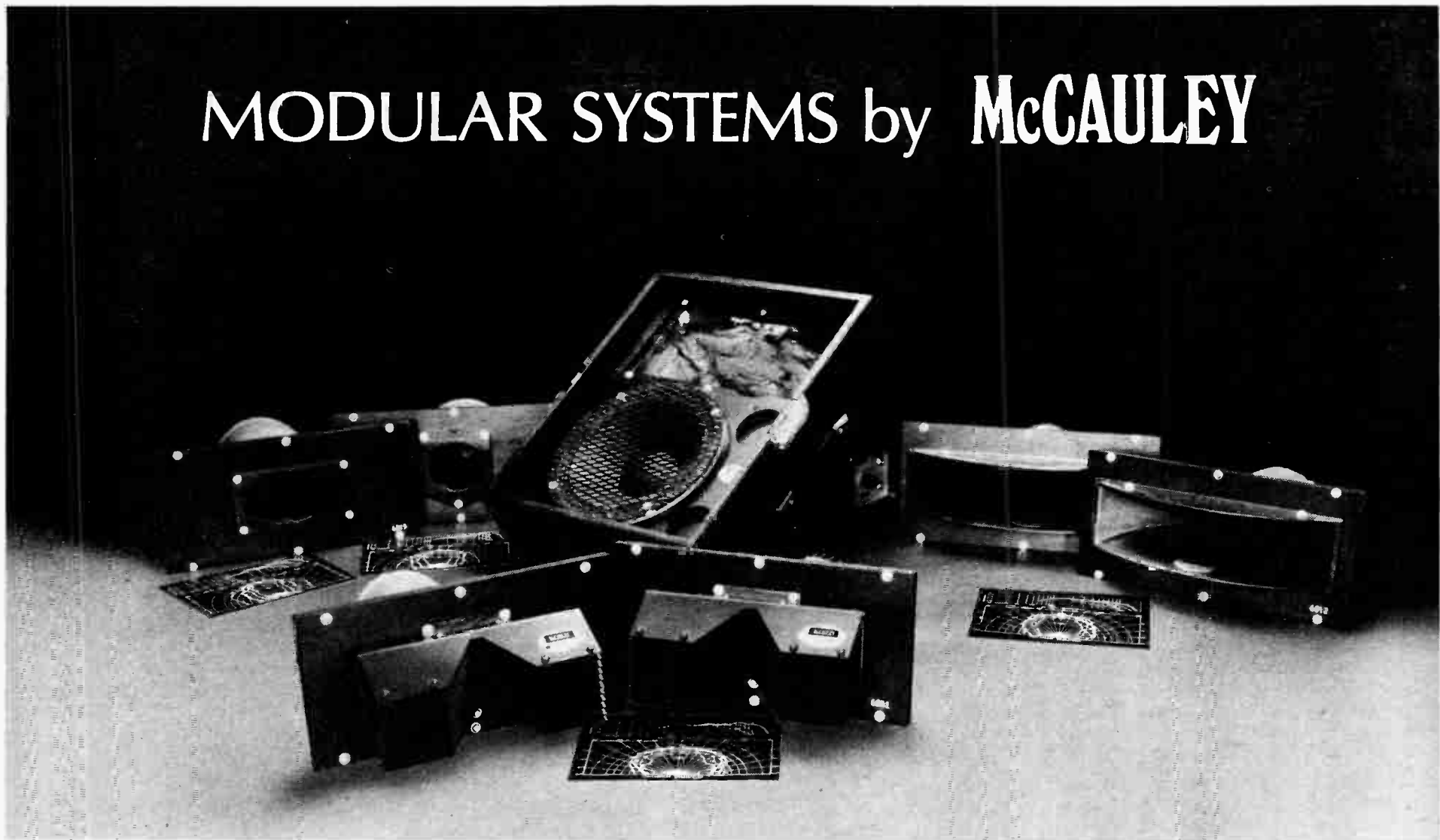
For those with more futuristic tastes, Bortz's work on a fretless Gibson was a tasty lesson on what to do with an old guitar you don't want to throw out. The instrument, which according to Dan is played without a pick in a halfway blend of bass and classical guitar techniques, consists of a Gibson on which he filed the frets away. It was subsequently modified by Valdez in Los Angeles so that the fretboard was tilted to give it more ring. And ring it did on "Piper's Room," where Bortz's playing combined the harmonic wealth of Pat Metheny with some of the solo stylings of Jaco Pastorius in a brief moment which left the audience breathless.

If Bortz and Edwards kept the audience entertained with their sonic inventions, tenor and alto saxophonist Richard Elliot and drummer Michael Jochum did their best to keep up. Elliot's work on lyricon and Echoplex was competent, and if his energy on sax outstripped his imagination now and then, he was no loss to the show on stage. Jochum did not fare quite as well. While his playing supplied the necessary drive, it was limited in scope. This was most noticeable on "Chinese Firedrill," a high energy number with virtuoso passages, where his lack of rhythmic vocabulary was painfully evident. Additionally, Kitty Hawk as a whole was not always rhythmically tight, undermining some of the impact of the band, especially on the uptempo numbers.

Most of the audience didn't notice, however; and generally speaking, the band's strengths outweigh its weaknesses. As one of the only groups to date to make full use of timbre both in traditional and in newer instruments, Kitty Hawk is making the first step at closing the gap between technology and imagination, and in the process helping to rid both jazz and rock of the cliches we are all so tired of. As such, the group (recently signed to EMI America) is well worth keeping an eye on. **M.I.**



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# Live:

# SEA LEVEL



JON SEVERT



MARK MANDER



MARK MANDER

Above: Jimmy Nalls.

Top: Chuck Leavell;  
Bottom: Davis Causey.

by Sam Borgerson  
NASHVILLE

If jazz-rock-R&B fusion with a side order of grits and a sprinkling of pain is your kind of dish, then Sea Level's Nashville concert, November 29, was cooked up just for the likes of you. But personally, although I lapped up the tasty guitar licks and succulent arpeggios that spiced this potpourri of influences, I could have easily foregone the merciless assault on my eardrums.

Whatever reservations and condemnations may follow, please note that no calumny whatsoever should

be heaped on the heads of Sea Level's six more-than-competent musicians. They delivered as much as all of us—at least those who had heard some of their recordings—had any right to expect. Oh, I'm sure there were some who expected shades of Allmans past or present to appear, spiritually or physically, and whip some straight-ahead swamp-rock into the two renegade ABB members and their four new companions. They may have left disappointed. The rest of us were amply entertained by a set of polished and, in brief flashes, inspired musicianship.

Perhaps we could blame the band's collective total of 60 numb fingers, brought on by mid-20 temperatures outside, for the stiff, sluggish start. The first songs felt like they were pushing the music, clamping down on it, instead of just letting it roll. But after a couple of tightly arranged instrumentals and some brave vocal numbers drawn from their latest LP (on the stumbling Capricorn label), that South Georgia feeling oozed back between the notes. Standing

center stage, guitarist Jimmy Nalls focused the energy of the band, as he picked, chopped, squeezed and wrung the notes out of his Stratocaster. Second guitarist Davis Causey matched him lick for lick, stepping into the spotlight on several occasions to spit out some searing and soaring sustain leads on his Telecaster. Some of those notes were hot enough to add extra frizz to Hendrix's departed bonnet.

The keyboard crew, Randall Bramblett and founder/namesake Chuck Leavell, flanked the stage. Leavell staked out the Yamaha 6' Conservatory Grand and the Rhodes as his home turf, while Bramblett spent most of the evening behind a Hammond B-3 topped by a Hohner Clavinet and a Multivox synthesizer. Although keyboards dominate much of their recorded work, they seem to give ground to the guitars in concert, perhaps because Bramblett and Leavell are called on for most of the vocal chores. I use the word "chores" because, alas, neither is gifted with anything even close to a soul-stirring voice.

And that's a big part of Sea Level's difficulty in generating a mass following. It's the voice that usually shapes the personality of a group, and these guys—virtuoso players that they are—don't come across with any cohesive, recognizable personality. They can do just about everything, musically, that the Doobie Brothers do. But they don't have a Michael McDonald. Or even a Pat Simmons, for that matter.

The closest thing Sea Level has to a personality is their drummer, former Wing-man Joe English. Alternately beaming like a cherub and grimacing like a hippopotamus with hemorrhoids, English is a joy to watch. He plays "backwards"—keeping the backbeat with his right hand and riding cymbals mostly with his left while behind a right-hand setup—which could be the secret ingredient in his punchy, richly syncopated style.

Judging from recordings, bassist Lamar Williams perfectly complements English down at the Sea Level bottom. In this concert, though, I could hardly hear him. It could have been the tone of his Ibanez bass, a problem with his pre-amp or amp, or the EQ in the mix. Or, more likely, it could be that he was buried in the general Sturm und Drang.

Now comes the time to gripe about the sound. The hall, Vanderbilt University's brand new 1,200-seat Underwood Auditorium, presented the lesser component of the problem. The acoustic design seems very good, but the walls are all bare brick. This may be fine for lectures and plays, but at high volumes this hard surface can start ringing in the high midrange region.

The reinforcement system, supplied by Nashville's Carlo Sound, was a problem only because its ample power was abused by the band's traveling mixer, who was stationed at the deadest spot on the floor. At all but the highest levels, and with all but the most extreme transients, the sound was delivered clearly by the Harrison 32-channel Alive mixer, banks of Phase Linear power amps, and stacks of JBL and Community speakers.

Toward the end of the set the Georgia boys got down to business, ascending from mechanical precision to an astral space-funk groove. In their last instrumental jam, English bashed out a gut-thumping solo, Bramblett spiked their air with crystalline notes from his alto sax, and Leavell launched his Rhodes into swirling orbits by piping it through a Multivox Full-Rotor.

The set closed with "Georgia Fool," a tune that opened with Leavell romping on barrelhouse piano and closed with Nalls pushing to a crescendo with gutsy slide work on a Les Paul. Tommy Crain of the Charlie Daniels Band joined them for an encore, and the whole crew stomped into "What Kind Of Love Is This?" The Allman Brothers hopefuls finally got a taste. Tommy Crain is no Dickie Betts, but their common flat-picking heritage was enough to spark some rapid-fire exchanges with Nalls' slide that were reminiscent of those bygone, halcyon days.

A good show. And my ears stopped ringing less than 24 hours afterwards. No complaints. **M.I.**



# Guitars & Accessories

New Products  
for 1980



**ARIA MUSIC (USA) INC.**  
"Aria Pro II Electric Guitar Model RS750"

**ARIA MUSIC (USA) INC.**  
**ARIA PRO II ELECTRIC GUITAR MODEL RS750**  
1201 John Reed Ct. City of Industry, CA 91745  
(213) 968-8581

Contact: Yoshi Arai V.P.

Date Product Introduced: January 1980.

**Product Description:** Solid body electric guitar. Long scale neck—24 frets. Alternate 5-ply laminations of maple and walnut run through ash body. Heelless and contoured cutaway body. Two single coil pickups and one slave pickup. Solid brass nut, bridge and tailpiece, pickup selector switch, master volume control, front main tone control, rear main tone control, mix-sound switch and phase reversal switch.

**Recommended Usages:** The new Aria Pro II RS series electrics were designed to create active and powerful sounds.

**Basic Specifications:** Body: Ash; Neck: alternate maple and walnut 5-ply lamination.

Fingerboard: Rosewood pickups: 2 x RSP-11 single coil and 1 x slave.

Controls: 3 position PU selector switch, 2 x mixsound switches, phase reversal SW, master volume, 2 x tone controls.

Color: Natural, oak and walnut.

**Suggested List Price:** \$695.00

**B.C. RICH**

\*  
4770 Valley Blvd., #117, Los Angeles, CA 90032  
(213) 222-8167

Contact: Mal Stich.

Date Product Introduced: January 1980.

**Product Description:** B.C. rich introduces its line of Bolt-on necks. Available in mahogany bodies, maple necks, rosewood fingerboards. hardware includes DiMarzio pickups, Grover machine heads, and Badass bridge. The Bolt-on line will include Bich, Mockingbird and Eagle bodies.

\* At this time B.C. Rich is running a contest to name the Bolt-on

line of guitars. Send a 3" x 5" card with your entry to B.C. Rich. Contest ends Jan. 31, 1980. 1st prize is a Bich Bolt-on.

**Recommended Usages:** Music.

**Basic Specifications:** Scale length 25½", 21 frets.

Width at nut 1¾", width at 12th fret 2".

Electronics include 2 volume, 1 tone and pick up selector switch.

**DEAN GUITARS**

**CADILLAC**

2125 Dewey, Evanston, IL 60201

(312) 475-3326

Contact: Zan Skolnick, Vice President, Marketing.

Date Product Introduced: Fall 1979.

**Product Description:** This super-custom, top-of-the line model, features three DiMarzio specially made pickups, a super-distortion, Super II and PAF, providing an amazing range of sounds, plus powerful pre-amps. Available in opaque black and red with 7-ply binding, block inlays in the ebony fingerboard, and gold-plated hardware. Body is one solid piece of choice mahogany and a mahogany neck.

**Recommended Usages:** A premium stage and studio guitar, designed for pros.

**Suggested List Price:** \$1,399.00 plus case.

**DEAN GUITARS**

**GOLDEN ELITE**

2125 Dewey, Evanston, IL 60201

(312) 475-3326

Contact: Zan Skolnick, Vice President, Marketing.

Date Product Introduced: Fall 1979.

**Product Description:** One piece mahogany body, mahogany neck, with cream binding over a mellow walnut finish. Two DiMarzio PAF pickups, specially made for Dean, give a lighter sound than the standard Dean line, which features an aggressive, hot rock sound. The DiMarzios are embedded directly into the wood; this plus other construction features give the Golden Elite the same fabulous sustain Deans are noted for. All hardware is gold plated, including pickup covers.

**Recommended Usages:** For stage or studio, gives a fine, light sound.

**Basic Specifications:** One piece mahogany body, mahogany neck, Grover tuning heads, ebony fingerboard dotted with abalone.

Two DiMarzio PAF pickups, specially made for Dean.

Separate volume and tone controls.

Gold plated hardware.

**Suggested List Price:** \$1,099.00 plus case.

**D'ANGELICO D'MERLE**

**SMOOTH ROUND GUITAR STRINGS**

1976 New Hwy., Farmingdale, NY 11735

(516) 293-1199

Contact: Jay Morena, G. Barbenine.

Date Product Introduced: June 1979.

**Product Description:** SmoothRound Guitar Strings are crafted from the finest material available: A shaped Swedish core, special

alloy winding, and a silk wrap at the ball end. The magnetically sensitive alloy winding surfaces are ground and polished to a satin-smooth finish that lets your fingers flow over these strings, not just "rasp" from position to position. Wrap slippage is prevented by the countoured core that bites into the winding.

**Recommended Usages:** For electric guitars to produce crisp clear full tones. Stray vibrations at the guitar tailpiece are hushed by the silk wrapped ball end of each string. To suit the personal taste of the player SmoothRound S-50's offer ultimate smoothness; SmoothRound S-25's offer greater tonal brightness. All these features make a set of D'Angelico SmoothRound Strings the best thing between you and your guitar.

**Suggested List Price:** \$9.00 a set.

**D'ANGELICO D'MERLE**

**SMOOTH ROUND BASS HITS**

1976 New Hwy., Farmingdale, NY 11735

(516) 293-1199

Contact: Jay Morena, G. Barbenine.

Date Product Introduced: June 1979.

**Product Description:** SmoothRound Bass Hits are crafted from the finest materials available: A Swedish steel core, special alloy winding, and a silk wrap at the ball end. The magnetically sensitive alloy winding surfaces are ground and polished to a satin-smooth finish that lets your fingers flow over these strings, not just "rasp" from position to position.

**Recommended Usages:** For electric bass guitars to produce crisp, clear, full tones. Players will be able to eliminate stray vibrations at the tailpiece by using SmoothRound Bass Hits because the overtones are hushed by the silk wrapped ball end of each string. SmoothRound S-50's offer ultimate smoothness; SmoothRound S-25's offer greater tonal brightness. SmoothRound Bass Hits are the best thing between you and your bass.

**Suggested List Price:** \$35 a set.

**DIMARZIO MUSICAL INSTRUMENT PICKUPS, INC.**

**ACOUSTIC MODEL QUICK MOUNT PICKUP**

1388 Richmond Terrace, Staten Island, NY 10310

(212) 981-9286

**Product Description:** The Quick-Mount is a high output, humbucking pickup which can be installed easily in most acoustic guitars. It has six adjustable pole pieces to compensate for different string types. The Quick-Mount is fully shielded, and comes complete with Belden cable and a Switchcraft metal jack. Model DP-132.

**Recommended Usages:** For installation in steel-string, acoustic round-hole guitars.

**Basic Specifications:** Inductance 0.834 Henries.

Impedance at 100 Hz 3.75K.

Impedance at 1,000 Hz 6.43K.

Impedance at 2,500 Hz 13.63K.

DC ohms 3.75K.

**DIMARZIO MUSICAL INSTRUMENT PICKUPS, INC.**

**X2N POWER PLUS**

1388 Richmond Terrace, Staten Island, NY 10310

(212) 981-9286

Date Product Introduced: October 1979.

**Product Description:** Humbucking pickup designed specifically for solid-body guitarists playing music requiring maximum output and harmonic distortion. The S2N comes with 4-conductor wiring, to allow all tonal options. Model DP-102.

**Recommended Usages:** For use in solid body electric guitars.

**Basic Specifications:** Inductance 10.33 Henries.

Impedance at 100 Hz 15.58K.

Impedance at 1,000 Hz 66.50K.

Impedance at 2,500 Hz 162.9K.

DC ohms 14.5K.

**DIMARZIO MUSICAL INSTRUMENT PICKUPS, INC.**

**CUSTOM BODIES**

1388 Richmond Terrace, Staten Island, NY 10310

(212) 981-9286

**Product Description:** Guitar and bass bodies in a variety of configurations and pickup formats. The bodies are compatible with Fender type necks, and can be equipped with DiMarzio hardware. Bodies are supplied with back plates and come ready for final sanding and finishing.

**Recommended Usages:** For construction of custom instruments.

**Suggested List Price:** Range from \$145.00 to \$270.00, depending upon body style, wood type and binding.

**GIZMO, INC.**

**BASS GIZMOTRON**

P.O. Box 139, Rosemont, NJ 08556

(800) 257-947

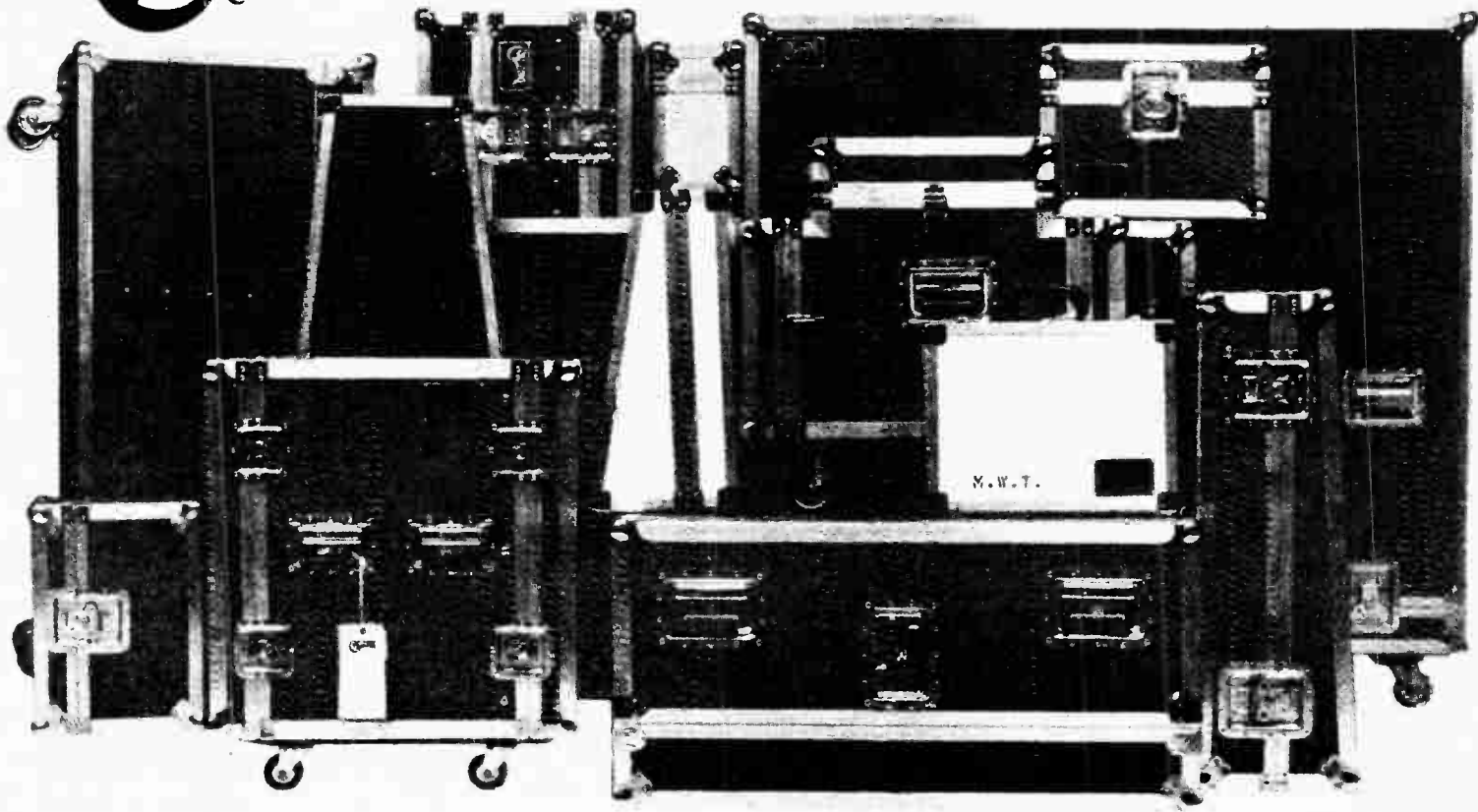
Contact: Michael Markowitz, General Manager.

Date Product Introduced: June 1979.

**Product Description:** The Bass Gizmotron is an electro-mechanical bowing instrument. It employs a series of round, semi-



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flexible wheels with small triangular teeth which, when activated by pressing a key, rotate against the string and act as a circular bow. The sound produced—which is infinite in duration if desired—amazingly resembles a bowed string bass. The mounting on the bass is accomplished through a universal mounting hardware system which uses double sided tape.

**Recommended Usages:** The Bass Gizmotron expands the range of the electric bass into the realm of the string bass and beyond. It enables electric bass players to produce string bass sounds with virtually no technique required, as well as getting infinite sustain for the first time. It mounts on any electric bass. In the studio it can create excellent bass and cello tracks and on stage it adds an exciting dimension of string sounds and effects new to the electric bass.

**Basic Specifications:** The Bass Gizmotron weighs approximately 10 ozs.

Comes complete with power supply, mounting hardware and carrying bag.

**Suggested List Price:** The list price has not been finalized but will be in the range of \$285.00.

#### GUILD MUSICAL INSTRUMENTS

##### B-401 BASS

225 W. Grand St., Elizabeth, NJ 07202  
(201) 351-3002

**Date Product Introduced:** January 1980.

**Product Description:** The B-401 has a long-scale, 22 fret maple neck, an ash body with a walnut-laminated top and back and single pickup with battery-powered active EQ, that is controlled by a single mini toggle switch. The bass is playable in either passive or active modes. There is a single volume control that functions in both passive and electronic settings and separate treble and Bass controls that function only in the active mode, providing a wide spectrum of sounds ranging from booming bass to metallic treble. Bass and treble response is  $\pm 15$  dB with the active EQ.

**Basic Specifications:** Body 14 $\frac{1}{4}$ " (36.2 cm) wide, 17 $\frac{3}{4}$ " (45.1 cm) long, 1 $\frac{3}{8}$ " (3.5 cm) thin.

Overall length 46 $\frac{1}{4}$ " (117.5 cm).

Scale length 34" (86.4 cm).

Neck width at nut 1 $\frac{3}{8}$ " (4.1 cm).

**Suggested List Price:** \$625.00

#### MIDCO INTERNATIONAL

##### LOTUS L1500 and L-1000

908 W. Fayette, Effingham, IL 62401  
(217) 342-9211

**Contact:** Barry A. Martin, Product Specialist.

**Date Product Introduced:** December 1979.

**Product Description:** The Lotus Guitar Models feature a "straight-thru" neck which runs the length of the instrument. Curved rosewood fingerboard on maple neck. Two-tone white ash and walnut body. Features brass top nut and heavily chromed hardware. Comes with hardshell case.

**Suggested List Price:** \$629.95 for either.

#### MODULUS GRAPHITE PRODUCTS

##### BLACKKNIFE SYSTEM

3515 Haven Ave., Menlo Park, CA 94025  
(415) 367-0375

**Contact:** Geoff Gould, President.

**Date Product Introduced:** October 1979.

**Product Description:** In response to many inquiries about the best components to accompany our graphite "strat" replacement neck, we have assembled top quality components from top to bottom. Mounted in a special laminated hardwood body, the Modulus/Alembic Blackknife graphite neck exhibits classical beauty as well as the ultimate in sound qualities.

**Recommended Usages:** Excellent for studio use where a flat response and maximum presence are desired. For the same reasons, plus maximum sustain, this guitar is excellent for the stage in either the lead or rhythm mode. For the touring musician, the environmental stability is unequaled. The graphite neck needs no truss rod, and will not warp with time.

**Basic Specifications:** Schaller machines, Bartolini strat-style pickups, Stars Guitars Startracks bridge, brass hardware, Raytheon knobs, Markley strings.

The neck comes with an 11" radius phenolic fingerboard with jumbo frets and mother of pearl position markers.

The body is rear routed to expose the body.

**Suggested List Price:** \$1500 without tremolo, and \$1550 w/tremolo.

#### OVATION INSTRUMENTS, INC.

##### UK 2

1330 Blue Hills Ave. Ext., Bloomfield, CT 06002  
(203) 243-1711

**Contact:** Bill Davis, Vice President of Marketing.

**Date Product Introduced:** June 1979.

**Product Description:** The UK 2 offers the most advanced thinking in electric guitar design for ultimate sound. The pickup system is composed of two dual bar magnet pickups which permit the

# Guitars & Accessories

strings to be closer to the pickups without hampering string vibrations. The result is more powerful output. Each pickup incorporates Ovation's exclusive SPS switch which can instantly transform the guitar from a mellow, humbucking sound to a hotter, single-coil sound. A pickup selector switch allows separate or combined pickup response. In addition, each pickup has individual volume and tone controls. Various combinations of these features give unlimited tonal possibilities. The light-weight, well balanced UK 2 offers unsurpassed comfort with its arched top and back.

**Basic Specifications:** Body: Urelite® urethane on aluminum framework.

Single-cutaway, tri-mounted bridge adjustable for action and intonation.

Neck: Two-piece Honduras mahogany, adjustable tension rod, bound ebony fingerboard.

24 nickel-silver frets, 11 inlays.

Ovation/Schaller deluxe gold machine heads.

Scale length 24 $\frac{3}{4}$ ".

Electronics: Two volume and two tone controls, one each per pick-up.

Three position toggle selector switch.

Two series/parallel selector switches.

Stereo/mono capabilities.

Two high-output: double coil humbucking pickups with two  $\frac{1}{8}$ " alnico bar magnets per pickup.

**Suggested List Price:** \$650.00 without case.

#### OVERLEND

##### EMG PICKUPS (POWER SERIES)

P.O. Box 4394, Santa Rosa, CA 95402  
(707) 525-9941

**Contact:** Rob Turner.

**Date Product Introduced:** September 1979.

**Product Description:** Power Series Models also use the internal pre-amp (IIP) Dual pickup points are used under the strings for increased mid-range response, high output, very low noise ( $-95$  dB typ.). Power Series Models are available in either ceramic or Alnico magnet versions. Models available:

EMG-HC, MHC (Dual-Ceramic, Humbucking & Mini-HB replacements).

EMG-HA, MHA (Dual-Alnico, Humbucking & Mini-HB replacements).

EMG-SA Strat 3 pickups, Alnico version.

These models require a +18 volt supply due to output capabilities. Include standard features, no buzz or hum, low-Z out, no string grounding.

**Recommended Usages:** These Power Models have rock and roll written all over them. Ceramic models have good string definition, with a good mid-range response, strong, cut-through tone. The Alnico models are warmer sounding, and have a slightly lower resonant frequency than ceramic models, accenting mid-range response without losing high frequency response. As with all EMG Pickups, studio or live performance is no problem, console or amp direct. Free from hum, free from microphonics and squeals.

**Basic Specifications:** Output Specifications: Individual Strings: 0.5V RMS.

Full Chords: 0.7V RMS.

Transients: 4.0V peak.

Noise:  $-95$  dBV.

Current reg. @ +18 volts 2.0ma.

**Suggested List Price:** EMG-HA, MHA \$97.00; EMG-SA \$195.00; EMG-HC, MHC \$94.00.

#### OVERLEND

##### SUPPORT ELECTRONICS, EMG SYSTEMS

P.O. Box 4394, Santa Rosa, CA 95402  
(707) 525-9941

**Contact:** Rob Turner.

**Date Product Introduced:** September 1979.

**Product Description:** Products include, pi2 phase inverter, pi3 phase/selection inverter, and ES-18 External Power Supply. pi2 is a phase reversing switch, which actively reverses the phase of any EMG. Model pi3 has a 3 position switch allowing #1 Pickup on, #2

Pickup off, #3 Pickup on, out of phase. Typical of the Strat set-up. The ES-18 is an External Power Supply designed for all EMG installations, and can be used without any modifications to the wiring. +18 volt IC regulated, 50ma capability, short circuit protection. Model pi2 is available with a gain trimmer for use as a boosting pre-amp.

**Suggested List Price:** PI2 \$20.00 w/trimmer \$25.00; PI3 \$20.00; ES-18 \$100.00

#### ROCHE-THOMAS COMPANY

##### GUITAR STRAP-DISC-LOCK

6921 Palm Ave., Highland, CA 92346  
(714) 864-1033

**Contact:** Mike Thomas, Gen Mgr.

**Date Product Introduced:** December 1979.

**Product Description:** It seems that the guitar players are looking for a device that will positively keep their guitar strap from accidentally slipping off their guitar. Strap locks are made from materials such as simple "pieces of leather" to complicated "metal quick-release pins". These devices almost require a degree in engineering to understand and a machine shop to install. Our Strap-Disc-Lock is simple and durable. No modification to the guitar is required—operation is effortless, yet very effective... fits standard and most replacement end buttons.

**Recommended Usages:** Recommended for troubled guitar players!!!

**Basic Specifications:** Made from engineered thermal plastic.

**Suggested List Price:** \$2.98 ea.

#### SAGA MUSICAL INSTRUMENTS

##### ST-20 SAGA DELUXE ELECTRIC GUITAR KIT

P.O. Box 2841, South San Francisco, CA 94080  
(415) 588-5558

**Contact:** Richard L. Keldsen, President.

**Date Product Introduced:** December 1979.

**Product Description:** The Saga ST-20 Deluxe Electric Guitar Kit comes with everything needed to build a professional quality instrument at a savings of 50%. Features include: solid ash body, maple neck with rosewood fingerboard and adjustable truss rod and pearl position markers. DiMarzio SDS-1 pickups, deluxe tuners, bridge and bridge cover. Complete assembly and finishing instructions are included. Parts are interchangeable with those of the famous Fender Stratocaster guitar.

**Recommended Usages:** All Saga Guitar Kits are easily assembled. No woodworking or electrical skills are needed. The ST-20 Kit allows the novice musician to build a quality instrument at a reasonable price, and the professional musician to custom-build an instrument to his personal specifications.

**Suggested List Price:** \$259.00

#### SIERRA MFG. CO.

##### "MASTER SERIES" SIERRA PEDAL STEEL GUITARS

5635 S.E. 111th Ave., Portland, OR 97266  
(503) 761-9632

**Contact:** Don Christensen, President.

**Date Product Introduced:** September 1979.

**Product Description:** The Sierra Master Series is a true E9th/B6th tuning. The traditional restrictions of universal tunings are eliminated with Sierra's exclusive "Change-Lok." The "Change-Lok" eliminates the need for double neck pedal steels, thus giving the player more versatility on a lighter weight guitar. It is standard equipped with 8 pedals and 5 kneelevers, in an arrangement common to a double 10, so a player doesn't have to re-learn pedal position.

**Recommended Usages:** Steel players wanting ability to achieve maximum music combinations from their instrument and yet have a lighter weight guitar, without sacrificing quality or durability.

**Basic Specifications:** All Sierra Master Series guitars include: 8 pedals, 5 kneelevers, wrist Change-Lok, swing-away kneelever, dual range pickup, tuned to universal E9th/B6th, and case.

**Suggested List Price:** Sierra Single 12 "Master": \$1995.00

Sierra Single Wide 12 "Master": \$2245.00

Sierra Single 14 "Master": \$2195.00

#### SILVER-EAGLE DESIGNS, INC.

##### THE MINSTREL GUITAR STRAP

14850 Oxnard St., Van Nuys, CA 91411  
(213) 786-8696

**Contact:** Lawrence Weisberg, President.

**Date Product Introduced:** December 1979.

**Product Description:** By re-designing the interlocking leather adjustment pieces, Silver-Eagle has created the most adjustable two-piece guitar and bass strap in the world! Available in all top-grain (5 $\frac{1}{2}$ -6 oz.) leather in Regular and Deluxe models. The Deluxe model features comfortable, sturdy 100% cotton braid trim in contrasting color designs which compliment and highlight our earthy leather colors. Features are: adjustability from 56" to 38"; 5 earthy leathers: black, tan, medium brown, dark brown, and reddish brown; handy Pick-Pocket on every strap for picks, slides, capos, etc.; no metal parts to scar instrument; heavyweight nylon thread stitching reinforcement; three popular widths: 2 $\frac{1}{2}$ ", 3", and 3 $\frac{1}{2}$ ".



**Recommended Usages:** The Minstrel Guitar/Bass Strap is adaptable to fit all known 6 & 12 string acoustic guitars, electric guitars and basses. It is the most adjustable two-piece all leather guitar/bass strap being made!

**Suggested List Price:** Model 1225 Regular (all leather, 2½" width): \$14.50.

Model 1230 Regular (all leather, 3" width): \$15.50.

Model 1235 Regular (all leather, 3½" width): \$17.00.

Model 1225B Deluxe (all leather with braid trim, 2½" width): \$16.95.

Model 1230B Deluxe (all leather with braid trim, 3" width): \$17.95.

Model 1235B Deluxe (all leather with braid trim, 3½" width): \$19.50.

For additional information send \$1.25 for full color 10-page catalogue to above address.

**SILVER-EAGLE DESIGNS, INC.**

**THE SILVER-EAGLE/NASTY CORDLESS GUITAR & BASS STRAP**

14850 Oxnard St., Van Nuys, CA 91411

(213) 786-8696

Contact: Lawrence Weisberg, President.

Date Product Introduced: December 1979.

**Recommended Usages:** The Silver-Eagle/Nasty Cordless Guitar & Bass Strap is custom designed for musicians who now use or will use the Nasty Cordless Radio Transmission System. It will adapt to all known electric guitars and basses.

**Basic Specifications:** The Silver-Eagle/Nasty Cordless Strap is available in Regular & Deluxe (w/genuine sheepskin/leather slip-on shoulder pad). Features are: Two-piece strap with adjustability from 56" to 39"; Made from 6 oz. genuine top-grade cowhide; 5 earthy leathers: black, tan, medium brown, dark brown, and reddish brown; handy Pick-Pocket on every strap for picks, slides, capos, etc.; no metal parts to scar instrument; heavyweight nylon thread stitching reinforcement; 3" width for maximum back/shoulder support and comfort.

**Suggested List Price:** Regular Model w/o sheepskin shoulder pad: \$30.00.

Deluxe Model with genuine sheepskin shoulder pad (slip-on): \$35.00.

For additional information send \$1.25 for full color 10-page catalogue to above address.

**SILVER-EAGLE DESIGNS, INC.**

**LA CULEBRA**

**GENUINE EXOTIC SNAKESKIN GUITAR STRAP**

14850 Oxnard St., Van Nuys, CA 91411

(213) 786-8696

Contact: Lawrence Weisberg, President.

Date Product Introduced: December 1979.

**Recommended Usages:** The La Culebra Exotic Snakeskin Guitar Strap is adaptable to fit all known 6 & 12 string acoustic guitars, electric guitars and basses.

**Basic Specifications:** La Culebra: genuine Brazilian Anaconda Snakeskin beaked with top-grain leather with heavy-duty, top-grain leather attachment pieces. Has 3" width for comfort and support. Features are: adjustability to any size; stylish suede covered buckle; handy Pick-Pocket for picks, slides, capos, etc.; Reversible. The La Culebra is available in natural, semi-bleached (colored with markings "spots"), and bleached (colored without markings) in tan, browns, and burgundy tones.

**Suggested List Price:** \$85.00

For additional information send \$1.25 for full color 10-page catalogue to above address.

**SILVER-EAGLE DESIGNS, INC.**

**THE REVERSIBLE EARTHWEAVE II GUITAR STRAP**

14850 Oxnard St., Van Nuys, CA 91411

(213) 786-8696

Contact: Lawrence Weisberg, President.

Date Product Introduced: December 1979.

**Recommended Usages:** The Earthweave II Strap is adaptable to fit all known 6 & 12 string acoustic guitars, electric guitars and basses. Handy Pick-Pockets are a special feature of the Earthweave II. There is one on each side for holding picks, slides, capos, etc.

**Basic Specifications:** The Earthweave II is a 2" wide strap with standard adjustability. Each strap has the following features: Strong fabric weaves, Pick-Pockets, Suede-covered buckle, top-grain cowhide, Reversing guide supplied with every strap.

**Suggested List Price:** Model 200: Two sides of different ethnic woven fabrics with heavy-duty top-grain leather ends, \$9.95.

Model 201: One side of ethnic woven fabric and the other of top-grain cowhide, \$13.50.

Both are reversible.

For additional information send \$1.25 for full color 10-page catalogue to above address.

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New Products  
for 1980

## ARIES MUSIC, INC. ARIES MUSIC SEQUENCE SYSTEM I

35 Congress St., Salem, MA 01970  
(617) 744-2400

Contact: Robert A. Snowdale, President.  
Date Product Introduced: March 1979.

**Product Description:** This sequence system is a 6-module system which contains all the necessary modules to create sequences of unusual complexity and interest. It is a controller system and can be used to control an Aries Music synthesizer or an instrument from any other manufacturer. The system includes a case and a power supply and is designed to function as an independent control system.

**Suggested List Price:** Complete system: Kit: \$1,074.00; Wired: \$1462.00.

AR-331: Kit \$125.00; Assembled \$175.00 Pre-amp, envelope follower.

AR-341: Kit \$258.00; Assembled \$340.00 Dual VCO.

AR-334: Kit \$199.00; Assembled \$299.00 Analog sequencer.

AR-347: Kit \$ 41.00; Assembled \$ 59.00 Patch bay.

AR-335: Kit \$199.00; Assembled \$299.00 Switches.

AR-318: Kit \$ 88.00; Assembled \$133.00 S/H, noise, VC clock.

AR-322: Kit \$ 92.00; Assembled \$132.00 Power supply.

AR-340: Kit \$ 65.00; Assembled \$ 95.00 7-module cabinet.

## ARIES MUSIC, INC. ARIES MUSIC KEYBOARD SYSTEM II

35 Congress St., Salem, MA 01970  
(617) 744-2400

Contact: Robert A. Snowdale, President.  
Date Product Introduced: March 1979.

**Product Description:** The Keyboard System II is the standard Aries Music keyboard synthesizer. It includes more of the standard synthesizer functions than any other instrument in its price range. In addition, it offers a voltage-controlled envelope generator, offered by only one other manufacturer, and the versatile AR-338 PMS VCO, an oscillator manufactured only by Aries Music. Including these two modules in a standard keyboard synthesizer significantly increases the instrument's versatility and sonic capability.

**Recommended Usages:** Because many of the modules in this instrument are either dual function or multi-function modules, the Keyboard System II offers 20 module functions packaged within eleven module frames. This provides a savings of space and cost, and makes the system easier to patch and to use on stage. It does not compromise any of the flexibility one expects from a modular synthesizer.

**Basic Specifications:** The Keyboard System II contains: (1) S/H, (1) dual LFO, (1) dual VCO, (1) PMS VCO, (1) VCF, low pass, (1) envelope generator, (1) VC env. gen., (1) VCA, (1) bal. mod. w/1 pedal, (1) dual mixer, (1) reverb, output, (1) keyboard, (1) power supply & (1) 11-module case. Keyboard case and electronics also inc.

**Suggested List Price:** Assembled: \$2,675.00; Kit: \$1,832.00

## ARIES MUSIC, INC. INSTRUMENT MODIFICATION SYSTEM III

35 Congress St., Salem, MA 01970  
(617) 744-2400

Contact: Robert A. Snowdale, President.  
Date Product Introduced: March 1979

**Product Description:** This system is the most complete and sophisticated synthesizer offered for this application. A 10-module instrument, this synthesizer contains 25 functions and is not only well-suited for processing and modifying signals from other instruments, but also for use as a complete synthesizer controlled by an external instrument.

**Recommended Usages:** It offers musicians the opportunity to vastly increase the timbral range of standard monophonic instruments. In the studio it has proven its use in processing and modifying recorded sounds.

**Basic Specifications:** The Instrument Modification System III contains one each of the following: pitch follower, bal. mod. w/2 pedals; dual VCO, VCF multi-mode filter; phase shifter, dual VC env. gen., dual VCA, dual LFO, S/H, noise, VC clock, reverb, output, power supply & 11-module case.

**Suggested List Price:** Assembled \$2,763.00; Kit \$1,924.00

## ARP INSTRUMENTS, INC. ARP PIANO

45 Hartwell Avenue, Lexington, MA 02173  
(617) 861-6000

Contact: Pat O'Hagan, Marketing Assistant.  
Date Product Introduced: June 1979.

**Product Description:** The new ARP 16-voice Electronic Piano offers a wide variety of touch-responsive percussive sounds; such as; acoustic piano, vibes, bells, harpsichord, harp, bright plucked strings, trill, fifth tunings, etc. With a 73-note keyboard, the piano has standard wood piano keys and a specially designed maple action which reproduces grand piano feel and response. The ARP Piano has a dual tone generation and keying system, a six-stage stereo phase shifter, pedal assembly, and a stereo headphone jack for private practicing. Weighing a scant 81 lbs., the piano has four detachable legs and a keyboard cover, and is packaged in black vinyl covered wood case. Because it is all electronic, the piano requires no regular tuning or other regulation.

**Recommended Usages:** The 16-voice ARP Electronic Piano is ideal for both solo and group performance applications, on stage and in the studio. The voices include a variety of unique effects such as acoustic piano tuned in fifths, plucked piano, automatic trill and, of course, a variety of bright or mellow Electric Jazz Piano voices. A touch of vibrato, phasor or the soft pedal expands the musical use of the voices still further. Other voices offer a series of "Envelope Follower" effects. An incredible amount of power and control is available through your fingers and the touch responsiveness of the keyboard.

**Basic Specifications:** General: 73 keys, touch responsive, fully-polyphonic, standard wood piano keyboard with maple action; 16 voices; 81 lbs.; black vinyl-covered wood case (external case suggested); 45" x 6" x 23.5"; electronic tone generators (2 per key). Front Panel Controls: Voice select, vibrato, pedal, tuning, phasor tone, volume and headphone.

Rear Panel Controls: Audio outputs—left and right both high level, ¼ connectors; Mono is both high and low with ¼ and XL 12

connectors.

Aux. Inputs: line level with RCA connectors.

Pedal: Accepts ARP 2-pedal assembly.

Power: 120VAC 50-60 cycles (120-240 switch inside instrument).

**Suggested List Price:** \$2850.00

## ELECTRO-HARMONIX ELECTRO-HARMONIX GUITAR SYNTHESIZER

27 West 23rd St., NY, NY 10010  
(212) 741-1770

Date Product Introduced: Available soon.

**Product Description:** A beautiful streamlined multicolor rack-mount synthesizer with 22 slide controls and 19 switches. Features include tracking controls: sensitivity, trig LED, portamento, guitar, fuzz, and synth; 3 VCOs, with volume, wave, coarse, fine, filter sync, pulse width, and PWM controls, also white noise and ringmod; VCF, with tune, track, sweep, attack and decay, level LED, AD/LFO, env., LP/BP, and resonance controls; and VCA, with attack and decay, initial gain, level LED, AD/LFO, chorus, and master volume controls.

**Recommended Usages:** The Electro-Harmonix Guitar Synthesizer represents a significant breakthrough in electronic music technology, offering the sonic capabilities of a sophisticated synthesizer under control of a guitar, voice, or other instrument.

**Suggested List Price:** About \$1000.

## EMU SYSTEMS, INC. 4060 KEYBOARD SOFTWARE

417 Broadway, Santa Cruz, CA 95060  
(408) 429-9147

Contact: Marco Alpert, General Manager.

Date Product Introduced: August 1979.

**Product Description:** A library of special function programs for the 4060 microprocessor-controlled polyphonic keyboard/sequencer. Programs are supplied on tape and are loaded via the standard "from tape" function. Current programs include special sequence editing functions, real-time multi-layered sequence programming, alternative keyboard tunings, machine language programming of the keyboards Z-80, and more.

**Recommended Usages:** These programs are intended for use in 4060 keyboards, and greatly expand the capabilities of the basic system.

**Suggested List Price:** Programs range in price from \$25.00 to \$200.00

## HELPISTILL DESIGNS, INC. THE ROADMASTER

5808 S. Rice St., Houston, TX 77081  
(713) 664-5922/2136

Contact: Charles Lowe, Vice Pres., Marketing.

Date Product Introduced: June 1979.

**Product Description:** A real piano with true piano sound, both acoustically and electrically. Features complete mechanism of a 64-note acoustic piano with dual stringing and built-in Helpinstill Sensors to capture every note faithfully and uniformly. Weighing approx. 200 lbs., the RoadMaster travels light with built-in casters. The unique keyboard mechanism folds down into its own durable flight case protection of formica over plywood with aluminum extrusion, heavy steel corners. Tuning stability insured by advanced 14-lamination pinblock.

**Basic Specifications:** Height 37¼", length 43¼", width (keyboard folded) 12¾", distance from keyboard in playing position to top of piano (for stacking multi-keyboard set-up) 5½", weight 210 lbs.; 64 notes ranging from "A" two octaves below middle "C", to "C" three octaves above middle "C". Contains laminated spruce soundboard for acoustic use.

**Suggested List Price:** \$1995.00

## IMPERIAL MUSICAL INSTRUMENTS, INC. SOLIST 505 SYNTHESIZER

2622 W. 59th St., Chicago, IL 60629  
(312) 476-3401

Contact: Mike Toumayan, V.P. Marketing and Sales.

Date Product Introduced: December 1979.

**Product Description:** Supplied in an unbreakable plastic case, it is available in the piano version with 49 keys C to C with pre-sets, trombone, trumpet, sax, clarinet, oboe, guitar, Hawaiian guitar, violin, flute, cosmic, Telstar, Presets variations: VCA & VCF, envelope filter, vibrato, bend, octave down, slider controls for general volume.

**Suggested List Price:** \$872.00

## IMPERIAL MUSICAL INSTRUMENTS, INC. X705 PORTABLE PROFESSIONAL ORGAN

2622 W. 59th St., Chicago, IL 60629  
(312) 476-3401

Contact: Mike Toumayan, V.P. Marketing and Sales.

Date Product Introduced: December 1979.

**Product Description:** Upper manual 49 keys C to C, lower manual 49 keys C to C, pedals 13 keys C to C. Solo pre-sets,



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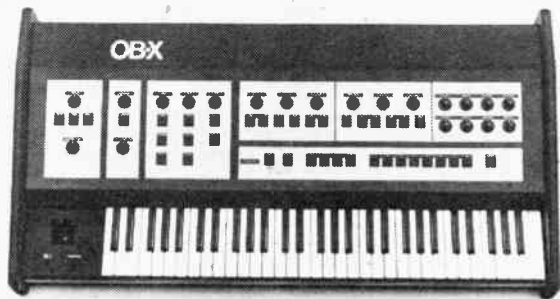
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include trombone, trumpet, sax, clarinet, oboe, guitar, Hawaiian guitar, violin, flute, Telstar, cosmic, cancel; organ presets of 7; strings and piano effects of 12; sustain controls of 8; memorized rhythm unit with 16 rhythms; vibrato with 3 controls, reverb.  
**Suggested List Price:** \$5130.00

**NOVALINE  
ROUGH RIDER ROAD-CASED ELECTRONIC PIANO**  
P.O. Box 574 Norwood, MA 02062  
(617) 828-7641

**Date Product Introduced:** 1979.  
**Product Description:** NovaLine introduces the Rough Rider road-cased electronic piano. It's tough for the professional pianist. Acoustic piano voicing, touch responsive, durability, portability, head set use.  
**Recommended Usages:** Traveling musicians, schools.  
**Basic Specifications:** Models 188R, 88-note.  
Cabinet: Black ABS laminate with aluminum edges and steel corners.  
Size: closed: 88-note: 9.5" x 18.5" x 55"; Weight: 88-note: 88 lbs.  
Output: Appx. .5 vpp across 47K ohm load at full volume on hard struck chord.  
Power line: 115 VAC, 50-60 Hz, 25 watts.  
Controls: On/off, volume, pilot light, sustain pedal, tuning control.  
Other features: Headset jack (stereo), output jack (mono), aux. audio input jack (RCA phono)—feeds only the headset.  
**Suggested List Price:** \$1495.00



**OBERHEIM ELECTRONICS, INC.**  
**"OB-X"**

**OBERHEIM ELECTRONICS, INC.**  
**OB-X**  
1455 19th St., Santa Monica, CA 90404  
(213) 829-6831

**Contact:** Russ Jones, V.P. Marketing.  
**Date Product Introduced:** June 1979.  
**Product Description:** The Oberheim OB-X: four, six and eight voice totally programmable polyphonic synthesizers are the new wave in live performance synthesis. A low profile instrument (only 7" high), compact and truly portable, the OB-X employs sophisticated microprocessor technology and superior construction techniques. The culmination of more than four years experience building the finest, most versatile polyphonic synthesizers in the world plus close collaboration with the professional and semiprofessional musician has spawned this incredible keyboard instrument.

**Recommended Usages:** The OB-X combines all the desired user functions, yet it is as simple to operate as an electric piano. you simply turn it on, press the auto tune switch, select your program and play. The OB-X is pre-programmed with 32 different sounds. These can be changed, altered, relocated or recorded directly on cassette tape (no interface device is required) at the users discretion. A "protect" switch is provided internally to prevent unintentional loss of programs.

**Basic Specifications:** Features include: Five octave keyboard, auto tune, edit, polyphonic portamento, polyphonic sample and hold, noise generator.  
Unique "return to center" pitch bend and modulation levers.  
Two ADSR envelope generators.  
Two oscillators per voice, and switchable 115/230 volt power.  
**Suggested List Price:** OB-X4: \$4595.00  
OB-X6: \$5395.00  
OB-X8: \$5995.00

**PAIA ELECTRONICS  
CURTIS ELECTRONIC MUSIC IC'S**  
P.O. Box 14359, Oklahoma City, OK 73114  
(405) 843-9626

**Product Description:** The CEM 3310 is a voltage controlled envelope generator with a typical time control range of 250,000:1. Attack, decay and release times are exponentially related to control voltage input and control voltage feed-through is for all practical purposes nonexistent. Price \$7.95.  
The CEM 3320 is a high performance voltage controlled four-

# Keyboards & Synthesizers

pole filter with on-chip voltage controlled resonance and temperature compensation. The 3320's four independent sections may be interconnected to provide a wide variety of filter responses. Price \$8.95.

The CEM 3330 Dual Voltage Controlled Amplifier provides such innovative features as simultaneous linear and exponential control response and virtual ground summing nodes so that signal and control mixing can be accomplished within the device itself. Price \$7.95.

The CEM 3340 Voltage Controlled Oscillator is a full feature device which directly provides ramp, triangle and voltage controlled pulse waveforms. Both exponential and linear response control voltage inputs are available and hard and soft sync inputs are provided. The chip is fully temperature compensated so that external tempco resistors are not required. \$10.00.

**POLYFUSION, INC.**  
**MODEL 2047**  
**DUAL VOLTAGE CONTROLLED ENVELOPE GENERATOR**  
160 Sugg Road, Buffalo, NY 14225  
(716) 631-3790

**Contact:** Alan Pearce  
**Date Product Introduced:** September 1979.  
**Product Description:** The 2047 is a module in the standard Series 2000 synthesizer format. This unit contains two independent envelope generators for which all five parameters (delay, attack, decay, sustain, release) can be separately voltage controlled. The 2047 has separate controls and control inputs jacks for all parameters, gate input jacks, manual gate push button switch and gate LED. All inputs and outputs are available at rear P/C edge connector in addition to panel jacks.

**Recommended Usages:** The 2047 is perfect for any application where the envelope characteristics must vary in conjunction with or as a result of the characteristics. For example, the velocity sensitive control output of a keyboard can be used to control the attack time so that just key switches cause sharper attacks. Also, the 2047 is ideal for totally programmable synthesizer systems.

**Basic Specifications:** Panel size: 9" wide x 7" high.  
Power requirement: ±15V regulated DC, 60mA.  
Control voltage range: 0-5V.  
Control output range: 0-5V.  
Delay time range: 4m sec-10 sec.  
Attack time range: 2m sec-10 sec.  
Decay and release time range: 2m sec-20 sec.  
**Suggested List Price:** \$395.00

**ROLANDCORP US**  
**ROLAND VP-330 VOCODER PLUS**  
2401 Saybrook, Los Angeles, CA 90040  
(213) 685-5141

**Product Description:** The Roland VP-330 Vocoder Plus is a highly versatile polyphonic keyboard employing Vocoder circuitry and two other tone generating sections (Human Voice & Strings) which are keyboard controlled. The VP-330's keyboard is split into two separate outputs so that the Vocoder, Strings, or Human Voice sections can be independently assigned to the whole or either half of the keyboard for stereo operation.

**Recommended Usages:** The string section of the Vocoder Plus produces warm, silky string sounds and the Human Voice Section has an uncanny resemblance to a chorus of human voices. The upper half of the keyboard controls one female and one male chorus; the lower half two male choruses. The ensemble effect increases the dimension of the voices. The Vocoder section processes the human voice (spoken or sung) through ten analysis filters for vowel sounds and an additional filter that is used to enhance consonants.

**Basic Specifications:** 49 notes.  
Strings Section: Tone tablets: upper strings 4', lower strings 8'; Control Knob: attack time, tone.  
Release Control: Strings, Human Voice, Vocoder.  
Human Voice Section, Tone Tablets: Female 4', Male 8' upper; Male 4', Male 8' lower; Control tablets: ensemble on/off; Control Knob: attack time.  
Vocoder Section, Tone Tablets: Upper 8', lower 8'; Control

Tablets: ensemble on/off; Control Knob: tone, microphone gain (dB).  
Vibrato for Human Voice and Vocoder, Control Knob: Depth, Rate, Delay Time.  
Balance, Volume Control: Strings, Human Voice, Direct Mic. Ext. synth. Volume; Phones Volume; Master Volume.  
Pitch Shift Control: Pitch Slider, Pitch Set, Time, Pitch Mode Switch (Auto-off/Ext-Manual).  
Connection Jacks, Input Jacks: Mic. std, Mic. cannon, Ext. Synth; Output Jacks: Stereo or mono level select; Vocoder Hold Control, Pitch Shift Control, Phones Output Jack.  
Dimensions: 35.6"W x 14.6"D x 5.7"H.  
**Suggested List Price:** \$2,695.00

**ROLANDCORP US**  
**KS-20 and KS-30 KEYBOARD STANDS**  
2401 Saybrook, Los Angeles, CA 90040  
(213) 685-5141

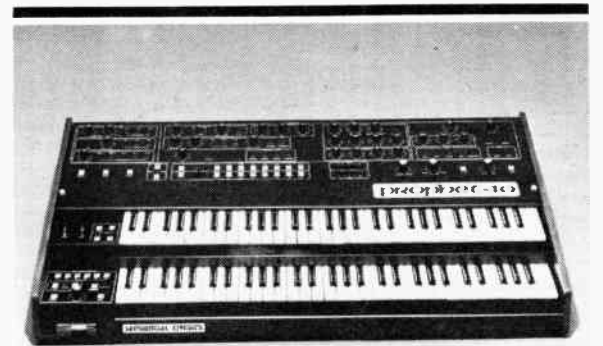
**Product Description:** A major problem for the working musician is having light-weight, portable and very durable equipment. Roland is helping to solve the problem by distributing the KS-20 Speaker Stand and the KS-30 Keyboard Stand made by our friends in Colorado—Ultimate Support Systems. These stands are constructed of light-weight aluminum tubing and are easy to set up or breakdown after the job is done.

**Recommended Usages:** The KS-20 is a speaker stand which will house almost any speaker system for instrument or PA. Each KS-20 holds up to 300 lbs, will accommodate a speaker up to 32" in width, and has 50° adjustable tilt angle. The KS-30 is a 3 tier keyboard stand which is designed to use with most electronic keyboards. Each tier will hold up to 150 lbs. and the height and tilt is infinitely adjustable. Both the KS-20 and KS-30 have protective non-slip felt and come with a durable waterproof tote bag.

**Basic Specifications:** KS-20 Model: Maximum speaker width: 32"

Maximum speaker weight: 300 lbs.  
Pivot height, low setting: 61 1/2"  
Pivot height, high setting: 76"  
Maximum tilt angle: 50°  
Floor space required: 36" x 40"  
Setup or breakdown time: 2 min.  
Breakdown dimensions: 51" x 4 1/2" x 4 1/2"  
Weight: 12 lbs.  
KS-30 Model: Maximum keyboard width: 47 1/2"  
Floor space required: 36" x 51 1/2"  
Maximum keyboard height from floor: 56"  
Maximum weight (per tier): 150 lbs.  
Breakdown dimensions: 7" dia. x 60" long  
Setup or breakdown time: 3 min.  
Weight: 17 lbs.

**Suggested List Price:** KS-20: \$240 per pair.  
KS-30: \$250 ea.



**SEQUENTIAL CIRCUITS, INC.**  
**"Prophet 10"**

**SEQUENTIAL CIRCUITS, INC.**  
**PROPHET 10**  
3051 North First St., San Jose, CA 95134  
(408) 946-5240

**Contact:** Bob Styles, Sales Manager.  
**Date Product Introduced:** June 1979.  
**Product Description:** Sequential Circuits introduces the Prophet 10, the most complete synthesizer available today. The Prophet 10 has ten complete voices. Each with two voltage controlled oscillators, two manuals (for playing two sounds at one time) and an optional plug-in polyphonic sequencer with built-in cassette. Completely programmable, the 10 has a noise source, a voltage controlled 24 dB/octave low pass filter, and two 4-stage envelope generators. To appreciate the extensive list of additional features, all one can do is play the Prophet 10.

**Recommended Usages:** The Prophet 10 has uses as infinite as the sounds it produces. The ultimate keyboard is ideal for live performances, recording sessions, and as a composing tool.



**UNICORD  
KORG ES50 POLYPHONIC ENSEMBLE**  
89 Frost St., Westbury, NY 11590  
(516) 333-9100

Contact: Bob Harrison, Nat'l Sales Service Mgr.;  
Tony Frank, Product Development Manager.

**Date Product Introduced:** December 1979.

**Product Description:** Totally polyphonic keyboard featuring nine voices in two separate sections: Percussive (piano) and Ensemble (string, chorus, bass). Sounds may be mixed, or isolated. All voices have separate "attack" ability for added realism. Voices are: electric piano, clav., piano, harmonica, brass, organ, vocal chorus, Strings I and Strings II.

**Recommended Usages:** For any situation requiring many varied keyboard sounds "packaged" into one compact unit.

**Basic Specifications:** Two separate envelope generators per key, and individual VCA's allow discrete articulation and layered sounds for each note. Triple oscillator system generates three separately tuned and modulated notes per key.

9 mixable voice rocker switches.

Stereo and mono outputs.

Variable speed analog delay.

Tremolo, Key click, variable attack, decay and release controls, visual LED tuning system.

**Suggested List Price:** \$1800

**UNICORD  
KORG MS50 MODULAR SYNTHESIZER EXPANDER UNIT**  
89 Frost St., Westbury, NY 11590  
(516) 333-9100

Contact: Bob Harrison, Nat'l Sales Service Mgr.

**Date Product Introduced:** December 1979.

**Product Description:** Maximum flexibility, non-keyboard controlled unit. Provides 20 separate synthesizer modules in one inexpensive, compact package, for coupling with any brand synthesizer or accessory.

**Basic Specifications:** VCO w/multi waveforms, exponential and linear CV inputs.

VCA hi-pass filter, AC/DC meter, trigger switch (N.O.).

Voltage controlled low-pass filter (VCF). Inverter.

ADSR envelope generator w/normal and inverted outputs. Second VCA.

AR envelope generator with variable hold and delay controls. Ring modulator.

Modulation generator (LFO) with four waveforms and VC frequency and pulse width capabilities.

3 channel AC/DC mixer.

Sample and hold generator w/built-in clock.

Variable voltage source, noise generator (white, pink), headphone amp.

**UNICORD  
MS02 UNIVERSAL SYNTHESIZER INTERFACE**  
89 Frost St., Westbury, NY 11590  
(516) 333-9100

Contact: Bob Harrison, Nat'l Sales Service Mgr.;

**Product Description:** Built-in, adjustable log amp and trigger processors for system flexibility and compatibility between any available voltage controlled synthesizer.

**Recommended Usages:** Interface any two or more synthesizers and/or accessories.

**Basic Specifications:** Linear-Exponential and exponential-linear converters.

Two channel adding amp (amplifiers/attenuators, bigger input CV's to create transpositional and micro-tonal effects)

Three junction terminals (multiple)

Two Universal trigger/gate processors/invertors.

**UNICORD  
KORG X911. MONOPHONIC GUITAR SYNTHESIZER**  
89 Frost St., Westbury, NY 11590  
(516) 333-9100

Contact: Tony Frank, Product Development Manager.

**Date Product Introduced:** December 1979.

**Product Description:** The model X911 offers the guitar player a simple to operate, pre-set (with variable, individual "voicing") monophonic synthesizer. No special pickups needed. Simply plug in guitar, set level, tune, press any "feather touch" control tab (tabs are mixable) and play. External expansion is possible as well as full external control of many effects (portamento, filter, pitch, on/off, "scaling" for harmony effects, etc.) Unit can be "coupled" to other synthesizers.

**Recommended Usages:** Designed primarily for use with any electric guitar.

**Basic Specifications:** 3" high, 13 1/2" wide, 8" deep.

11 voices which are mixable, 3 octave range switch;

Footswitch external functions.

**Suggested List Price:** \$550.00

# The RMS Modifications

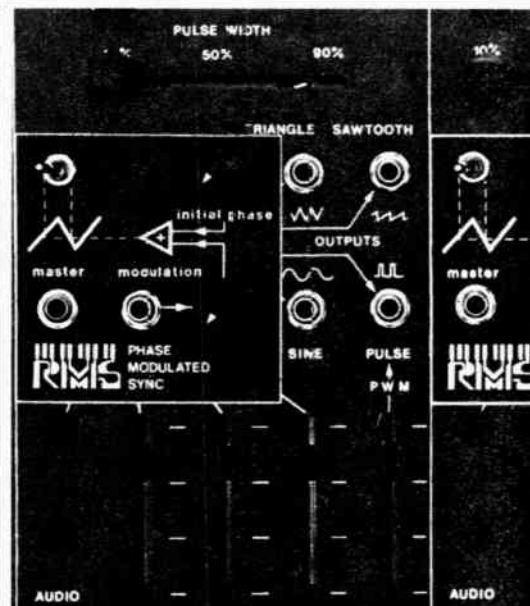


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# New Products for 1980

# Amplifiers & Sound Reinforcement

## ALTAIR CORPORATION

### FC-1 FUSE CLIP

202 West Bennett St., Saline, MI 48178  
(313) 429-5454

Contact: Lance Korthals, President.

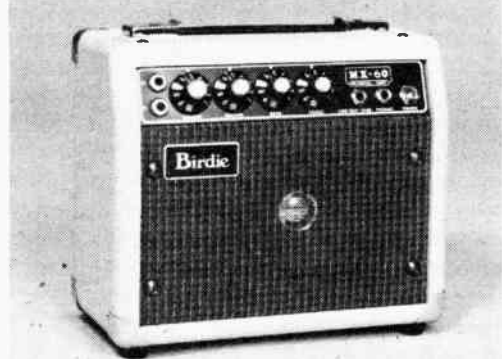
Date Product Introduced: July 1979.

**Product Description:** The FC-1 solves the problem of not having the proper fuse handy when the fuse on an amplifier or other electronics blows. The Fuse Clip has four clips mounted on a small phenolic block and holds two 1/4 inch x 1/4 inch spare fuses. Double-sided foam adhesive on the back of the FC-1 allows it to be conveniently attached to the electronics at a location near the fuse holder.

**Recommended Usages:** Attach the FC-1 close to the fuse holder on guitar amplifiers, equipment racks, sound reinforcement power amplifiers or any other piece of electronics that may be prone to having a fuse blow at a critical time.

**Basic Specifications:** Capacity: 2 fuses; Fuse size: 1/4" x 1/4". Material: Phenolic base, nickel plated brass clips. Dimensions: 3/8" x 1 1/8" x 1 3/8".

**Suggested List Price:** \$2.99



ARIA MUSIC (USA) INC.  
"Birdie Amplifier Model MX100"

## ARIA MUSIC (USA) INC.

### BIRDIE AMPLIFIER MODEL MX100

1201 John Reed Ct. City of Industry, CA 91745  
(213) 988-8581

Contact: Yoshi Arai V.P.

Date Product Introduced: October 1979.

**Product Description:** Compact amplifier with cream color leather covering. 10W RMS and 20W peak, 6 1/2 inch speaker with 20W handling capacity. Features include master volume with hi-boost switch, bass and treble controls. Input high and low levels. Output, headphone jack-stereo and line-out jack.

**Recommended Usages:** To amplify all type electric guitars, for tuning on stage and practice in your home.

**Basic Specifications:** Input: H-level: 40 dB/1M ohms (hi-gain),

L-level: -30 dB/150K ohms (lo-gain).

Output, headphone jack-stereo, line out: 20 dB/50K ohms.

Size 1 1/4" x 10 3/4" x 6". Weight: 33 lb.

**Suggested List Price:** \$150.00

(MX100R with reverb: \$170.00, MX60 6W RMS: \$120.00).



ARIA MUSIC (USA) INC.  
"Aria Pro II 'Loco Boy' Micro-amplifier"

## ARIA MUSIC (USA) INC.

### ARIA PRO II "LOCO BOY" MICRO-AMPLIFIER

1201 John Reed Ct. City of Industry, CA 91745  
(213) 988-8581

Contact: Yoshi Arai V.P.

Date Product Introduced: October 1979.

**Product Description:** One of the smallest amplifier in the world. Put directly in electric guitar, no guitar cable or AC-power necessary. 500 MMW output power, 2" speaker with 250 MMW capacity. Mini toggle switch works as on-off.

**Recommended Usages:** For stage side tuning, practice at night or outdoor performance.

**Basic Specifications:** Output: 500 MMW. Speaker: 2", power supply 9V battery x 2.

**Suggested List Price:** \$39.00

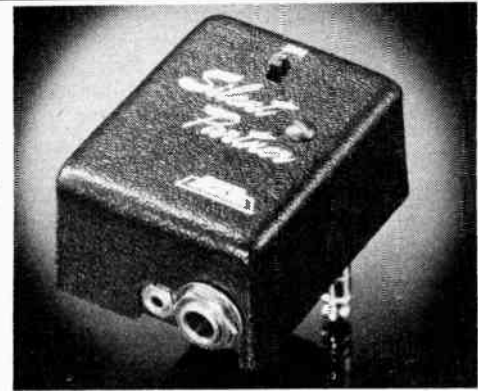
## ARTISTS X-PONENT ENGINEERING

### SILENT PARTNER

P.O. Box 2331, Menlo Park, CA 94025

**Product Description:** Silent Partner is a 4oz. micro-sized, battery powered headphone amplifier, with shirt pocket portability. Now, by simply plugging the Silent Partner into an instruments output jack and adding their favorite headphones, both amateur and professional musicians can practice, tune and compose without interruption or the need for external power or amplification.

**Suggested List Price:** \$39.95



ARTISTS X-PONENT ENGINEERING  
"Silent Partner"

## ASPEN & ASSOCIATES

### GROOVE TUBES

13994 Simshaw Ave., Sylmar, CA 91342

(213) 382-1551

**Product Description:** Groove Tubes is a company formed by musicians who own tube amps. They are quite familiar with the tube problem. They test thousands of tubes, obtained from the best current source (it changes), toss-out the "lemons", and package the remainder into closely "matched" sets. The Groove Tubes matched sets will greatly improve any amps tone and sustain—here's why. Tube amps use a circuit called Push/pull. Half the tubes push, the other half pull, amplifying the sound "wave". An unmatched set of tubes work against each other, losing sustain and wearing out fast in the process. The Groove Tubes sound fantastic and since they outlive an ordinary set many times, they'll save you money.

**Suggested List Price:** 2 6L6GC: \$40.00

4 6L6GC: \$80.00

## AUDY INSTRUMENTS

### SERIES 2000 MIXING CONSOLE

35 Congress St., Shetland Industrial Park,

Salem, MA 01970

(817) 744-5320

Contact: Kevin J. Doyle, Sales Manager.

Date Product Introduced: July 1979.

**Product Description:** The Audy Series 2000 mixing console produces simultaneous mono and stereo outputs that allow mono and stereo formats to operate independently. It also provides separate monitor (switchable pre or post EQ) and effects (switchable pre or post fader) sends. Available in 12 or 16 channels (stackable to 32), the console utilizes high speed, low noise IC technology to reduce TIM distortion to 0.03% and enhance sound quality. Providing input preamps with a dual LED system, the Series 2000 maintains 25 dB of headroom throughout. Other standard features include: individual channel and output patch points; transformerless balanced inputs and outputs; 3 band EQ with switchable mid range; soloing for any input or output; phantom power; work lamp socket and Anvil ATA approved flight case. Penny & Giles conductive plastic faders are available as an option, and the Series 2000 carries a full 2-year warranty that also guarantees the following specifications.

**Basic Specifications:** Frequency Response: -2, +0dB 20 Hz to 20 KHz

Bandwidth: 10 Hz to 100 KHz

Slew Rate: greater than 10 volts per microsecond.

Gain: 91 dB bal. output.

Noise (20 Hz to 20 KHz unweighted) E.I.N.: -124 dB(200 ohm source impedance)

S/N: greater than or equal to 90 dB below +4 dBm, faders at minus infinity; greater than or equal to 74 dB below +4 dBm, faders at 0

TIM Distortion: 0.03% maximum up to maximum rated output (IEC method)

IM Distortion: 0.02% maximum up to maximum rated output (SMPTE method)

THD: 0.02% maximum 0 dB mic input, +18 dBm output, 20 Hz to 20 KHz

Maximum output level: +22 dBm

**Suggested List Price:** \$3495.00 to 4795.00, depending on inputs and options.

## CREST AUDIO, INC.

### P-2500

9171 Gazette Ave., Chatsworth, CA 91311

(213) 998-3120

Contact: Bob Prideaux, VP Marketing.

Date Product Introduced: August 1979.

**Product Description:** Forced-air cooled, this "dual power" supplied amplifier delivers FTC noted power of over 125 watts per channel-8 ohms, over 200 watts per channel-4 ohms. Other



# MESA / Boogie

- custom quality, limited production
- small, lightweight, tough, reliable
- greatest sustain at any volume
- fattest, baddest, warmest tone
- beautiful cabinets
- and they are loud!

CARLOS SANTANA  
LARRY CARLTON  
STEVE MILLER  
ALAN HOLDSWORTH  
MICK RONSON  
BOZ SCAGGS  
ROBBEN FORD

THE ROLLING STONES  
FLEETWOOD MAC  
THE WHO  
THE EAGLES  
BLUE OYSTER CULT  
MEATLOAF  
WISHBONE ASH

*More and more you'll find the leaders in music today have discovered the Boogie Amp. It gives them the musical tone they want. They like its versatility & the wider more open range of sounds — the definition of what's felt and what's heard. But it's not easy to sound so good. It takes great playing ability first but it also takes the finest equipment to make the most of your playing talent. And proper amplification, with flexible, massive overdrive capability is essential to today's music — high energy or subtle.*

# MARK II

The BOOGIE is the strongest and smallest all tube amp made. Its radical combination of size, power and sensitivity gives it unmatched versatility with phenomenal sustain at any volume. Each unit is individually hand made and features patented relay activated "cual mode" pre-amp circuitry. This unique arrangement allows any blend of warm tube clarity and natural overdrive distortion — regardless of playing loudness — and provides separately adjustable lead and rhythm settings which are footswitch selectable. Options available include five-band graphic equalizer with footswitch, dual power range (60/100 watts), exotic hardwood cabinets and several speaker configurations.

For the player who wants something special, we know that factory mass production will never replace individual master craftsmanship in the instrument tradition and the roster of great players using Boogie amplifiers bears this out. As our emphasis is on quality rather than quantity, these instruments are available direct only. Satisfaction guaranteed.

EXPORT MODELS AVAILABLE  
We arrange world wide shipping

**MESA**  
ENGINEERING

BOX 116 LAGUNITAS, CA 94938



*Individual soulness  
in an amp you'll want to keep.*



features include twin peak reading LED VU meters, special safeguard system for speaker protection and turn on delay, active balanced inputs.

**Recommended Usages:** The Crest P-2500 has broad professional applications. Constructed of 16 gauge steel, the P-2500 is built to withstand the many tortures incurred with road use. A totally modular electronic design affects easy serviceability, anywhere. The manufacturer states that the performance characteristics are such that the recording industry is sure to appreciate the P-2500's accurate distortion-free sound.

**Basic Specifications:** Power output: 125 watts per channel 8 ohms: less than .03% THD.  
200 watts per channel 4 ohms: less than .05% THD.  
300 watts per channel 2 ohms: less than .1% THD.  
350 watts mono 8 ohms: less than .03% THD.  
IM Distortion: Less than .01%.  
TIM: Less than .01%.  
Signal to Noise: (20 Hz to 20 KHz): 105 dB below rated output.  
Power supply: 2 independent semi-toroidal power transformers.  
**Suggested List Price:** \$799.00.  
No VU meter: \$699.00

#### FENDER MUSICAL INSTRUMENTS

##### 112M MONITOR

1300 E. Valencia, Fullerton, CA

(714) 879-8080

Contact: Fender Marketing.

Date Product Introduced: September 1979.

**Product Description:** 112M Monitor Speaker consists of one 12" speaker and a Heppner 4 x 10 horn/driver assy. The unit has angular cabinet, allowing the 112M to produce a dispersion pattern of 60° x 120° that can be positioned to produce four different patterns.

**Recommended Usages:** Horizontal placement with 60° upward angle provides a 120° vertical dispersion pattern for short throw applications. Horizontal placement with 30° upward angle provides a 120° vertical dispersion pattern for long throw application. Horizontal placement with a 0° angle (parallel to stage) provides 120° vertical pattern for long throw application. Vertical placement with 0° upward angle provides a 120° horizontal dispersion for long throw applications.

**Basic Specifications:** Adjustable level control in the crossover allows the user to select the proper degree of high frequency content to prevent feedback.

Dimensions: 18 3/4" H x 26 1/2" W x 17 3/4" D.

Weight: 34 lbs.

**Suggested List Price:** \$265.00

#### FENDER MUSICAL INSTRUMENTS

##### SRA 200

1300 E. Valencia, Fullerton, CA

(714) 879-8080

Contact: Fender Marketing.

Date Product Introduced: September 1979.

**Product Description:** 200 watt stereo power amp; 2 independent inputs feeding independent 100 watt output. 200 watt monophonic: one input feeding two 100 watt outputs. 200 watt monophonic bi-amp after an electronic crossover (two inputs one high frequency two 100 watt outputs). SRA 200 uses two 22-step calibrated rotary attenuators (volume controls) to provide accurate, repeatable changes. Each attenuator has a fast-acting LED indicator which shows when actual clipping occurs.

**Recommended Usages:** SRA 200 is the perfect power amp for small and medium size sound reinforcement applications. Also good for studio and home use. More than one unit could be used for larger applications.

**Basic Specifications:** 100 watts x 2 @ 8 ohms, 180 watts x 2 @ 4 ohms.

THD .007% @ 100 watts, 8 ohms, 1KHz.

IM Distortion: .008% using 60 Hz & 7 KHz in 4:1 ratio @ 100 watts, 8 ohms.

Weight 25 lbs (11.3 Kg).

H x W x D: 5 1/4" x 19" x 11 1/2" (13.3cm x 48.3cm x 29.8cm).

**Suggested List Price:** \$575.00

#### FOSTER ELECTRIC (USA) INC.

##### MX-18 MIXER

1111 E. Touhy Ave. #428, Des Plaines, IL 60018

(312) 298-7570

Contact: Ken Hoskin, Ass't Sales Mgr.

Date Product Introduced: January 1980.

**Product Description:** 16 x 4 mixer, sub inputs, 3-band equalization, built-in digital reverb, cue, pre/post fade monitor, talk back, ext. reverb input, Hi/Lo inputs, bal/unbal. outputs, clipping LED's.

**Recommended Usages:** Small studios and live groups will find this mixer extremely versatile and reliable.

**Basic Specifications:** Contact manufacturer for specs. available modifications and prices. Sold on an OEM (private label) basis.

#### FOSTER ELECTRIC (USA) INC.

##### HO40M22A0000 COMPRESSION DRIVER/HORN

# Amplifiers & Sound Reinforcement

1111 E. Touhy Ave. #428, Des Plaines, IL 60018

(312) 298-7570

Contact: Ken Hoskin, Ass't Sales Mgr.

Date Product Introduced: January 1980.

**Product Description:** Mid-range horn; die cast aluminum 1" throat with 40W 1000 Hz - 16 KHz compression driver.

**Recommended Usages:** Can be used in PA, stage, and disco speaker systems.

**Basic Specifications:** Sold on an OEM (private label) basis. Contact manufacturer for specs. and prices.

#### GALLIEN-KRUEGER INC.

##### 112SC GUITAR AMPLIFIER

502-F Vandell Way, Campbell, CA 95008

(408) 379-3344

Contact: Richard Krueger, Chairman/Marketing Director.

Date Product Introduced: October 1979.

**Product Description:** The 112SC is a compact and very efficient combo guitar amplifier. Its important features include two channels (with master volume on each channel), channel switching via an illuminated footswitch, reverb, effects loop, four band active EQ, and footswitchable contour (for instant EQ changes). Patent pending, advanced design circuitry delivers an amazing punch to the single 12 inch Celestion G12-80 watt speaker. The result of an extensive research project, the 112SC is one of the most advanced guitar amps available today.

**Recommended Usages:** Because the 112SC has a master volume on each channel for precise control of clean and over-driven sounds, it is suitable for all playing styles. The flexibility provided by its other unique features, makes the 112SC the obvious choice of the true professional.

**Basic Specifications:** 75 watts RMS into 8 ohms.

20 1/2" wide x 18 1/4" high x 9 1/2" deep. 41 lbs.

**Suggested List Price:** \$799.00

#### GROSSMAN MUSIC CORP.

##### ORBIT AMPLIFIERS, CRESTLINE GUITARS

1278 West 9th St., Cleveland, OH 44113

(216) 896-1234

Contact: Shel Pierson, Adv. Mgr.

**Product Description:** Complete line of guitar and bass amplifiers and systems, designed for the player who wants quality and value. Includes amps, heads and speaker enclosures. Also a complete line of acoustic and electric guitars, as well as banjos, ukuleles and mandolins.

**Basic Specifications:** Amps from 50 to 150 watts.

**Suggested List Price:** Guitars from \$55.00 to \$500.00

#### GUILD MUSICAL INSTRUMENTS

##### MODEL 4, 5, 6 AND 7 AMPLIFIERS

225 W. Grand St., Elizabeth, NJ 07202

(201) 351-3002

Date Product Introduced: January 1980.

**Product Description:** Models 4, 5, 6 and 7 amplifiers are small in size, but high in output. Heavy duty construction gives these amps full response under hi-power conditions. Equipped with a master volume control as well as channel volume, warm jazz sounds are easily obtainable as well as hot distortion. Volume control with hi-boost switch changes the normal sound to the bright sound by "one push". Dual inputs of hi-gain and lo-gain are standard. Headphone jacks make late-night or stage-side practicing easy and the "line-out" jack facilitates recording or patching with another amp. The Model 6 is equipped with reverb.

**Suggested List Price:** Model 4: \$169.50, Model 5: \$199.00, Model 6: \$225.00, Model 7: \$239.50

#### GUILD MUSICAL INSTRUMENTS

##### MM-500 AMP

225 W. Grand St., Elizabeth, NJ 07202

(201) 351-3002

Date Product Introduced: November 1979.

**Product Description:** The MM-500 is the most portable guitar amp ever. Powered by two standard 9 volt batteries, it plugs

directly into the guitar—no cable is needed. An on/off switch conserves battery life and the amp will fit in the accessory compartment of your guitar case. Different sounds can be obtained using the guitar's volume knob, from lively clarity to raunchy distortion. The MM-500 can even be used with bass guitar. Also available is the M-55 adapter for stratocaster type guitars.

**Recommended Usages:** The MM-500 is ideal for offstage tuning, late night practicing, outdoor jamming, street musicians, camping trips, accompanying acoustic instruments and playing along with records or radio.

**Basic Specifications:** Size: 2 7/8" x 2 3/4" x 1 1/8" (plus plug). 2" speaker, 500 milliwatts output, powered by 2 9-volt batteries.  
**Suggested List Price:** \$55.00; M-55 \$2.95.

#### HARBINGER AUDIO

##### MODEL 1116 H.F. HORN

960 O'Brien Dr., Menlo Park, CA 94025

(415) 329-8282

Contact: Gil DeLiso.

Date Product Introduced: March 1979.

**Product Description:** The 1116 wide angle high frequency horn has been specifically designed for one inch bolt-on drivers. A birch ply pallet top and bottom sandwiches the fiberglass horn, creating a strong, compact and lightweight package that can be easily handled and stacked. It utilizes a reciprocating type flare, with mouth size and path length optimized for 1.6 KHz crossover to insure reliability. The result is the widest possible dispersion at the lowest distortion, even at the highest levels.

**Recommended Usages:** Because of its high efficiency; smooth, uncolored response, and excellent mid-range to high frequency balance off-axis, the 1116 is the ideal choice for one inch drivers in any system requiring superior performance and fidelity in the 1.6 to 20 KHz band.

**Basic Specifications:** Size: 13"W x 17"L x 8.75"H.

Weight: 8.5 lbs.

Nominal crossover: 1.6 KHz.

Flare rate: 460 Hz.

Dispersion: 60° hor./30° vert.

1 watt/1 meter with JBL 2420: 109 dB.

**Suggested List Price:** \$107.50

#### HARBINGER AUDIO

##### MODEL 524 FLOOR MONITOR

960 O'Brien Dr., Menlo Park, CA 94025

(415) 329-8282

Contact: Gil DeLiso.

Date Product Introduced: Feb 1979.

**Product Description:** The 524 is a two-way wedge-type monitor with JBL 15" speaker and 1" driver housed in a birch ply cabinet. This compact, highly efficient unit provides remarkable intelligibility at the highest levels with a minimum equalization and no need for bi-amping. This truly professional device surpasses all others in the industry, regardless of cost or complexity.

**Recommended Usages:** In theaters, music halls, night clubs and concerts, wherever professional performers and audio engineers seek superior sound quality, ease of operation and reliability, the 524 is the cost-effective choice. From the subtlest solo vocalist or instrumentalist, to the loudest rock act, to the complexity of a funk/fusion group, the 524 has it covered.

**Basic Specifications:** Size: 19" x 19" x 14".

Weight: 58 lbs.

Power Handling: 125 watts w/50 Hz filter.

Freq. Response: 80 - 15 KHz.

1 watt/1 meter SPL: 103 dB.

**Suggested List Price:** \$695.00

#### HARBINGER AUDIO

##### MODEL 516 A/B

960 O'Brien Dr., Menlo Park, CA 94025

(415) 329-8282

Contact: Gil DeLiso.

Date Product Introduced: July 1979.

**Product Description:** The 516 is a two-way system housing a 15" speaker and 1" compression driver on a 1116 horn. A 200 watt, 12 dB/octave crossover with variable attenuator are included in the birch ply cabinet. Smooth, broad-band response is achieved in this compact device through use of a port-horn coupled direct radiating speaker and careful attention to transducer-crossover complement.

**Recommended Usages:** The 516-A is recommended when live acoustic or amplified performances alternate with pre-recorded program material. Not recommended if bass instruments or drums are to be miked. For music rooms and night clubs where only moderate levels are necessary. The 516-B is designed for use as a high level keyboard monitor with better transient response and tighter bass, but also is quite suitable for vocal PA or playback applications.

**Basic Specifications:** 32"H x 24"W x 17"D.

Weight: 101 lbs.

Power handling: 200 watts/8 ohms.

Freq. Response: 50 - 15 KHz.

1 watt/1 meter SPL: 95 dB.

**Suggested List Price:** A: \$795.00 B: \$895.00



 **YAMAHA PROFESSIONAL SOUND PRODUCTS**

AVAILABLE FROM:

**PRO MEDIA** 

**(415) 957-1383**



**YAMAHA PM-2000 MIXER**



**MUSIMATIC INC.****MMX 1800A**

4187 Glenwood Rd., Decatur, GA 30032

(404) 289-5159

Contact: Don McCampbell.

Date Product Introduced: April 1979.

**Product Description:** The MMX-1800A is a 18 channel stereo mixer for sound system, PA and recording purposes. The MMX-1800A has 18 balanced low impedance/high impedance inputs. Each input also has an output for multi-channel tape machines.

**Basic Specifications:** Road case included with mixer

Slide pots in all inputs and outputs  
Built-in headphone amp  
Line/mike/mute selector switch  
Input LED clipping light  
Input gain pot  
Bass-middle-treble input tone controls  
Built in reverb  
Built in talkback microphone  
Two position output sensitivity switch  
18 low impedance mike inputs  
18 high impedance mike/line inputs  
Direct out from each input channel  
Effect send and receive  
Internal power supply  
VU meters

**Suggested List Price:** \$2799.00

**NADY SYSTEMS INC.****NADY CORDLESS BLUE SYSTEM**

1145 65th St., Oakland, CA 94608

(415) 652-2411

Contact: Cheryl Martinez, Publicity and Advertising.

Date Product Introduced: April 1979.

**Product Description:** The Nady Cordless Blue System offers the same professional performance features as the Nasty Cordless Blue System but with a lo-impedance input for use with lavalier microphones. This transmitter is for use with the Nady Pro 400 or (for optional add-on diversity) the Nady Pro 400 and 500 receivers. The system is tunable across the FM band and is totally interference free.

**Recommended Usages:** Any place where wireless transmission is required or desired with lo-impedance hook-ups such as lavalier microphones.

**Basic Specifications:** Frequency Response: 25 - 20,000 Hz  $\pm$  3 dB.

Signal to Noise Ratio: 99 dB.

Harmonic Distortion: .7%.

R.F. carrier frequency: 88 - 108 MHz (tunable).

Modulation: Wideband FM.

Operating Range: 500 feet line of sight, 11 feet, adverse conditions.

Dimensions: 2 $\frac{3}{8}$ " x 3 $\frac{1}{4}$ " x 7 $\frac{1}{8}$ " (WxLxH), Weight: 4 oz. (without battery).

**Suggested List Price:** \$1450.00 with Pro 400.

\$2,100 with Pro 400 & 500.

**NADY SYSTEMS INC.****NADY VHF 900 TRANSMITTER**

1145 65th St., Oakland, CA 94608

(415) 652-2411

Contact: Cheryl Martinez, Publicity and Advertising.

Date Product Introduced: April 1979.

**Product Description:** In addition to the Nady VHF 800 transmitter for use with electric musical instruments, Nady Systems announces their new Nady VHF 900 transmitter with a low impedance input for use with lavalier microphones. Both body-pac transmitters are for use with the most recent line of Nady products — the Nady VHF Systems. These new systems utilize patent-pending Nady Lo-Noise circuitry as in the company's nasty Cordless systems and feature: a signal-to-noise ratio of 102 dB (10-12 dB better than the closest competitor), a range of 1,500 feet line of sight, better than 100 dB image and spurious response and a frequency response of 25 - 20,000 Hz  $\pm$  3 dB.

**Recommended Usages:** For use with low impedance microphones wherever wireless operation is necessary or preferable to use of a standard cord. Can be used on live stage, in the recording studio (audio & video) or in any other facet of the music and entertainment fields.

**Basic Specifications:** Nady VHF 900 Body-Pac transmitters—Weight: 4 oz. (excluding battery).

Dimensions: 7 $\frac{1}{8}$ " deep x 4 $\frac{1}{8}$ " high x 2 $\frac{3}{8}$ " wide.

Battery life: 20 hours nominal.

Battery: 9 volt alkaline.

RF Power out: 50mW/12mW switchable.

Radiated spurious and harmonic emissions: less than -40 dB.

**Suggested List Price:** \$800.00

As a complete system: \$1,800 (with 600 receiver).

\$2,500 with 700 True Diversity receiver.

# Amplifiers & Sound Reinforcement



ROCK AMPLIFIER COMPANY  
"Mini-Rock"

**ROCK AMPLIFIER COMPANY****MINI-ROCK**

489 West Holt Ave., Pomona, CA 91768

(714) 629-9225

Contact: Joe Sandino, President.

Date Product Introduced: December 1979.

**Product Description:** The Mini-Rock is a battery operated amplifier. It produces 5.5 watts RMS, and comes with a self-contained 6" x 9" speaker. Features include an external speaker jack, line out, instrument level out, headphone jack, overdrive, volume and tone, footswitch jack, and input.

**Recommended Usages:** Since the Mini is set up for 12 volts. It can be plugged into the cigarette lighter of your automobile, and is ideal for any situation where AC current is not available. An optional AC adapter (regulated 12V supply) is also available.

**Basic Specifications:** The Mini is 12" x 8" x 5 $\frac{1}{2}$ ", and is housed in a brown vinyl cabinet with curly maple face.

The chassis is brushed black anodized aluminum, total weight: 8 lbs. plus batteries.

Power output is 5.5 watts RMS with batteries, and 10 watts RMS with an external supply.

**Suggested List Price:** \$129.00

**ROCK AMPLIFIER COMPANY****STUDIO SERIES AMPLIFIERS**

489 West Holt Ave., Pomona, CA 91768

(714) 629-9225

Contact: Joe Sandino, President.

Date Product Introduced: January 1980.

**Product Description:** A series of heads and self contained amplifiers featuring the Studio Jazz 112, the Studio Bass 115, and the Studio Lead 112 all three of which are available as separate heads. The Studio Series has possibly the quietest amps ever made, boasting of signal to noise ratio better than -80 dB down from full rated output. All 6 models have a long list of features.

**Recommended Usages:** Studio, performance, clubs, concerts etc.

**Basic Specifications:** Studio models are 80 watts RMS at less than 1% THD at 4 ohms.

**Suggested List Price:** Studio Bass 115: \$399; Head only: \$259.00.

Studio Jazz 112: \$429; Head only: \$299.00.

Studio Lead 112: \$489; Head only: \$359.00. Separate cabinets are also available.

**ROCK AMPLIFIER COMPANY****PRO-MODEL ROCK AMPS**

489 West Holt Ave., Pomona, CA 91768

(714) 629-9225

Contact: Joe Sandino, President.

Date Product Introduced: January 1980.

**Product Description:** Pro-Models feature volume, bass, treble, waveform, distortion, reverb, variable line out, external speaker jack, ISC control (input sensitivity control), effects in and out,

3-prong AC outlet, external fuse, AB switching, and footswitch jack. They are available in either vinyl cabinets, or in solid mahogany cabinet. Options includes a 10" or 12" speaker.

**Recommended Usages:** Ideal for studio work, rehearsals, small clubs etc. They were designed for guitar, but work for keyboards, synthesizers, accordians, and other electronic instruments.

**Basic Specifications:** Pro-Models are 25 watts RMS and weigh under 20 lbs. The 10" models are 12 $\frac{1}{2}$ " x 16" x 7 $\frac{1}{4}$ ". The 12" models are 12" x 7 $\frac{1}{4}$ " x 18".

**Suggested List Price:** Pro 10 in vinyl: \$259.00

Pro 10 in wood: \$289.00

Pro 12 in vinyl: \$269.00 (not yet available in wood).

**ROLANDCORP US****ROLAND BOLT-60**

2401 Saybrook, Los Angeles, CA 90040

(213) 685-5141

**Product Description:** The warm sound of a tube amp and the latest in technology is combined in the new Roland Bolt-60 Tube Amp. The Bolt-60 is a 60 watt (RMS) Amp which features a 12" speaker, hi and lo inputs, main input, and a distortion section with 2 pre-amp volumes—master volume and a level for the normal channel.

**Recommended Usages:** The 2-stage pre-amp in the overdrive section allows for a variety of distortion settings and can be switched to the normal channel for a clean sound by using a footswitch.

**Basic Specifications:** Output: 60W (RMS).

Speaker: 1 (30cm).

Channel: 1.

Inputs: Hi, low, main in, return.

Control: Volume-1, Volume-2, Master Volume, Volume-Bass, Middle, Treble, Reverb.

Switches: Footswitch—overdrive/normal, reverb; effect loop select switch, power on/off switch, standby switch.

**Suggested List Price:** \$695.00

**ROLANDCORP US****ROLAND SIP300 GUITAR PRE-AMP**

2401 Saybrook, Los Angeles, CA 90040

(213) 685-5141

**Product Description:** The Roland SIP-300 Guitar Pre-Amp has been designed to give the guitarist complete control over his sound. The SIP-300 features high and low gain inputs; an overdrive section for high harmonic distortion (even at low volume levels); bass, middle, and treble controls (all active); hi and low cut filters; balanced and unbalanced outputs; and, two (2) external effects loops which provide noiseless operation of effects devices.

**Recommended Usages:** The SIP-300 is part of the Roland Rack Series of products, all designed to allow maximum flexibility of sound. The SIP-300 is ideal for the studio and offers a variety of patch possibilities. On stage, the Roland guitar pre-amp (when combined with a high quality power-amp such as Roland's SPA240 or SPA120) will deliver all the power and endless tone variations necessary for achieving just the right sounds.

**Basic Specifications:** Inputs: Hi: 1M ohm, 1.8V RMS. Lo: 100K ohms, 1.8V RMS.

Outputs: Balanced: 600 ohm, + 20 dBm. Unbalanced: 600 ohm (min), 4V RMS.

Frequency response: 20Hz - 30 KHz.

Distortion: 0.1% at 1 KHz.

Hi Cut filter cutoff: 17 KHz, 6dB/8va; Lo Cut filter cutoff: 32 Hz, -6 dB/8va.

Tone Control switches: treble: 6 KHz-9 KHz; middle: 500 Hz-1 KHz; bass: 40 Hz-50 Hz.

Dimensions: 19"W x 3.5"H x 9.7"D.

**Suggested List Price:** \$360.00

**ROLANDCORP US****ROLAND SIP-301 BASS GUITAR PRE-AMP**

2401 Saybrook, Los Angeles, CA 90040

(213) 685-5141

**Product Description:** The Roland SIP-301 Bass Guitar Pre-Amp affords the bass guitarist the kind of flexibility conventional amplification is unable to provide. The SIP-301 features high and low gain inputs; a variable compressor circuit which contours your sound from a soft, subtle attack to an incredible punch; three (3) frequency controls (bass, middle, treble) with hi and low cut filters; balanced and unbalanced outputs with built-in crossover network; and, two (2) external effects loops for the addition of signal processing devices.

**Recommended Usages:** The design features of the Roland Bass Guitar Pre-Amp enables the bassist to have complete control over his sound on the stage or in the studio. The outputs can be used simultaneously to a PA or mixing console. One (1) effects loop is located on the rear panel facilitating the use of other rack mounting devices while the other is on the front panel. The Roland SIP-301 can be powered with any high quality amp such as Roland's SPA-240 or SPA-120.



# Amplifiers & Sound Reinforcement

**Basic Specifications:** Inputs: Hi: 1M ohm, 1.8V RMS. Lo: 100K ohms, 1.8V RMS.  
Outputs: Balanced: 600 ohm, +20 dBm. Unbalanced: 600 ohm (min), 4V RMS.  
Frequency response: 20 Hz - 30 KHz.  
Compressor: Ratio: 1:1 to 1:6.6; Threshold: -50 to -30 dBm (variable); Dynamic Range: Max 25 dB (variable).  
Distortion: 0.1% at 1 KHz.  
Hi-cut filter cutoff: 17 KHz, 6 dB/8va; Lo-cut filter cutoff: 32 Hz, -6 dB/8va.  
Crossover: 50-400 Hz (variable).  
Filter curve: 12 dB/8va.  
Dimensions: 19"W x 3.5"H x 9.7"D.  
**Suggested List Price: \$395.00**

## YORKVILLE SOUND LIMITED TS-50B BASS AMPLIFIER

80 Midwest Road, Scarborough, Ontario, Canada M1P 4R2  
(416) 751-8481

**Contact:** Yorkville Sound Limited Sales Department.  
**Date Product Introduced:** October 1979.

**Product Description:** The TS-50B is a solid state 50 watt bass head featuring dual inputs, footswitchable boost, separate gain control, line output for mixing and dual speaker outputs. Its matching speaker cabinet is the TS-215, with two 15" drivers in a dual-vented reflex enclosure.

**Basic Specifications:** TS-50B: Power Output: 50 watts into 8 ohms @ 120 volts AC. 70 watts into 4 ohms @ 120 volts AC. Total Harmonic Distortion: Better than 1.0% @ rated output. Input impedance: Normal 270K ohms, low 20K ohms. Input Sensitivity @ 1 KHz: tone controls set at 5, normal 1.8mV, normal (with boost) 0.4mV.  
Dimensions: 9" x 20 3/4" x 10 1/2". Weight 24 lbs.  
TS-215: Speakers: Two low-frequency drivers, each 15" in diameter with 1 1/2", 16 ohm voice coil.  
Power capacity: 80 watts RMS overall.  
Impedance: 8 ohms overall.  
Enclosure: Dual-vented reflex type.  
Dimensions: 38" x 25" x 15". Weight 85 lbs.

## YORKVILLE SOUND LIMITED TS-120B BASS AMPLIFIER

80 Midwest Road, Scarborough, Ontario, Canada M1P 4R2  
(416) 751-8481

**Contact:** Yorkville Sound Limited Sales Department.  
**Date Product Introduced:** December 1979.

**Product Description:** The TS-120B is a self contained bass amplifier featuring a 15" bass driver, footswitchable 6-band graphic EQ. Footswitchable front end boost, normal and low gain inputs with output paralleling jacks, and balanced line outputs. It is designed for use with the optional TS-120BES extension cabinet, which features a 15" bass driver.

**Basic Specifications:** 75 watts @ 8 ohms.  
120 watts @ 4 ohms (with extension speaker).

## YORKVILLE SOUND LIMITED TS-75 GUITAR AMPLIFIER

80 Midwest Road, Scarborough, Ontario, Canada M1P 4R2  
(416) 751-8481

**Contact:** Yorkville Sound Limited Sales Department.  
**Date Product Introduced:** December 1979.

**Product Description:** The TS-75 is a 75 watt self contained amplifier featuring a 6-band graphic EQ. Footswitchable front end boost, normal and low gain inputs, balanced line outputs and reverb.

**Basic Specifications:** 75 watts @ 8 ohms.  
120 watts @ 4 ohms (with extension speaker).  
**Suggested List Price:** Appx. \$675.00

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# Percussion

## New Products for 1980



**CARRAWAY CONGAS**  
"Carraway Congas"

**CARRAWAY CONGAS**  
P.O. Box 4163, San Rafael, CA 94903  
(415) 479-3668

Contact: J.L. Carraway.

**Date Product Introduced:** November 1979.

**Product Description:** These beautiful hardwood drums, a refinement of the traditional Cuban style, are entirely handmade by Carraway; only after the shell is completed are the steel hoops rolled, welded and fitted — down low enough to be out of the way of your hands. The tuning hardware is extremely strong and compact, permitting accurate tuning of even the heaviest skins. These highly individualized drums are designed and constructed for the ultimate in tone quality, strength and beauty.

**Recommended Usages:** Recording or any demanding application.

**Basic Specifications:** Usually built to customer specifications. These drums are available in African zebrawood, black walnut, vermilion, narra, oak, cherry, maple, etc.

The handmade, hand-fitted hardware is triple-chrome plated, cold-rolled steel, heliarc welded for maximum strength. (Gold plating optional.)

The drum shell is epoxy-fiberglass reinforced on the inside bottom for durability, and is acoustically isolated from the floor to enhance tone quality.

**Suggested List Price:** \$600.00

**DRUM WORKSHOP, INC.**  
D.W. 5000-C  
15312 S. Broadway, Gardena, CA 90248  
(213) 515-7826

Contact: Paul A. Real, Vice President, Sales.

**Date Product Introduced:** November 1979.

**Product Description:** Chain and sprocket bass drum pedal. Chain and sprocket replaces conventional steel, leather or nylon strap and cam to produce the ultimate in speed and sound.

**DURALINE**  
**SUPERHEADS (DRUM HEADS) DRUM STICKS**  
11581 Federal Drive, El Monte, CA 91731  
(213) 443-7803

Contact: D. Wayne Christensen, Vice President.

**Date Product Introduced:** April 1979.

**Product Description:** Drum heads—no tape/no wallets. True performance heads, designed to last. Going beyond skin or plastic, we have taken a unique new material, and woven it into the strongest most stable drum head ever made, shrinkage, expansion, and tension problems no longer exist with Duraline heads. The revolutionary textured surface combines excellent stick and brush response with an exclusive no dent no rip durability. Sticks: will outlast any wood stick. Perfectly balanced. Will not

crack or split and the tips stay on.

**Recommended Usages:** All percussion instruments that use drum heads and sticks.

**Basic Specifications:** Drum heads in all sizes from 6" up to 26" bass drums.

**ELEK-TREK**  
**DRUM MIKING SYSTEM**  
2454-G E. Fender Ave., Fullerton, CA 92831  
(714) 773-0551

**Product Description:** A complete drum miking system which eliminates the time-consuming hassle and guesswork so often encountered when miking a set of drums. With Elek-Trek, the sound is controlled by a system designed specifically for drums, giving them dynamic depth and presence, with that "fat", full-bodied, "recorded sound," no matter how poor the room acoustics, and at any volume level of performance. The heart of the system is specially-designed microphones, four and six channel mixers and expanders, featuring volume control, bass and treble control, and

three band equalization for each channel. A LED clipping indicator warns against over-driving. Full coupling capability is provided, allowing the multiple coupling of expanders to the main mixer, when greater channel capacity is required. Two series are available: the stage mix (hi-Z) and the audio engineer series (hi-Z/lo-Z) out with cannon plugs.

**Suggested List Price:** 4 channel system: \$695.00

6 channel system: \$895.00

8 channel system: \$1,295.00

**MIDCO INTERNATIONAL**  
**PERCUSSION PLUS**  
908 W. Fayette, Effingham, IL 62401  
(217) 342-9211

Contact: Barry A. Martin, Product Specialist.

**Date Product Introduced:** December 1979.

**Product Description:** Assortment of quality percussion items: congas, bongos, claves, guiros, shakers.

**ROLANDCORP US**  
**BOSS DIVISION**  
**BOSS DR-55 DR. RHYTHM**  
2401 Saybrook, Los Angeles, CA 90040  
(213) 685-5141

**Product Description:** Boss products introduces the Boss DR-55 Dr. Rhythm. The Dr. Rhythm is a highly compact rhythm unit which allows you to program rhythm patterns through a sophisticated micro-computer and recall the patterns instantly at the touch of a button. Each pattern will contain up to three independent percussion effects: snare drum, rim shot, and bass drum. To your programmed pattern you can add a fixed hi-hat sound (eighth or sixteenth note values) and a programmable accent.

**Suggested List Price:** \$199.00

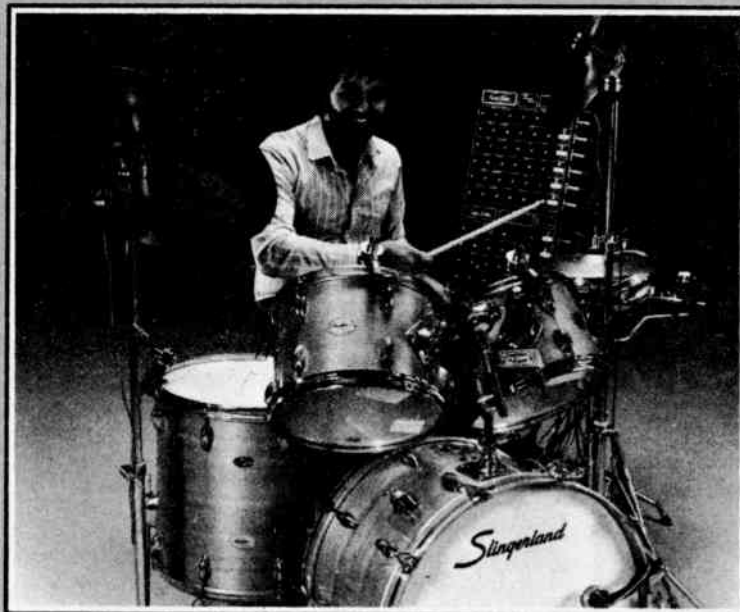
**AVEDIS ZILDJIAN COMPANY**  
**QUICK BEAT HI HAT**  
P.O. Box 198, Accord, MA 02018  
(617) 871-2200

Contact: Mr. Dan Sweeney, IKON

554 Washington St., Wellesley, MA 02181

**Suggested List Price:** \$170.00 per pair.

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microphones and mixing systems. Setup is a matter of minutes, no longer hours. Go drive your dealer crazy to see the Elek-Trek sound system, or write us to get our full information kit before someone steals this magazine.

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# S Special Effects

New Products  
for 1980

## AUDIONICS OF OREGON

### SPACE AND IMAGE COMPOSER

10950 S.W. 5th #160, Beaverton, OR 97005  
(503) 641-5225

Contact: Charles Wood, Sales Mgr.

**Date Product Introduced:** June 1979.

**Product Description:** Lab Standard SQ decoding system using Tate directional enhancement system with special functions of interest to both professional musicians and music listeners. Recovers directional information from both stereo and SQ program sources with up to 45 dB interchannel separation. Solo null switch eliminates primary center front sources to reveal secondary program information normally buried in the mix. Special directional effects may be created in conjunction with any pitch or phase changing effects device.

**Recommended Usages:** A high performance SQ decoding or stereo enhancement system for the studio or home or use as a special directional effects generator for professional applications.

**Basic Specifications:** Input: unity gain, 47K ohms, line level, unbalanced.

Output: 2 volts, 10K ohms; will drive 600 ohm line.

Freq. Response: 10 Hz - 30 KHz  $\pm$  1 dB.

THD and IM Distortion: Less than 0.15%.

SN Ratio: 80 dB.

Remote control option.

**Suggested List Price:** \$970.00

## DE ARMOND, INC.

### 1930 TWISTER PHASE

1702 Airport Hwy, Toledo, Ohio 43609  
(800) 537-3375

**Date Product Introduced:** September 1979

**Product Description:** The Model 1930 Twister Phase is a new product from DeArmond featuring a built in noise-gate. The twister phase is a heavy duty box construction with variable speed and intensity controls. The noise-gate is built in and pre-set for hassle free operation. The twister operates with a 9 volt battery at a low power drain.

**Recommended Usages:** For guitar, keyboard, or any electric instrument.

**Basic Specifications:** Phasing of up to 720° featuring DeArmond's 2 year warranty.

**Suggested List Price:** \$89.95

## ELECTRO-HARMONIX

### BASS MICROSYNTHESIZER

27 West 23rd St., NY, NY 10010  
(212) 741-1866

Contact: Mike O'Brien Customer Service

**Date Product Introduced:** October 1979

**Product Description:** The Bass Microsynthesizer is for the bassist who wants to cover the full spectrum of synthesizer sounds. Its four voices including guitar, octave, suboctave, and distortion are continuously mixable and completely independent. Envelope

control allows for bowed and "blown" sound along with highly variable filter sweep options. Packaged in a compact 10 slider box, the Bass Microsynthesizer lets you choose among pungent, bouncing, undulating, screaming, dive bombing sounds.

**Recommended Usages:** For live performance and studio recording.

**Basic Specifications:** Input Impedance: 47K ohms

Output Impedance: 1K ohm

Input Sensitivity: 100mv-1V (adjustable)

Output level: 1V

Weight: 3 lb; Size: 8" x 6 $\frac{3}{4}$ " x 1 $\frac{1}{2}$ "

110AC (Regulated) Footswitch Bypass.

**Suggested List Price:** \$299.00

## ELECTRO-HARMONIX

### SPACE DRUM

27 West 23rd St., NY, NY 10010  
(212) 741-1866

Contact: Mike O'Brien Customer Service

**Date Product Introduced:** November 1979

**Product Description:** Space Drum is the percussion synthesizer for the drummer who wants today's electronic sounds at affordable prices. It features sweeping oscillator tones and dynamically responsive sensor pad. Infinitely variable sweep start and stop frequencies generate downward slides, upward swoops and anything in between. Switch selectable decay rates offer sustained tones or sharp percussive envelopes, while variable sensitivity insures optimum response with any drumming style.

**Recommended Usages:** Excellent as addition to standard drum kit or for use by percussionist or any other band musician. Can be struck with drumsticks or by hand. Special sound effects make it a valuable studio recording tool.

**Basic Specifications:** 7 $\frac{1}{2}$ " x 5" x 2 $\frac{1}{2}$ ".

9V Battery Powered.

**Suggested List Price:** \$99.95

## ELECTRO-HARMONIX

### AMBITRON MONO TO STEREO EXCITER

27 West 23rd St., NY, NY 10010  
(212) 741-1866

Contact: Mike O'Brien Customer Service

**Date Product Introduced:** November 1979

**Product Description:** Turn the smallest, deadest room into the acoustic equivalent of a concert hall with the Ambitron. Placed between a microphone and PA or any electric instrument and amp, the Ambitron introduces an adjustable amount of stereo ambience into the output signal. A high rolloff control shapes the tonal character, a space control determines the spaciousness of the synthesized ambience, and a feedback switch introduces an echo effect.

**Recommended Usages:** Excellent for vocals or instruments especially in small, acoustically dead rooms. For studio and live performance.

Frequency response: 16 Hz to 70 KHz, +0-3 dB.

Input Impedance: 90K.

Output Impedance: 150.

**Basic Specifications:** Weight: 3 lb.

Size: 8" x 6 $\frac{3}{4}$ " x 1 $\frac{1}{2}$ ".

110 AC (regulated) Bypass Footswitch.

**Suggested List Price:** \$149.00

## MU-TRON INC.

### MU-TRON DIGITAL DELAY

45 Hartwell Ave., Lexington, MA 02173  
(617) 861-6000

Contact: Pat O'Hagan, Marketing Assistant

**Date Product Introduced:** June 1979 — NAMM Show

**Product Description:** Self-contained audio delay line. Input signal is processed through delay circuitry with delay time selected by user. The signal is then mixed with the straight, non-delayed signal at the output of the delay. Delay time ranges from 16 milliseconds to 160 milliseconds. Accessible front panel controls include input gain, pushbutton delay select, variable delay, freeze, feedback, modulation depth and frequency, mix, and output level.

**Recommended Usages:** Effects include slapback echo, hard reverb (spring-like, metallic), decaying repeats, infinite hold (non-degenerating), doubling flanging, "cardboard tube" effects, vibrato, and pitch shifting.

**Basic Specifications:** Delay Range: .625mS to 160mS.

Frequency Response: Dry: 20 Hz - 20 KHz; delay: 25 Hz - 10 KHz.

Input Impedance: 100K ohm (balanced or single ended).

C.M.R.R.: 40 dB (typical).

Input Level Range: - 15 dBm to + 15 dBm.

Input Connectors: XLR-3 and 1/4 phone.

Output Impedance: 600 ohms.

Output Level: Adjustable to + 20 dBm.

Memory Type: 2 x 16K dynamic RAM.

Variable Delay Range: 4:1 continuous.

Modulation Speed: .1 Hz to 20 Hz.

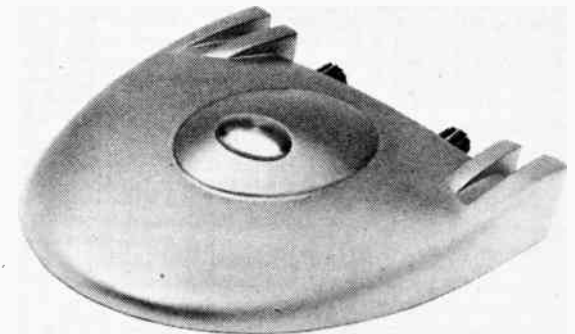
Modulation Depth: 4:1 maximum.

Feedback Range: 0 to 100%.

Dynamic Range: 85 dB (typical).

THD: 0.2% or less (any delay setting).

**Suggested List Price:** \$795.00.



ROGER MAYER ELECTRONICS  
"Octavia"

## ROGER MAYER ELECTRONICS

### OCTAVIA

225 E. 57th St., New York, NY 10022  
(212) 486-1544

**Date Product Introduced:** January 1980.

**Product Description:** A distortion device for guitar that accents the second harmonic rather than the odd numbered harmonics that are accented in most fuzz boxes.

**Suggested List Price:** \$98.00 plus \$5.00 handling.

## PROFESSIONAL MUSIC PRODUCTS, INC.

### SUPERSINK, HOT SINK

14731-E Franklin Ave., Tustin, CA 92680  
(714) 838-8421

Contact: Jeffrey D. Brown

**Date Product Introduced:** November 1979.

## ROLANDCORP US

### ROLAND SBF-325 STEREO FLANGER

2401 Saybrook, Los Angeles, CA 90040  
(213) 885-5141

**Product Description:** The Roland SBF-325 Stereo Flanger is part of The Rack Series of products. A wide variety of effects can be achieved from classic flanging to chorus and doubling. Run-

ning the SBF-325 in stereo makes possible stereo panning which greatly intensifies the effect and the phase can be inverted by flicking a switch. The Stereo Flanger has four effect modes—three of which are variations of flanging and one for chorus and doubling.

**Recommended Usages:** By utilizing the inversion switch the three flanging modes (resonant, resonant crossmix, and crossmix) can be altered for additional variety in the effect. Chorus speed and intensity is highly controllable and the feedback control provides regeneration of the flange for additional richness of the sweep. An input attenuator on the front panel allows for many instrument applications and the on/off function can be controlled by the front panel or a footswitch.

**Basic Specifications:** Inputs — Unbalanced Hi: 13K ohm, + 20 dBm max Lo: 13K ohm, + 10 dBm max  
Outputs — Unbalanced Hi: 100 ohm, + 20 dBm max  
Lo: 1K ohm, + 10 dBm max  
Noise Level: Better than - 70 dBm.  
Delay Time — Flanger: 0.5-15 ms, Chorus: 0.2-20 ms.  
Dimensions: 19"(W) x 3.5"(H) x 9.7"(D).  
**Suggested List Price:** \$495.00.

**ROLANDCORP US**  
**BOSS CE-2 CHORUS**  
2401 Saybrook, Los Angeles, CA 90040  
(213) 685-5141

**Product Description:** The Boss CE-2 Chorus is the compact version of our famous CE-1 Chorus Ensemble. Like the CE-1, the CE-2 produces the rich chorus effect which gives any instrument or voice a thicker, deeper sound resembling that of a chorus of voices or a doubling effect. The rate and depth controls create a wide variety of effects from subtle enhancements to rapid sweeps of pitch.

**Recommended Usages:** The CE-2 is ideal for the studio and stage because of its low S/N (90dB) and silent FET switching. A LED doubles as a normal/effect indicator and as a battery level check. The CE-2 may also be powered with an optional BOSS ACA-120 adapter. The BOSS CE-2 Chorus is a perfect device for guitar, keyboard, wind & brass instruments, studio, and PA applications.

**Basic Specifications:** Current Requirements: DC9V, 9mA  
Power: 9V (1), AC Adapter  
Controls: Rate & Depth  
Input Impedance: 470K ohm  
Output Load Impedance: Over 10K ohm  
S/N: 90 dB or more (IHF-A)  
Jack: Input, output, AC Adapter  
Max. Allowable Input: 0dBm (100Hz), -10dBm (1KHz)  
Other: Normal Effect Switch (FET), Effect Indicator (LED), Battery Check (LED)  
Weight: 0.88 lbs.  
Dimensions: 2.8(W) x 2.2(H) x 4.9(D) in.  
**Suggested List Price:** \$125.00

**360 SYSTEMS**  
**MODEL 2800 PROGRAMMABLE EQUALIZER**  
18730 Oxnard St., #215, Tarsana CA 91356  
Contact: Robert Easton

**Date Product Introduced:** November 1979

**Product Description:** Model 2800 is a programmable 4-band parametric equalizer. It contains enough internal memory to store 28 complete "scenes" of the front panel. Each of these 28 groups of settings can be recalled at any time in the future, providing instant access to specific sounds needed in a production. The equalizer is based around a Z-80 Microcomputer system. Its memory is protected against loss from all possible causes by a 10-year lithium "Eternacell." The complete system provides the ability to edit existing sounds, re-arrange their sequences, program loudness changes, and replace sounds with new ones. All programs can be recalled by remote control as well.

**Recommended Usages:** Programmable equalization is particularly valuable on stage where pre-determined sound qualities are to be recalled on cue. It's also useful in the studio for collage-type productions, and in film sound work where scene-by-scene changes occur faster than one can manually change conventional equalizers. The 2800 EQ extends the range of any synthesizer by adding programmable voicing to its output.

**Basic Specifications:** Four bands, 4½ octaves wide each, overlapping.

Variable bandwidth from 1/6 octave to 5 octaves.

Boost to +12 dB and cut to minus infinity.

Gain programmable ±12dB.

Bypass switch for each band.

Line level in and out

XLR connectors.

3½" x 19" x 12" (HWD) rack mountable.

Overload indicator lights and input attenuator.

Number of programs remembered: 28.

Available only from the manufacturer.

**Suggested List Price:** \$1195.00 for single channel;  
\$1550.00 stereo.

# NAMM '80

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New Products  
for 1980

# Other Equipment

**ALTAIR CORPORATION**  
**CT-3 MICROPHONE CABLE TESTER**  
202 West Bennett St., Saline, MI 48176  
(313) 429-5454

Contact: Lance Korthals, President.

Date Product Introduced: June 1979.

**Product Description:** The CT-3 is a Go/No-go microphone cable tester. It has an XLR-type connector in each end and is switched on by pushing in on the cable's female connector. Two LEDs are provided for status indication. All three conductors are tested simultaneously and continuously. A failure in any one of them will cause one of the LEDs to go out. One stays on to let you know the cable is being tested.

**Recommended Usages:** The CT-3 checks for all the common wiring faults: shorts, open circuits and cross-wiring (including reversed phase). There are no buttons to push so both hands are free to wiggle the cable and connectors to check for loose, intermittent connections. With the CT-3½ Remote Tester (provided with the CT-3), snake cables can be tested after the system is set up, without moving the cable. Permanent studio wiring can likewise be tested.

**Basic Specifications:** ¾" diameter x 6 inches long;  
Weight: 4 ounces (including CT-3½);  
Construction: Epoxy fiberglass (with pocket clip);  
Connectors: Male and female XLR-type;  
Battery: 7 volt mercury.



**CONQUEST SOUND CO.**  
"Gladiator Coil Cable"

**CONQUEST SOUND CO.**  
**GLADIATOR COIL CABLE**  
15524 S. Orland Court, Orland Park, IL 60462  
(312) 429-1770

Contact: Larry Spalla.

Date Product Introduced: September 1979.

**Product Description:** The Gladiator coil features solid brass military plugs with a diamond tip and a double strain relief system. The cable is Belden, and like our entire line, the Gladiator carries

a two year guarantee.

**Recommended Usages:** All instruments and amplifiers.

**Basic Specifications:** On request.

**Suggested List Price:** On request.

**DE ARMOND, INC.**  
**1620 DUAL VOLUME PEDAL**  
1702 Airport Hwy, Toledo, Ohio 43609  
(800) 537-3375

Date Product Introduced: September 1979

**Product Description:** The Model 1620 Dual Volume Pedal is a new product designed for stereo uses. It has two inputs and two outputs and utilizes two pots for separation. The dual volume lets you run two separate instruments through one control pedal to two separate sources.

**Recommended Usages:** Stereo guitar and multiple keyboard set ups. Any use requiring dual control of a stereo source.

**Basic Specifications:** Cast aluminum shell, steel treadle, and Allen Bradley pots. Featuring DeArmonds 2 year warranty.

**Suggested List Price:** \$69.95

**DEERING BANJO COMPANY**  
**DEERING BANJOS AND DEERING DULCIMERS**  
3615-B Costa Bella St., Lemon Grove, CA 92045  
(714) 464-8252

Contact: Janet Deering, Co-owner.

Date Product Introduced: June 1979

**Product Description:** Deering Banjo Company provides a complete line of American made banjos for beginners to professionals. The lower priced Deering banjos have steel rims and quality necks. The upper line of banjos have maple rims and sand-cast bell bronze tone rings. Deering banjos provide one of the only complete lines of American made banjos available. Deering Banjo Company also makes a sideline of solid wood dulcimers.

**Recommended Usages:** Banjos are great for relaxation and playing banjo is a nice change from working.

**Basic Specifications:** Basic Banjo: Steel rim, poplar neck and resonator, geared tuners: \$310.00.  
Intermediate Banjo: Heavier steel rim, mahogany neck and resonator: \$420.00.

Deluxe Banjo: Maple rim with a bell bronze tone ring, mahogany neck and resonator: \$599.00.

Maple Blossom Banjo: Maple rim with a bell bronze tone ring, maple neck and resonator, flower inlay pattern: \$850.00.

Calico Banjo: Maple rim with a bell bronze tone ring, maple neck and resonator, beautiful inlay pattern: \$1260.00.

Dulcimers: Hourglass shape and cutaway shape, maple and spruce solid wood: \$110.00.

**DIGI-TUNE, LTD.**  
**DIGI-TUNE 220**  
3314 H' St., Vancouver, WA 98663  
(206) 694-7905

Contact: Dick McPartland, Design Engineer.

Date Product Introduced: February 1979.

**Product Description:** The Digi-Tune 220 is a highly accurate low audio frequency counter designed for tuning musical instruments. Precise frequency to the nearest 1/10 cycle is displayed on large, easy to read LEDs. A Lock/Follow switch allows the 220 to freeze the display after each note is attacked, or to continuously follow pitch changes. The Digi-Tune 220 features a high level input labeled MixerIn, and an Inst/Mic Input. Filtering and gain are controlled automatically.

**Recommended Usages:** Accurate tuning of musical instruments for recording and performance. Ideal for adjusting oscillators in synthesizers and tuning electronic pianos. The mixer input was Other uses include precise identification of feedback frequencies. Simplifies bridge and neck adjustments on guitars and basses. Other uses include precise identification of feedback frequencies, and monitoring the frequency of oscillator controlled motors and other devices.

**Basic Specifications:** Accuracy: 4 digit, crystal controlled, to nearest .1 Hz.

Range: 15.0 Hz to 5 KHz.

Power: 110V AC 60 Hz 2 watts.

**Suggested List Price:** \$310.00

**DIGI-TUNE, LTD.**  
**DIGI-TUNE 220**  
3314 H' St., Vancouver, WA 98663  
(206) 694-7905

Contact: Dick McPartland, Design Engineer.

Date Product Introduced: February 1979.

**Product Description:** The Digi-Tune 220 is a highly accurate low audio frequency counter designed for tuning musical instruments. Precise frequency to the nearest 1/10 cycle is displayed on large, easy to read LEDs. A Lock/Follow switch allows the 220 to freeze the display after each note is attacked, or to continuously follow pitch changes. The Digi-Tune 220 features a high level input labeled MixerIn, and an Inst/Mic Input. Filtering and gain are controlled automatically.

**Recommended Usages:** Accurate tuning of musical instruments for recording and performance. Ideal for adjusting oscillators in synthesizers and tuning electronic pianos. The mixer input was designed for multiple keyboards using a common mixer. Simplifies bridge and neck adjustments on guitars and basses. Other uses include precise identification of feedback frequencies, and monitoring the frequency of oscillator controlled motors and other devices.

**Basic Specifications:** Accuracy: 4 digit, crystal controlled, to nearest .1 Hz.

Range: 15.0 Hz to 5 KHz.

Power: 110V AC 60 HZ 2 watts.

**Suggested List Price:** \$310.00

**EMU SYSTEMS INS.**  
**ELECTRONIC MUSIC IC'S**  
417 Broadway, Santa Cruz, CA 95060  
(408) 429-9147

Contact: Marco Alpert, General Manager.

Date Product Introduced: December 1979.

**Product Description:** SSM 2044: 24 dB/octave low pass filter IC with on chip voltage controlled resonance. SSM 2055: Voltage controlled ADSR IC with improved exponential contour and control rejection.

**Recommended Usages:** These IC's are designed for use in all types of electronic music synthesizers. Their voltage control capability makes them ideal for use in programmable and computer controlled systems. Their high quality, low cost, and minimum parts count allow their use in large polyphonic systems.

**Basic Specifications:** SSM 2044: S/N: 90 dB, 10,00 to 1 minimum sweep range.

Price: \$6.00.

SSM 2055: 10V peak output, 50,000 to 1 minimum exponential control range.

Price: \$6.00.

**MUSIMATIC INC.**  
**MUSIMATIC DL-100/DL-200**  
4187 Glenwood Rd., Decatur, GA 30032  
(404) 289-5159

Contact: Don McCampbell.

**Product Description:** A direct line box enables a musician or sound engineer to plug a signal line (whether it is a speaker signal or a guitar signal) into a sound mixer or PA system. This direct line is a 150-600 ohm transformer isolated and bal mike level signal with a 3 pin low impedance receptacle. A direct line box will not cause ground loops or hum and will not change the signal in any way. The box transfers the tone response of the instrument realistically to the PA.

**Basic Specifications:** Transformer isolated.

Two models DL-100 active DL-200 passive.

Plug a signal line (speaker or instrument) directly into sound mixer. Perfect transfer.

Gain Control.

**Suggested List Price:** DL-100: \$102.85; DL-200: \$94.16.

**THE NORWOOD COMPANY**  
**NORWOOD MUSIC STANDS**  
 8020 N. Austin Ave., Morton Grove, IL 60053  
 (312) 968-4760

Contact: Mr. James F. Ellis, Vice President, Sales.

**Product Description:** Manufacturer of Norwood Music Stands for over 40 years. The well known Norwood Stands have proven in school use to be exceptionally rugged and practical as well as being the choice of many professionals. Stands are available in chrome, brass and black stain finish and sold exclusively through distributors.

**SAGA MUSICAL INSTRUMENTS**  
**SAGA OK-4 PROFESSIONAL OPENBACK BANJO KIT**  
 P.O. Box 2841, South San Francisco, CA 94080  
 (415) 588-5558

Contact: Richard L. Keldsen, President.

**Date Product Introduced:** December 1979.

**Product Description:** The OK-4 Banjo Kit is one of eight banjo kits now offered by Saga. The design and component parts duplicate the classic Vega Whyte Laydie open-back banjo of the 1920's. The kit is easily assembled and includes all necessary parts, tools, and easy to follow instructions.

**Recommended Usages:** Openback banjos are particularly favored by frailing and old-timey banjo pickers. The OK-4 produces an exceptional sound with excellent playability at an affordable price.

**Basic Specifications:** Tone ring: Solid brass Whyte Laydie design.

Neck: Mahogany with double cut Whyte Laydie headstock.

Routed for pearl inlay position markers.

Silver-nickel frets installed.

Two-way adjustable truss rod.

Rim: 3/4" laminated beech.

Tuners: Saga Planetary tuners with geared 5th peg.

Armrest: Solid brass, nickel plated, Whyte Laydie style.

Coordinator rods: Dual adjustable.

Tailpiece: Brass, nickel plated, Kershner style.

Head: Remo WeatherKing.

**Suggested List Price:** \$229.00

**SANO CORP**  
**ADL CABLES AND CONNECTORS**  
 317 Cox St., Roselle, NJ 07203  
 (201) 241-8008

Contact: Joseph Zonfrilli, Jr., President.

**Date Product Introduced:** August 1979.

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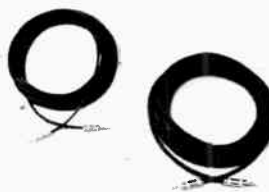
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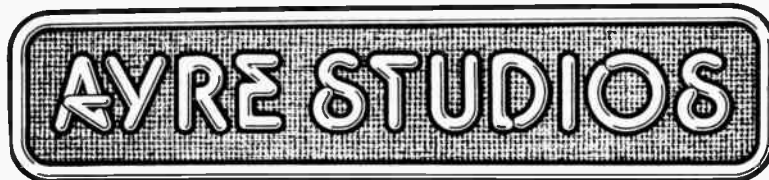


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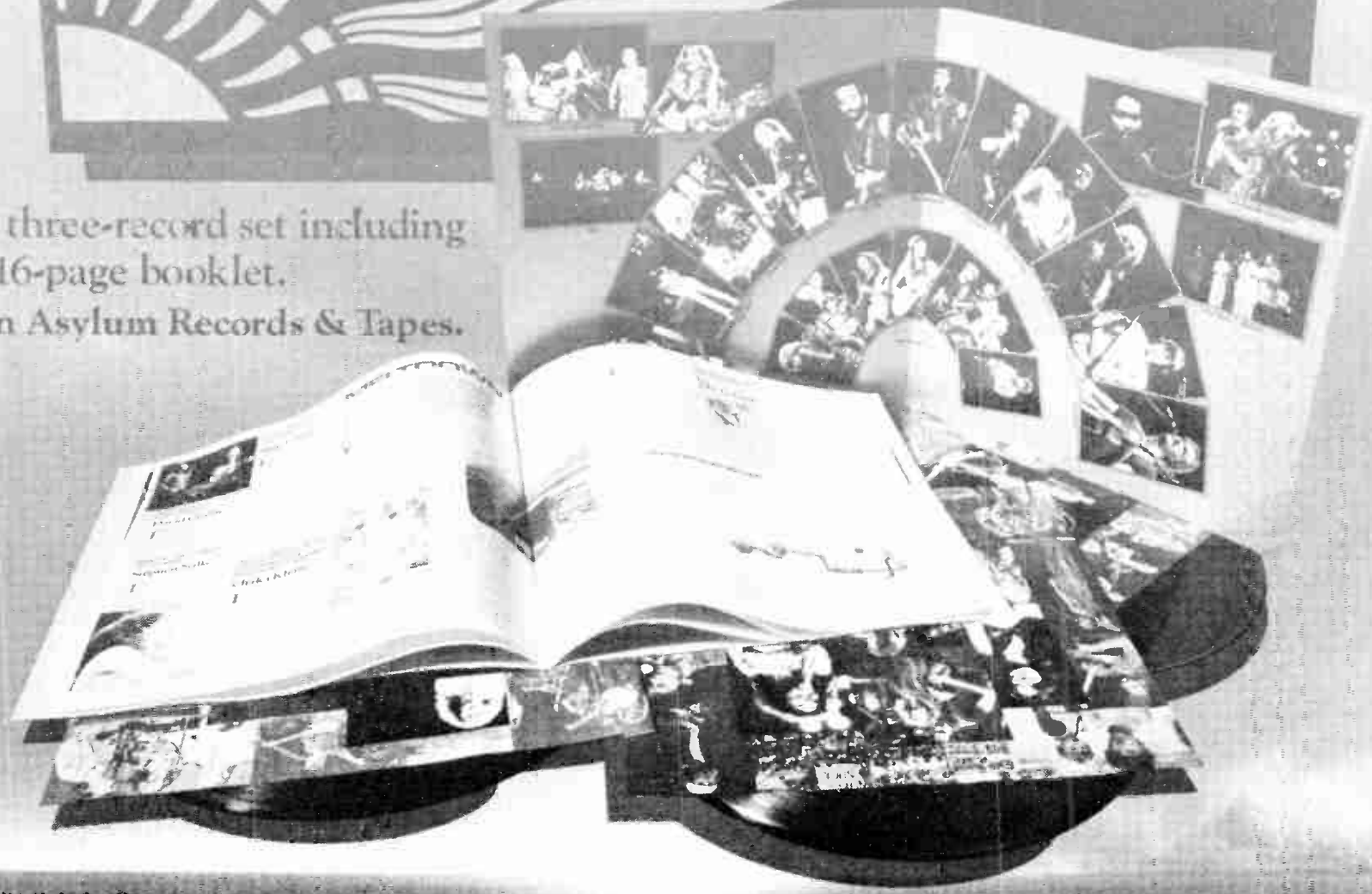
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## Silence. The Step Beyond.

Even more important than what an effect adds to your performance is what it doesn't add. Noise — pops, clicks, and hiss can make a good effect virtually unusable in a performance. That's where BOSS effects are different, and it's a difference you'll notice from the moment you turn them on.

You see, all the different effects on the market share the same noisy problem — they all use the same kind of mechanical footswitch, and no matter who makes it, it still has the same problem — it makes an audible "click." That can be a pain in the studio where you have live mikes, but even worse is that a mechanical switch is prone to make popping noises in the signal when it's engaged, and that's a real problem no matter where you are.

BOSS effects have been designed differently. We incorporate what is called F.E.T. switching. This means that there are no mechanical contacts in the signal system, so it won't make an audible click — and it can't make a pop. The switching is done totally electronically and cleanly.

But that's only the beginning of the beauty of BOSS pedals. You'll find a host of other features the competition has yet to catch up with. Features like battery eliminator jacks on every pedal, skid pads that work, and a unique design that allows you to change the battery without exposing the circuit board. And, back on the subject of silence, you'll find BOSS pedals to be the quietest pedals on the market with signal to noise ratio consistently better than 80 dB.

You'll find a BOSS pedal to fit any need — from phasers to flangers, to equalizers to compressors to the new CE-2 Chorus Ensemble, a compact version of our legendary CE-1.

None of the BOSS pedals make noise. No clicks, no pops, no hiss. And that's pretty important. Cause if you're serious about your music you know that what you leave out is as important as what you put in.

BOSS products are designed and manufactured by Roland, 2401 Saybrook Ave., Los Angeles, CA 90040. (213) 685-5141.

 **BOSS**