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THE RECORDING INDUSTRY MAGAZINE

Mix

Interview: Les Paul

**NAMM Show
Special Issue**

**Independent Engineers
and Producers Listings**

The Art of Touring '85

**Brian Eno
MIDI Update
Billy Strange
Nightclub Sound**

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**Harrison**



Cover: Mad Hatter Studios, Los Angeles
Photo by: Suzanne M. Nyerges
Jazz giant Chick Corea originally had Mad Hatter Studios built to be a place where he and his friends could make music. With his demanding concert schedule and the growing popularity of the room, it has also become an in demand spot for commercial music production for clients like Apple Computers, American Express, Mitsubishi TV, Nike and Almaden Wine.

Cover photo of Les Paul by Mr. Bonzai



As music technology has improved, the demands placed upon clubs to provide exceptional sound for touring bands has increased. *Mix* writers in four different cities take a look at a top club in each respective market for this issue's report on the state of the art in *nightclub sound*. Page 12.

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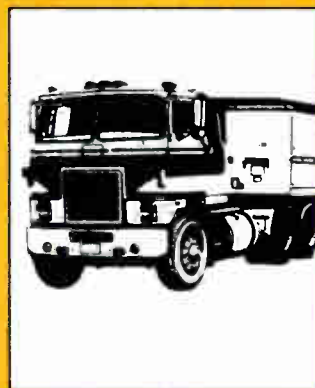
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What hath *MIDI* wrought! In an extensive article, ace keyboardist Roger Powell talks about the evolution of MIDI and the enticing possibilities this technological breakthrough offers. Powell's piece begins on page 34.



In *The Art of Touring '85*, writer Brooke Comer talks to experts in diverse fields associated with life on the road, from tour manager Harry Sandler to staging specialist Michael Tait. In addition, Rosanne Soifer looks at "Women on the Road." Page 43.

He's produced U2, Devo, Talking Heads, Ultravox and others. His own music has ranged from quirky rock to soothing "ambient" music. *Brian Eno* has been involved in some of the most fascinating music projects of the past 15 years. John Hutchinson's interview with Eno appears on page 65.



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feedback

Dear *Mix*:

AT&T Bell Laboratories is an awesome facility which cannot possibly be adequately addressed in one magazine article, even a long one. For this reason, my article on computer music at Bell was necessarily limited in scope. I nonetheless feel remiss in having made absolutely no mention whatsoever of Manfred Schroeder. Schroeder has been at Bell for nearly three decades in which time he has been without doubt the foremost pioneer in the field of architectural acoustics, and in particular the application of computers in analyses of concert halls. These studies led to many procedures and techniques now standard in that field. They also led him to experiments in digital reverberation which resulted in the algorithms that most digital reverbs in current use are based on. As if this were not enough, Schroeder's work with speech coding by digital simulation brought him to create Linear Predictive Coding (LPC), a very complex but extremely powerful technique which models a sound source as a driving function: (waveform) which is passed through a number of filters. Changing the driving function and filter parameters in a calculated fashion results in very intelligible speech. This type of synthesis is starting to find its way into more musical and creative applications now. It is interesting to note that Schroeder began his work on these subjects before 1960. Additionally, Professor Schroeder is an award-winning pioneer in computer graphics. He is still at Bell Labs today, but splits his time between Murray Hill and Germany. I most deeply regret my oversight in neglecting to mention this most brilliant scientist.

Sincerely,
Larry Oppenheimer
Los Angeles, CA

Dear *Mix*:

Although I greatly enjoy reading your magazine, I must point out a grave error in your Canadian studio report. A picture of Le Studio is captioned "The crew at the Studio." The four guys at the board happen to be collectively known as UZEB, one of the world's finest funk-jazz bands.

Give a listen to "You Be Easy" or "Fast Emotion" and you'll hear what I mean. The band is presently touring

Europe and Japan before returning home to record their next LP.

Sincerely,
Andre Dorais

Dear *Mix*:

I've been buying and selling used musical instruments and recording gear for 16 years. I've placed a *lot* of ads in magazines and newspapers all over the country. The only reason I bring this grand fact to your attention is to point out that my current 1/2 page ad in *Mix* is the most effective, highest selling ad I've ever placed.

I thought you might like to know. And thanks for all your help. You guys are doing a great job!

Regards,
Dan Alexander
Berkeley, CA

Dear *Mix*:

As a composer and technician who is also involved with multitrack recording and sound reinforcement, I'd just like to tell you how much I enjoyed your recent article on Daniel Lentz. Your regular features on the mainstream music/recording industry are good and getting better all the time, but it's really gratifying to see you paying some attention to some of the (thousands of) people doing interesting work outside the mainstream.

Sincerely,
Jay Clويد
Oakland, CA

MIX Opens Southern California Sales Office

As of January, 1985, Mix Magazine has established a sales office in Southern California which will handle business for that area and the southwest region of the U.S. The advertising representative is Cecilia (Cece) Hernandez. The address is 4000 MacArthur Blvd., Suite 3000, Newport Beach, CA 92660. The phone number is (714) 851-1706.

CURRENT

SPARS Recommends Digital Formats

A letter has been sent by the Society of Professional Audio Recording Studios (SPARS) to their advisory associate member manufacturers involved in the development of digital recording equipment that essentially outlines the "wish list" of features that many SPARS member studio owners desire in a professional digital recording machine. Although the description does not line up specifically with any currently manufactured machine nor does it support the DASH format presently favored by several machine builders, the suggestions have been offered to the manufacturers in the hope of accelerating a move toward interchangeability of tapes among quarter-inch, two channel stereo digital reel-to-reel audio recorders.

Basic items included in the

SPARS "suggestion" are electronic editing capability, cut and splice capability, operating speed of 15 ips, 90 minute capacity at 15 ips, symmetrical track layout, twelve tracks including: eight tracks for two channels of digital audio, two tracks of analog audio, one user-generated information track capable of being separately recorded and one time code track capable of being separately recorded. Additionally, SPARS suggests that when a four channel recorder is built it should be capable of playing tapes recorded on the above suggested machines.

The authors of the letter admit they are in no position to recommend standards to the manufacturers, however they agree that if the manufacturers could build machines with the above attributes, they would be found most useful.

ERA Forms New Division

The Southern California Chapter of the Electronic Representatives Association has established a Sound, Signal and Security Division to serve professional audio, commercial sound and audio/visual products representatives. Chairman of the new division is Wes Alderson, president of WesTech Marketing, Culver City.

Alderson said the formation enables representatives in the "sound, alarm, music, professional audio and audio/visual markets to become involved in an organization of representatives with similar goals. Acting as a group we can accomplish goals which are good for the industry, our manufacturers, our accounts and, therefore, good for us."

Alderson said the division plans to be a sponsor of a western regional sound show in the Los Angeles area during 1985.

Additional information is available from the ERA office, 1700 Westwood Blvd., Los Angeles 90024; telephone (213) 879-7119.

TV Stereo Meeting in San Diego

A two-day conference to discuss the topics of stereo and second-language TV sound will be held at the Hyatt Islandia Hotel in San Diego, March 11 and 12, 1985. Workshops will focus on how audio and video are becoming integrated in the viewer's home, on sources of stereo programming and the plans of the networks, on the problems encountered in converting a television station to stereo, on the role of cable in providing high quality sound, and on the audience impact of reaching the Hispanic market with bilingual programs. For more information contact Waters Information Services at (607) 770-1945.

NOTES

AES officially announced that the 78th convention will be held in Anaheim, CA, May 3 through 6, 1985. Mr. Milton "Bill" Putnam will serve as convention chairman. Greg Badger has been appointed director of engineering for *Aphex Sound Field Systems*, a new division of *Aphex Systems Ltd.* which will specialize in surround stereo products for the motion picture and audio/video industries. Uher, the German manufacturer of tape

recorders, mixers and accessories, has reopened their U.S. sales office at 7067 Vineland Avenue, North Hollywood, CA 91605; phone (818) 764-1120.

Audio Precision, Inc. has recently been formed by four former Tektronix engineers and managers—Bob Metzler, Dr. Richard Cabot, Bruce Hofer and Bob Wright—to specialize in high quality test and measurement instrumentation for pro audio applications. They can be reached at P.O. Box 2209, Beaverton, Oregon 97075, phone (503) 297-4837.

Synergetic Audio Concepts will be sponsoring a business organization and financial management workshop, aimed at managers of small audio firms, to be held at seven locations throughout the U.S. and Canada in the spring. Phone (714) 728-0245 for more information. Garry Templin has been named central regional sales manager for *Electro-Voice, Inc.*

Joel Silverman has been appointed director of marketing and sales for *Lexicon Inc.* in Waltham, MA. A licensing and development agreement has been worked out between *George Massenberg Laboratories* and *AMEK Systems and Controls Ltd.* to cover the manufacture by AMEK of the GML Moving Fader Automation System for use in the AMEK line.

FM Acoustics, the Swiss manufacturer of amplification and signal processing equipment, has opened a U.S. branch headed by Gene Michalski at P.O. Box 311 in Davis, California 95617-0311. (Dennis) Ray Kirchhoefer has recently joined the *Electro-Voice* engineering team as engineering project manager/microphones.

James F. Woodworth has been appointed national sales manager of *CompuSonics Corporation*. A. Franz Witte III has joined the *Ampex Magnetic Tape Division* as manager of market research and planning.

Robert Dupras has been appointed acting regional distribution manager for the Burbank, California, regional distribution center of *Agfa-Gevaert, Inc.* Audio Industries Corporation of Hollywood, CA, has been named representative for JVC professional audio products in 13 western states, including Hawaii and Alaska.

Vari-Lite, the Dallas-based automated lighting equipment manufacturer, has announced international distribution agreements with *Samuelson Vari-Lite Europe, Ltd.* in London, and *Vari-Lite Asia, Inc.* in Tokyo.



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SESSIONS

NORTHWEST

Montage Recording Studio, Newark, CA was busy with a project by *Billy J. Walsh* featuring Sneaky Pete on pedal steel guitar. Also in was *Bay Rum* working on a tape with *Will Mullins* engineering and *Edwardo Avila* assisting. . . . Current projects at SF's *Independent Sound* included a solo album by noted jazz/rock guitarist *Bill Rodgers*, lately of *The Crusaders*; and a soundtrack for illustrator John Capick's animated Christmas special slated for 1985. Commercial work continues, and recording is in progress on *Peter and Mary Buffett's* follow-up to their surprise hit "My Boyfriend's Back," an LP of original Buffett material sung by Mary and set for completion in early '85. . . . Recent album action at *Starlight Sound* in Richmond, CA included premiere releases from ska-rockers *The Uptones* with *Ray Pyle* behind the board, and *The Mysteries* with *Steve DeGrazia* at the helm. . . . The mixers at *The Sound Service* in San Francisco have been busy: *Kim Aubry* engineered and mixed the soundtrack for *Jackie Baldwin's What is History*, a Chevron School Broadcast project. He also edited and mixed the French language version of Loni Ding's "Nisei Soldier" . . . *Merilee Rush* was in *Triad Studios* (Redmond, WA) for a single project with Bob Bogal, producer . . .

SOUTHERN CALIFORNIA

Carol Duboc recorded tracks at the *Sound Solution* in Santa Monica with chief engineer *Keith Wechsler*. Also at Sound Solution, Neophonic Records artist *Zamp Nicall* put finishing touches on his debut release, produced by *Steve Barnard* and engineered by *David Blade*. . . . At *Preferred Sound* in Woodland Hills, artist *Lauren Wood* was in with producer *Kathy Kurasch* and engineer *Matty Spindell*. . . . Composers *Tom Scott* and *Jack Hayes* were in Burbank's *Evergreen Recording* recording the score for Columbia Pictures' *Fast Forward*. Engineer on the sessions was *John Richards*, assisting was *Mike Hatcher*. Composer *Burt Bacharach* was in at Evergreen scoring the new motion picture *Creator* for Kings Road Productions. Engineering was *John Richards*, assisted by *Gary Luchs*. . . . At *Golden Goose Productions* in Costa Mesa, *Rick DeLong* of the rock group *Citizen Kane*, has been working on a number of solo projects, including commercial jingles. . . . Producer *David Malloy* was at *Sunset Sound* working on *Dolly Parton's* upcoming album with *Joey Bogan* engineering and *Peggy McCreary* assisting. And Warner Bros. artist *Jennifer Holiday* was in mixing for her LP with producer *Tommy LiPuma*, *Dave Jerden* engineering with *Stuart Furusho* assisting. . . . At

Gopher Baroque, Westminster, CA, A&M recording artists *Exude* put the final touches on their follow-up album to *Boys Just Wanna Have Sex*. *Michael Mikulka* engineered with *Manny Perez* assisting. . . . At *Artisan Sound Recorders* in Hollywood disk mastering engineer *Greg Fulgniti* recently mastered LPs for *The River*, produced by *John Williams*; *Ella Fitzgerald* and *Duke Ellington*, produced by *Norman Granz*; *Eric Carmen*, produced by *Bob Gaudio* and *Don Gehman*; *Planet P* and *White Lion* with producer *Peter Hauke*. . . . At *Dynasty Studio* in Torrance, *Todd Robinson* cut his new album with backing musicians, Dave Benoit, Rick Jaeger, and Vernon Porter, with *Phil Kachaturian* engineering. . . . At *Skip Saylor Recording*, in LA, singer/comedian *Tommy Rucker* was in mixing a live LP for Steelbridge Records. *Tom Greenough* produced with *Skip Saylor* behind the board. . . .

SOUTHWEST

Roger Hess Productions, N.Y. Broadway producers of the extremely successful musical, *A Chorus Line*, commissioned the staff of Dallas' *Sumet-Bernet Sound Studios* and Sumet's giant Studio "A" to record the actual production orchestration to be used on the Broadway company's European tour. The orchestra was composed of all Dallas musicians, supplemented only by the N.Y. company's conductor and drummer. *Bob Singleton* was the session engineer with *Mike Pietzsch* assisting. . . . StarSearch '84 finalist *Benita* completed work on two songs for a new single release at *Sierra Recording* in Fort Worth, TX. Producers *Ed Jones* and *Richard Harris* made extensive use of drum machines and synthesizers, and *Tony Rodriguez* engineered the sessions. . . . Recent session activity at *Crystal Clear Sound* in Dallas: *Bill Swicegood* produced a demo for his band, *Dallas*. Engineering was handled by *Keith Rust*; an album by jazz/wave group *About Nine Times* due for early February release has been recorded by *Keith Rust* and produced by *Rust* and the Band. . . .

NORTH CENTRAL

At *Comfort Sound*, Toronto Billy Idol's bassist *Steve Webster* produced an EP for Ottawa-based band *Bugs Harvey Oswald*. And *John Tucker* and *Angus Robbie* recently spent a week recording a dance single using a Fairlight CMI. . . . Several national publishing firms utilized *Pinebrook Studio's* three rooms to completely record their in-house musicals (which includes orchestra, vocals, narrative and mix). Recent recording activity at the Alexandria, IN facility included the following producers, arrangers and companies: *Don Wyrzten*,

Phil and Lynn Brower (Zondervan Corporation)—two musicals; *Jim Kimmel, John Higgins* (Jenson Publications)—a children's musical/several vocal and instrumental demos; *Neal Joseph, Jeff Kennedy* (Gaither Music Company)—youth musical engineers included *John Bolt, Steve Archer, Mark Aspinall, Kevin Thompson* and *Mike Graham*. . . . Recording activity at *Studio A*, Dearborn Heights, MI included *Calvin Simon*, former member of *Parliament Funkadelic*, producing an album on *McCharacter*, with *Eric Morgeson* engineering. Also, jazz keyboardist *Lyman Woodward* mixed his second self-produced album with *Jim Vitti* behind the console. . . . At the *Sound Suite* in Detroit the legendary *Four Tops* cut vocal tracks with producers *Willie Hutch* and *Iris Gordy* for Motown Records; engineering the project was *Jim Vitti* with *Steve "Dr. Ching" King* assisting. Also, gospel producer *Rance Allen* was in recording tracks for an album on Word Records; *Warren Woods* engineering. . . . *Lansing Sound Studios* in Okemos, MI is pleased to announce the release of *Mike Brushes' Secret Songs* a contemporary jazz LP cut there with master engineer *Neil E. Gorov* of *Groover Producers*, and produced by *Gorov* and *Mr. Brush*. The sessions were assisted by *Marc C. Moore* of *Lansing Sound*. . . . At *Studiomedia*, Evanston, IL, *Jerry Goodman*, formerly of the *Mahavishnu Orchestra* and the *Flock*, was in recording onto Mitsubishi X-800 and X-80 digital machines for *Private Records* with producer *Martin Rubenstein* and engineer *Benji Kanters*, formerly the pride of NU's Elder Hall. Also in Studio A, *Marshall Vente & Project Nine* cut tracks for their third album on Mo Pro Records with engineer *Scott Steinman*. . . .

SOUTHEAST

At *Reflection Sound Studios*, Charlotte, NC, producer *Don Dixon* has been keeping busy, and among recent projects he has handled is the new *Tommy Keene* album, due out in early '85 on Dolphin Records. He and *T-Bone Burnett* co-produced the LP with *Steve Haigler* engineering. *R.E.M.* live dates in Charlotte, Durham, Washington D.C. and Charlottesville, VA will be mixed for a live LP by *Don* and *Mitch Easter*. *Mark Williams* and *Chip Garrett* handled engineering on the road in Reflection's Studio "C" on wheels. . . . Among those in *Music City Music Hall* recently were *Charly McClain*, busy finishing up the newest Kentucky Fried Chicken jingle; *Norro Wilson* producing and *Bill Harris* engineering; and producer *Jerry Kennedy* cutting tracks on CBS artist *Joe Stampley* in order to finish up an album project. *Bill Harris* was the engineer. . . . At *Hummingbird Studio* in Nashville, TN, *Michael Murphy* worked on lead vocals and guitar overdubs for his newest album to be released by Warner



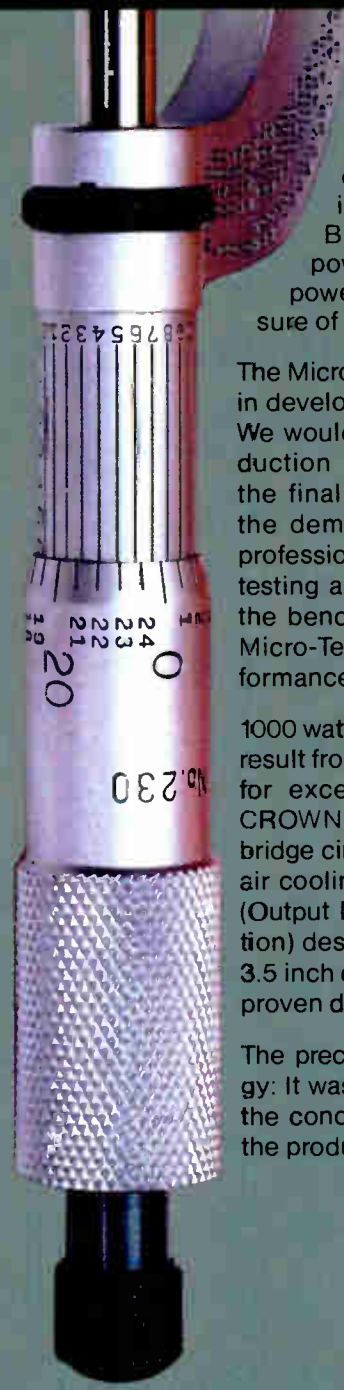
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Brothers. *Jim Ed Norman* was producing and *Scott Hendricks* engineering. . . At *Woodland Sound Studios* in Nashville, the *Charlie Daniels Band* was in laying tracks for their new album with *John Boylan* producing and independent engineer *Paul Grupp* engineering, with *Ken Cribblez* assisting. Also, *Billy Crash Craddock* was in mixing his new live album with *Tim Farmer* behind the controls. . . At *Polymusic Studios*, Birmingham, AL, recording activity included the band *Telluride* doing tracks for their new LP on Lizard-head Records, with *Mark Philips* and *Tommy Caltin* producing, *Andy Bray* engineering; and *Scotti*, featuring *Scott McDavid*, cutting for Polymusic Records, with *Michael Panepento* and *Davey Moire* producing, *Moire* and *Andy Bray* engineering. . . Producer *Harold Shedd* was in Nashville's *Music Mill* finishing up *Alabama's* new album being engineered by *Jim Cotton*, *Joe Scaife*, *Paul Goldberg* and *George Clinton*. . . Recording projects currently at the *Castle Recording Studio* in Nashville included *Eli Ball* producing new Epic artist *Terry McNeil*, with *Toby Scott* engineering. *Scott* was engineer on the last four Bruce Springsteen albums. . .

NORTHEAST

At *Tiki Recording Studios*, Glen Cove, NY, *Rusty Lane* was in cutting tracks with *Rick Derringer* on guitar, *Tommy Price* (Billy Idol, Scandal) on drums, *Joe Vista* (Billy Idol) on bass, and *Tom Mandell* on keys. Producing this project were *Fred Guarino* and *Rusty Lane*. . . At *Secret Sound Studio* in New York City, *Frank Stallone* mixed his latest album with *Tom Marolda* and *Warren Bruleigh* engineering. *Frank* and *Tom* produced with help from *Neil Kernon*. Also mixing at *Secret* were *The Miracles* for *Hitsburgh Records*. *Al Cleveland* produced with *Scott Noll* engineering and *Bruleigh* assisting. . . Recent activity at *Kajem Studios* in Gladwyne, PA included recording and mixdown of a single for recently-signed *Nick Mundy* on CBS Records. The A side, entitled "Ain't It Alright," was produced by *Nick Mundy*, and engineered by *Mitch Goldfarb*. . . At *Evergreen Recording* in New York City, reggae stars *Sly and Robbie* were in laying down vocals with *Rob Stevens* and *Hahn Rowe* at the controls. *Bob Kirshner* and *Matt Cummings* assisted on the sessions. . . At *Normandy Sound* in Warren, RI producer *Le Roy Radcliffe* has been recording tracks for a new album by *Mark Dana* with engineers *Phil Greene* and *Tom Soares*. Notable session players have included singers *Vicki Sue Robinson* and *John Warren* and drummer *Eric Parker*. . . The husband and wife team *Ted & Mayumi Klum* were in at *Inner Ear Recording*, Queens, NY, with a nine-piece band recording a jazz suite written and arranged by *Ted Klum*. The work is being submitted to the N.J. State Council of the Arts for a fellowship award in composition. . . *Stanley Turrentine* was in Long Island City's *Power Play Studios* doing his next release for *Manhattan Records*. *Les McCann* was in on the session with *Tony May* engineering and *Rick Gratz* assisting. . . At *Greene Street Recording*, NYC, *James Blood Ulmer* recorded a single for *Soho Productions*;

Les Davis and *Rod Hui* producing, *Hui* engineering and *Andrew Spigelman* assisting. Also at *Green Street*, *Rare Silk* recording for *Palo Alto Records*, *Patrick Cullie* producing and *Tim Geelan* engineering with *Andrew Spigelman* assisting. . . The *Rebel Montez* project being recorded at *Trod Nossel Studios* in Wallingford, CT, is progressing. *Thomas "Doc" Cavalier* is supervising album production and mixing. *Cavalier* is also producing *Bob Mel's* LP, where *Bob* is performing most of the instrumental tracks through overdubbing. . . The *Secret Sound/Aura Sonic* team (Flushing, NY) have been recording all the live concerts for *PMC/FM Tokyo*. Four more shows were captured live for Japanese radio featuring the *Black Uhuru* from the *Ritz*, NY, *Pedi Boi*, *Loremil Machado and the Savava Band* and *Kimati Dinizulu and the Kokoto Society* and *S.O.B.'s*, NY. The taped broadcasts were recorded, mixed and engineered by *Steven Remote* and *Jack Malkin*. . . *Battery Sound* in New York City reports feverish activity with *Powerman*, *B-Rock*, and *Killer Whale*. All projects engineered by *Mark Freedman*. . . The *19 Recording Studio* in South Glastonbury, CT has been recording with *Dayton*, for *Capitol Records*: *Rahni Harris*, producer; *Ron Scalise*, engineer; *Richard Musk*, Fairlight CMI programmer. . .

At the *Power House* in Camden, NJ, *The Johnston Brothers Band*, recent second-prize winners at the *Wrangler Country Showdown* at the *Grand Ole Opry* in Nashville, returned to record six sides with *Bill and Bob Adams* producing. . . At *Sigma Sound Studios* in Philadelphia the heavy metal band *Krokus* was in dubbing studio tracks from their live concert for *MTV*. *Art Stoppe* and *Mike Tarsia* handled the engineering, assisted by *Randy Abrams*. . . *Mastermind Studios* in NYC had *Kenny Burrell* completing work in *Studio A* on his upcoming album *Togethering* with *Grover Washington Jr.* The album, released in January under the *Blue Note* label, was produced by *Helen Keane*, *Burrell* and *Washington*, and features *Ron Carter*, *Jack DeJohnette* and *Ralph McDonald*. *Frank Laico* and *Neal Ceppos* engineered. . . At *39th Street Music Productions*, CBS/Silverblue recording artist *Marcus Barone* mixed a single for new singer-artist *Sally Ries* with *Richard Kaye* engineering. Producer *Rod Funston* put finishing touches on two sides for new recording artists *Radford & Ray*, with *Richard Kaye* engineering. . . London recording artists *Loose Ends*, produced by *Nick Martinelli*, completed work on their second album at *Alpha International* in Philly. . . Recent happenings at *Quadrasonic Sound Systems* (NYC) included *Jennifer Holliday* of *Dream Girls* fame in the studio laying down tracks for some cuts for her up-coming album on *Geffen Records*. . . Multi-instrumentalist *David Liebman*, formerly with *Miles Davis*, *Elvin Jones*, *Lookout Farm* and currently with *Quest*, has been recording solo tracks for a *Compact Disc* at *Eras Studios* with *Gene Perla* producing and *Cynthia Daniels* engineering. . . *Joe Venneri* was in *Park South Studios* in NYC producing and engineering a new, posthumous *Bob Marley* album for February release on *Jamaica Records*; *Jamie Chaleff* assisting. Also the *Weather Girls* were in working on a new album for *CBS*. *Hank Medress* and *Jeff Kent* produced for *Double Vision Productions* with

associate producer/engineer *Joe Venneri*. . .

STUDIO NEWS

Work has begun on *Granny's House*, a 24 track, *Chips Davis*-designed control room surrounded by a three bedroom Victorian house in *Reno, Nevada*. The "resort" studio, operated by *Scotti Brothers* recording artist *Robert Foreman*, is scheduled to open in *August, 1985*, and will feature an *SSL console* and *Studer tape machines*. The room will be the second *Chips Davis* designed facility on the *West Coast*. . . *Bonneville Media Communications* in *Salt Lake City* has now equipped a second audio control room for video sweetening. Newly remodeled *Studio A* has been fitted with an *Audio Kinetics Q.lock 310-3 synchronizer*, an *Ampex 1100 16 track audio recorder*, and an *MCI 1-inch "C" format audio layback machine*. . . *Island Recording Studio* is the name of a new 24 track studio in *Temple Terrace, FL* (just outside of *Tampa*). Equipment there includes *ACES recorder, console* and *mastering machine* and a healthy selection of *outboard gear*. For more information call (813) 985-1926. . . *John B. Uhrig* has been appointed operations manager and chief engineer at *Hayes Recording Studios* in *Tampa*. *Uhrig* owned and operated *M.T.R. Studios* in *Richfield, Ohio* where he worked with groups including *Devo*, *Taxi*, *Phil Lombardo* and the *James Gang*, and *Freddy Salem* and the *Outlaws*. . . *Allied Artists Records* has opened *Allied Artists Recording Studios*, at the label's *Santa Fe Springs* location twenty minutes southeast of *downtown Los Angeles*. The facility boasts a *Harrison Raven* automated console and *Otari MTR-90 24 track*. . . *Power Play Studios* have added a new *Trident Series 70* board in the *B room*. They now have two 24 track studios, one with an *MCI JH-636 board* and one with the *Trident*. . . *Sumet-Bernet Sound Studios* in *Dallas* has just completed total renovation of *Studio "A's"* headphone/foldback system with the addition of redesigned headphone stations (each with selectable *XLR* or *1/4-inch headphone jacks*, switchable *stereo/mono function*, and individual *high-power level controls*). New headphone amplification is now using *Crown amplifiers*. . . *Omega Audio* in *Dallas* has recently acquired the *Filmways-Heider Mobile Unit #2* from the *Record Plant* in *L.A.* The unit has been refurbished by *Omega* with the addition of *JBL 4430 monitors*, two *Otari MTR-90 24 track recorders*, an *Otari MTR-10 two track recorder*, an *Otari 5050B 2 track recoder*, various *signal processing units* such as *dbx 162 and 160 limiters* and a *Lexicon 224X digital reverb* with *LARC*. . . *New York's dB Sound* has installed two *Neve 5106 consoles*. . . *3M Company* of *St. Paul, Minnesota* has donated a four track digital mastering recorder to the *Music Engineering program* at the *University of Miami* in *Coral Gables*. . . *The Castle Recording Studio* in *Nashville* now offers a complete *keyboard/synthesizer room* for audio *pre/post production*. The facility includes a *Fairlight CMI Series II X digital synthesizer*, one of only five in this series found in the *United States*: a *Yamaha DX1* and a *DX7 digital synthesizer*, and several additional *keyboard instruments*. . .

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NIGHT CLUB SOUND

FOUR CLUBS IN SEARCH OF THE STATE OF THE ART

THE PARK WEST Chicago, Illinois

"The Best Club in America," is their claim. Owner Dale Niedermaier, would probably agree with this modern day paraphrase of the 16th Century writer Machiavelli: "The ability of a nightclub owner is recognized in two ways. The first is his selection of a site, the second in his sound system. And since club owners cannot make themselves secure without having power over a large populace, it is necessary for them to avoid barren places in the country and to establish themselves in very fertile places where they can overcome anyone who attacks their greatness. . . ."

In 1977 Niedermaier selected a former porno theater only five minutes from downtown Chicago for his site. His current sound system was selected for him by some very bright street kids who now manufacture their own brand of speaker systems—Modular Sound/Bag End—in a well-to-do suburb.

Back in 1978 young Jim Wischmeyer and his partner, Henry Heinie, had built sound cabinets for Heinie's band. During vacations they would head West and climb mountains. They'd come back to the city, build more cabinets, fill them with speakers, set up outdoor concerts and stack their creations as high as they would go—like mountains. One day they brought their system into Dale Niedermaier's Park West, and it never left.

"We're very happy with our sound system," says Jim Nudd, sound engineer for the Park West. "It's flexible and unique." As of this date Wischmeyer and Heinie have stacked 3.5 tons of cabinets and speakers into two pillars, each 28 feet high, on Park West's spotlighted stage.

"It's a cone-type system," says Wischmeyer. With 152 loudspeakers in use, there's not a horn in sight except for some tweeters. This acoustical concept has both pleased and confounded soundmen for Dennis DeYoung, Blondie, Genesis, King Crimson, The Rolling Stones, Crystal Gale, Henry Youngman, and hundreds of other top acts.

"This is a hi-fi system," says Jim Nudd. "It's meant to give a 'living room' definition and clarity to an artist's performance. A lot of soundmen come in and try to run it like a traditional horn-packed operation. A cone system just doesn't perform well if it is driven hard so this is definitely not the place for high sound pressure levels."

The directivity of Park West's speakers was custom-analyzed by Mod-

ular Sound Inc. for the characteristic room layout, and outside sound systems are not allowed. Although touring sound engineers may get frustrated with Bag End's cone approach, Jim Nudd is always conveniently at the board to counsel them if things get out of hand.

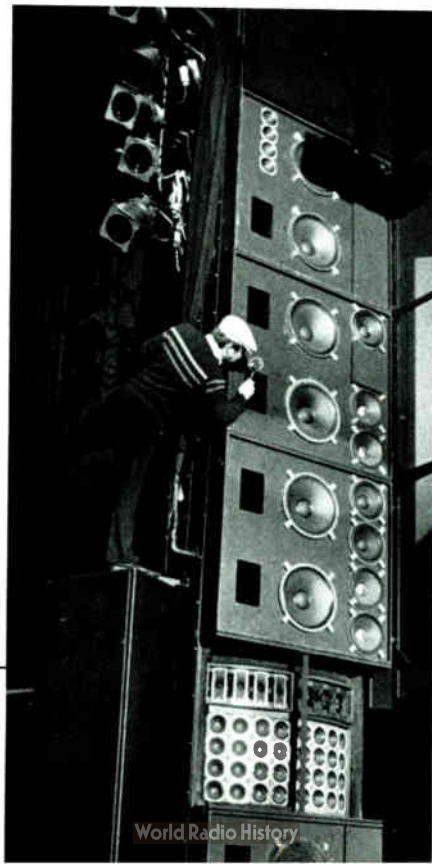
"Some soundmen have a set way of doing things," says Jim. "They've gotten away with pushing traditional horn-loaded systems, but an over-driven limiter can be a disaster in this room." Since Brooke-Siren Crossover/Limiters, wired at each crossover point, are located 60 feet away on stage, a soundman can't depend on a traditional limiter's VU meter or LED to tell him what's clipping. While the Park West offers a potential of high-quality sound, its sound system is definitely a challenge for engineers with less than sensitive ears. A well-mixed show at the Park West, however, is worth hearing. Patrick Moraz of Yes and Moody Blues fame recently called Niedermaier's live grand piano sound the best he's ever heard.

Fourteen amplifiers that supply 10,000 watts to the 132 speakers and 20 tweeters are also located on stage to reduce cable length. It's very effective; there's only .48 ohm of resistance in the entire speaker system!

Lately quite a few radio, TV, and even satellite transmissions have originated from the Park West (Tina Turner, Frankie Valli, Hall & Oates. . .). Jim Nudd reveals that, no, he does not patch direct from his 24 x 8 Yamaha PM-2000 mixing console. Instead, mike-splitters grab the music near its source and feed it to sound trucks that lurk behind the club. The sound trucks then, of course, launch sub-microscopic music molecules into space and sometimes outer space. They say that, today, when anyone "attacks the greatness" of Dale Niedermaier he takes to the high ground—like a 16th Century prince. It's a mountain-climber's dream.

—Bob Wallick

Writer, Bob Wallick, closely examines one of the Park West's sound pillars.



World Radio History



Park West Sound System Specifics

Mikes (all Shure):

SM57 (15); amplifier miking
SM58 (10); vocal backups
SM85 (5); grand piano
SM81 (3); hi-hat & overhead
SM53 (3); jazz guitar, harp, misc.
SM7 (1); acoustic guitar
SM87 (1); lead vocals

Amps:

AB Systems 1200 (6) for 15"
and 5" speakers
Crown DC300 (4) for 10" speakers
McIntosh 2300 (2) for 24 tweeters
McIntosh (unidentified—2) for 5"
speakers and balcony tweeters
Combined total: 10,000 watts

Speakers and Cabinets:

JBL, Gauss, and Electro-Voice speaker components that include: 15" (24); 10" (20); 5" (88); tweeters (20). Modular Sound Inc. Bag End cabinets (approximately 20) are stacked 28 feet high in two columns, stage left and right: Total weight—3.5 tons; total radiating surface area—6125 sq. in.; total #8 copper speaker wire weight—35.3 lbs.; total speaker system wire resistance—.48 ohm.

Mixing Console:

Yamaha PM-2000 24 x 8

Crossovers:

Brooke-Siren Crossover/Limiters four-way with crossover points and soft limiting at 250, 1,000 and 4,000 Hz.

Stage Monitors:

Full array of Bag End and Hill enclosures with 15" and 5" JBL & Gauss speakers; 24 x 8 Hill console feeds 4,000 to 10,000 watts of Crown and Moco amps. Owned and operated by Chicago Music Co.; Jack Alexander, chief engineer

Room Dimensions:

Approximately 75 x 80 x 30' excluding balconies and lobby.

Seating Capacity:

800

THE PALOMINO North Hollywood, CA

For more than three decades, the Palomino has been synonymous with country music on the West Coast in much the same way that the Grand Old Opry has in the East. From its modest beginnings as a pub for Hollywood stuntmen in the '50s, the club has grown in stature to become one of the greatest proving grounds for new talent in the history of the music business. For 15 years, it consistently held the title of the #1 country and western nightclub in the U.S. Among those who spent their early days polishing their music at the Palomino are such legends as Kenny Rogers, Johnny Cash, Waylon Jennings, Barbara Mandrell, Willie Nelson, Linda Ronstadt, Eddie Rabbit, Huey Lewis & the News, Glen Campbell, and Emmylou Harris.



Everyone from Elvis Presley to Lawrence Welk has graced the Palomino's tiny stage at one time or another.

During the '70s and that decade's phenomenal country music explosion, the club entered its golden era and earned its legendary status within the industry. Since that time, due to the softening of the record business and inflation, the club has had to face up to the disastrous economic considerations that have

kept many of L.A.'s biggest nightclubs shuttered (and shuddering). These days, the Palomino plays host to many national acts of varying musical genres, from Jimmy Witherspoon and Tower of Power, to Billy & the Beaters and Jack Mack & the Heart Attack.

The fact that it is one of the few music clubs in town open seven nights a week, and because of the diversity of musical acts that appear there, the choice of sound reinforcement equipment was a critical one. For many years,



the club operated with a Shure 200-watt, eight-input "Vocal Master" system, with the house band's steel guitar player mix-

ing onstage and operating the lighting system (four on/off switches) with his right foot. In fact, many of the Nashville artists, used to singing around one big microphone in the early days of the Opry, had to be convinced that they could use separate microphones when the Shure system appeared.

After artists like Leon Russell, Linda Ronstadt and other groups began bringing in state-of-the-art sound sys-



tems, the decision was made in 1977 by the Palomino's owner, Tommy Thomas, to install a more versatile sound and lighting system. The contract, originally awarded to A-1 Audio and now held by

former A-1 employee C. David Hopkinson's Zeta Sound, was for installation and maintenance of a sound system that would adequately cover the club's unusual L-shaped layout and outside patio.

That year, the first phase of the system was completed, which featured four modified JBL 4320s with custom crossovers, a Yamaha PM1000 16 x 4 console and a limited number of effects. Later, because of a number of very hot spots and dead spots, six more 4320s were added, along with a pair of stock JBL 4311Bs as fill speakers in the club's game room. A few Shure SR columns remain from the old days, and are mainly used for fill speakers in certain areas. The speakers are bi-amped with JBL 5234 electronic crossovers (with x-over points fixed at 800 and 3200 Hz with a low filter at 80 Hz) and 10 BGW 750s and 100-As providing the necessary amplification. For monitors, the club used to use Community Light & Sound's small two-way fiberglass monitors but has switched in recent years to Yamaha's model 2115.

The system is essentially mono,

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with the Yamaha's four matrixes providing sound to different areas of the club. The philosophy of the system's design, according to Hopkinson, is to provide a recording studio-like monitoring environment for the Palomino's patrons rather than the "blow-em-away" outdoor system approach used by many other area clubs. A good deal of outboard equipment is available in the rack, including a Yamaha PM-180 sub-mixer, a Shure feedback controller, UREI 530 stereo graphic used for the monitors, an Orban 621 parametric and 111B reverb, a UREI LN-76 compressor, a dbx 160 stereo compressor, a Shure M67 mixer, a Sony cassette deck, and a few Studio-master amps. A separate, isolated power-line powers the equipment, which is never turned off, except for maintenance, and is allowed to "burn-in" 24 hours a day.

Since the club is continually used for video and audio recording of live performances, three-way, hard-wired

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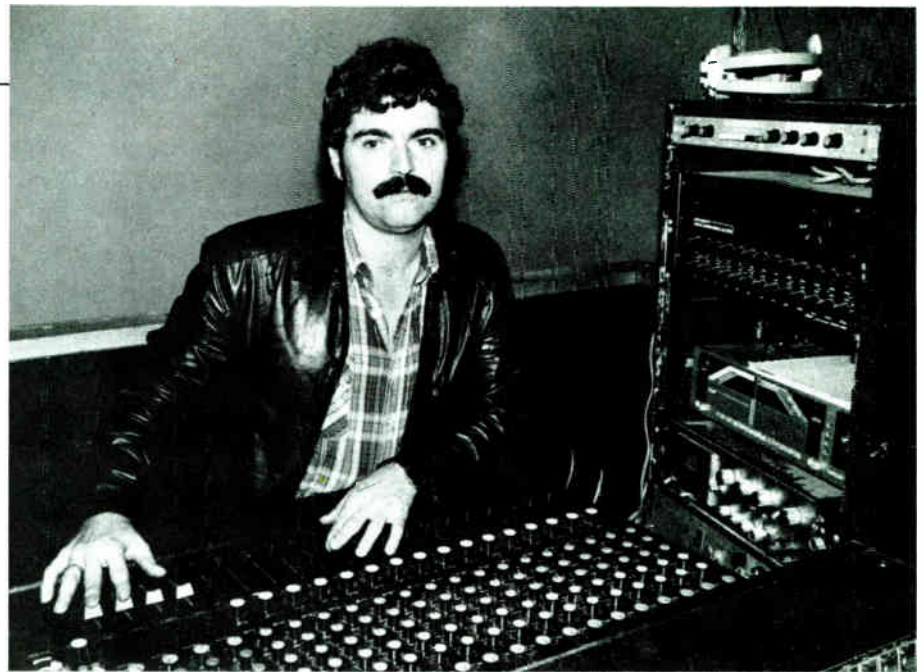


Kevin Chisholm at Wolfgang's.

mike splitter boxes are located on the stage, feeding a 27-pair main snake with sub-snakes for vocals and drums. The club also has its own simple video recording and distribution system consisting of a Panasonic WV 3800 three tube camera and some broadband distribution amplifiers. The microphone complement includes only the industry's sturdiest models—primarily Shure SM58s, Sennheiser 421s and EV PL-95s. Microphones like AKG D1000Es and Shure SM-57s, often regarded as fairly sturdy stage mikes, failed to withstand the Palomino's tortuous 7-day schedule. The direct input boxes are Sescoms, and the Yamaha baby-grand is miked by two D1000Es and a Shure 548 on the bottom. A Helpinstill piano pickup system was shelved after it received too much abuse to be workable.

The club's lighting system consists of a TTI lighting console with 24 channel two scene capability. The light bank includes 20-250 and 500 watt 6-inch fresnels, six 3-inch ellipsoidals, and three four-color ceiling hung border lights. A 1000 watt follow spot is located near the sound booth, filling out the lighting complement.

Several times a month, Zeta is contracted to augment the system from their five-figure equipment inventory. A Soundcraft 24-input console, drum risers, more exotic microphones such as EV RE-20s, AKG 451s, Sennheiser 441s,



by moving the mixing area to in front of the stage and by adding to the aging and well-worn equipment.

The system, as it stands, is not as physically attractive as it once was, yet it is a testimonial to what good equipment can handle if properly configured, day in and day out, for more than seven years.

—Tony Thomas

**WOLFGANG'S
San Francisco, CA**

"Wolfgang" is a name that carries a lot of weight in music history. Although Mozart wore his given name unself-consciously, rock music impresario Wolfgang Jargonka decided to change his before making his fortune, in the process, becoming easily the most famous American music promoter of the past couple of decades. "Bill Graham" was pronounceable, less forbiddingly Teutonic. The discarded name did come in handy later, however, to christen the newest Bill Graham nightclub, "Wolfgang's" in the North Beach area of San Francisco.

The 680-seat live music club opened on July 4, 1983 with a new look to a well-worn venue. Back in the '30s Club Lido was built and launched a long line of dance spot incarnations, including, Harry's, X's, Dance Your Ass Off (in the '70s in the grip of disco-fever), and The Boarding House, which was really a live rock club and the predecessor to Wolfgang's.

Graham's organization wanted to upgrade the sound system for their new club, so they called the San Rafael acoustic design company, Ultra Sound. Manager Don Goldstein recommended

a \$30,000 Meyer Sound system to do the best job for a number of reasons: "You hook it up, turn it on, and you're right there with your great sound—no adjustments with knobs or dials or anything." Goldstein continues to say that, "The speakers are made for arrayability. You can add speakers to a cluster with no problem—the dispersion is very even from side to side." The configuration includes: five UPA loudspeakers with an M1 control electronics unit, four 650-R subwoofers (18-inch drivers), Crest 3500 amps at 225 watts into 8 ohms into the UPAs, and Crest 5000 amps at 325 watts into 8 ohms for the 650-Rs.

Goldstein hung a center loudspeaker cluster to achieve that even sound all around the room. "That was easier said than done," says Goldstein. "We had to go way up in the ceiling to find a solid spot to support the weight... it's a really old building."

Wolfgang's presents that common challenge to a club sound system—the upstairs balcony. "I really had a hard time deciding how to do that, so I went with tilting the cabinets, splitting the speakers between upstairs and downstairs." Goldstein is candid in citing the two places in the room that still bother him: "Under the balcony there's a problem with the high end—it's a typical balcony problem—you've got a reflection occurring underneath the balcony." The other spot is dead center in the first two rows in front of the stage. "You don't hear the horns there, but I figure the people who are sitting in the front rows aren't listening, anyway," he says, laughing. "We really could have fixed that with some little speakers, if we'd had more time and money, I guess." (Ultra Sound got the

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okay to do the installation a day-and-a-half before the club's grand opening, according to Goldstein.)

The booking policy at Wolfgang's allows for a broad cross-section of pop/rock acts, plus comedy. Manager Queenie Taylor says she'll book live bands "as often as we can sell enough tickets to make some money." With such wide parameters, the system has to be as flexible as possible. "We were a little nervous in the beginning when we heard that Blue Oyster Cult was coming a couple of weeks after we installed the Meyer system," says Goldstein, referring to the band's reputation for atom-splitting volume and power. When that show sounded good, and didn't blow up the UPAs, they knew they were in business.

Wolfgang's production manager Kevin Chisholm says he hasn't had any problems with the sound system. "The room is good, dispersion is good. The worst problem is the position of the mixing console," says Chisholm. The Yamaha PM-1000 with two sends, sits to the left of the door in back of the room. "The club is unfortunately kind of short, and it would take up 40 or 50 people to put it (the console) into the center . . . you have to walk into the room to hear for the right mix."

Chisholm provides what is a luxury for many bands on the club circuit: four separate mixes on stage. "During the sound check we can adjust the mix for individual band members. We use Harbinger monitors up on stage from the

Old Waldorf." (The Waldorf was another Bill Graham club in San Francisco which closed before Wolfgang's opened.) The club's lighting system uses some instruments from the Waldorf, but the 16 new leko spots, a new bank of washes to bathe the stage in various colors, and a new patchbay including 24 dimmer channels rounds it out nicely.

For microphones the usual blend of Shures, Electro-Voices and Sennheisers (for drums) work well with the rigors of club life.

Wolfgang's is a good place to see a show—it looks pleasant, as well as sounding even and clear. If you're in town for a show, remember where the best seat in the house for sound is: Don Goldstein recommends you sit at the bar. Cheers, and roll over, Mozart.

—Elizabeth Rollins

SCORGIE'S Rochester, NY

Although there are at least a dozen respectable live music clubs in Rochester, N.Y. (one of the largest markets in the state), only one of them is equipped with a complete in-house sound system. Located in the heart of downtown, on Andrews Street, and tucked behind a mighty IBM complex, Scorgie's Saloon has provided not only a haven for alternative music fans, but probably the best live audio available in the city.

Opened in 1976 on the first floor of a renovated brick building, Scorgie's (named after its owner Don Scorgie), expanded into the building's basement two years later for live shows and became the first club to book new wave music in Rochester. Although other clubs have toyed with that style of music whenever the right opportunity arose, Scorgie's is the only room to book local, regional and national new music and reggae acts on a consistent basis.

In addition to being home base for one of America's leading garage bands, The Chesterfield Kings, as well as 415 Records' New Math, Scorgie's has played host to scores of national acts on their way up, including The Go-Gos, Nona Hendryx, Jim Carroll, John Cale, REM, Fear, The Cramps, Dream Syndicate, Hoodoo Gurus, The Comateens, and many others.

The permanent sound system (and as of late, video system) found at Scorgie's came about for reasons that one might not consider: to save on the cost of brutal heating bills in the winter caused by constantly hauling equipment in and out and to save on set up time.

With an in-house sound and light set-up, the basement of the club (where the live shows are) doesn't have to open until 7:00 or 8:00 p.m., as opposed to 3:00 p.m., and everyone is usually out of the room by 3:00 a.m., in-

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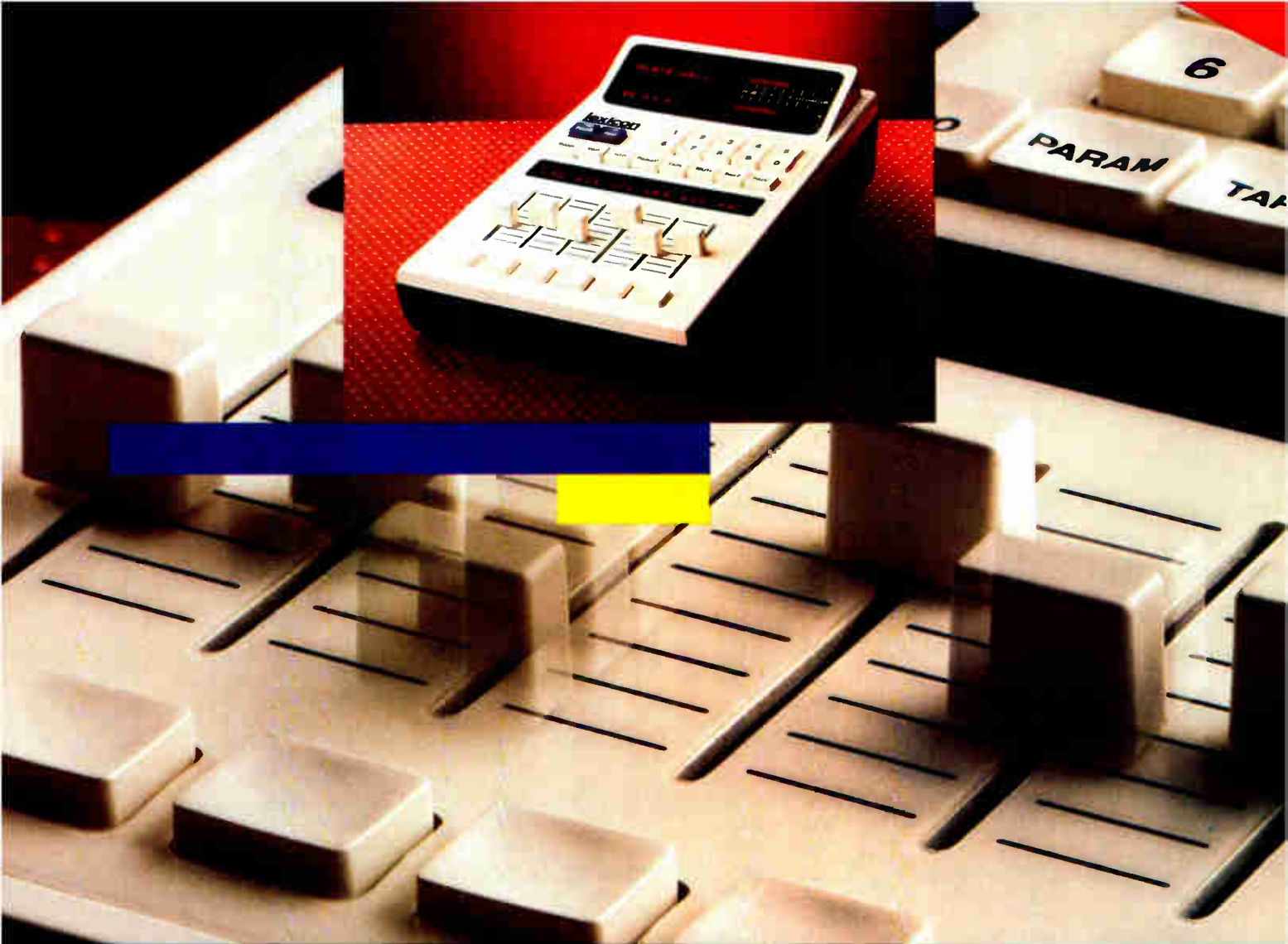
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stead of 5:00 in the morning.

In addition, most local new wave acts couldn't (and still can't) afford their own sound and lights, and since Scorgie's was bringing in national shows on a regular basis, the cost of hiring pro audio systems constantly brought its costs higher and higher, until it just made economic sense for the club to align itself with someone who would put in a permanent system.

That person was an affable art-deco collector named Mark Theobald, who is known to everyone as Mark Nuge. "It's an old joke that goes back many years," says Theobald, who is rarely seen not smiling. "I used to work with these three other guys in audio and all of us had long, frizzy hair and Fu Manchu moustaches, and at the time, Ted Nugent was very popular. So, one of the local musicians used to mock us out by calling us 'The Nuge Brothers.' And for me, the name just stuck."

Theobald, who calls his audio company Sterling Sound, put his first system in Scorgie's in 1979. Since then the system has been updated several times, including just recently.

Presently, it is 4-way stereo; the mains being 24 x 4 and the monitors being 16 x 4. The board is a new Yamaha MC2404, which features EQ for all sub-

Scorgie's sound mixing booth.

masters and full analysis for the system. Theobald also uses three different effects; a Roland Space Echo, a top-of-the-line DeltaLab digital delay, and Yamaha reverb.

The mains and the monitors are powered by JBL, and Ashly FET 500s and 200s, respectively, and Theobald uses all Ashly products, such as compressor-limiters, parametric equalizers, and crossovers for the signal processing.

"The reason I only use Ashly," says Theobald, "is because they're good; I've never had anything of Ashly's break and they're located here in Rochester, which makes it convenient."

The mains consist of all Eastern Acoustic cabinets, holding 12-inch, 15-inch and 18-inch speakers. Theobald also uses the new JBL bi-radial horns with 4525 drivers.

"The thing that makes Scorgie's unique is that fact that all the speakers are behind the stage," said Theobald. "That was done basically for visibility."

But what about feedback? "Without EQ it would be a problem, but I've got 8 bands of parametric on both sides and that seems to take care of it."

The basement of Scorgie's, which is only 100 x 45 and approximately 2,000 square feet, has the stage directly facing the bar. The capacity of the club is 500, although the club sounds best when there are about 300 present.

Because of its size, Theobald has had to severely limit the system, which has left him open to some criti-

cism. "It is too compressed," he admits, but is quick to counter, "The reason for that is that the bartenders will only stand the volume so much. The PA itself could do halls maybe four or five times the size of Scorgie's."

The system's monitors consist mostly of Yamaha SR 2115 wedges ("I tried a lot of cabinets and went for those because they were cheaper and they sound better") and for the drums there are custom 4-way Eastern Acoustic boxes containing an 18-inch, a 12-inch, a JBL bi-radial horn and a Gauss tweeter.

For mikes, Theobald uses mostly Shure SM57s because they're "the old stand-by; but usually that's what people want and they don't break." He also has a few AKG mikes for hi-hats and kick drums.

Theobald has also recently expanded into video with a 10-foot Klaus-Nova Beam screen, two Sony Beta Hi-fi video decks, a Sony color monitor and a video switcher. The audio for the videos is pumped through the sound system.

In the five years that he has been set up at Scorgie's, Theobald says he has never had any problems meeting a national act's rider, and has never had any complaints or real problems with group's that have used his system.

"I did have an interesting night with The Cramps a few years back," he says with a slight laugh. "The lead vocalist, Lux Interior, stuck my SM58 down his pants and then cut himself with a beer bottle and bled all over my system. Then he ripped down half the ceiling with one of my mike stands. After that, Don Scorgie said 'no more live shows'... but, eventually he changed his mind."

—Bruce C. Pilato



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Mark Theobald at Scorgie's.

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AUDIO-APPLICATIONS

“**D**igitization means smaller parts, smaller parts count, smaller power supply requirements, smaller mediums, etc. Pretty soon, a scanning electron microscope will be standard equipment for any technicians’ tool kit . . .”

The Miniaturization of Audio

by Ken Pohlmann

According to legend, roller skates proved to be the ideal secret weapon to combat a crisis which threatened the U.S. Army’s war effort in 1944. An experimental computer, dedicated to mathematical computation, was suffering disastrous downtime; the thousands of vacuum tubes which comprised its circuitry had a too-short life expectancy. Individual tube burn-outs kept accumulating to cause system failures which interfered with program execution. In short, the bad tubes couldn’t be replaced fast enough. The ingenious solution, of course, was to hire technicians with a pouch for bad tubes and another holding good tubes, roller skating down the aisles between electronics racks, replacing bad tubes. Whether or not that story is true, I don’t know, but at least it illustrates one incontestable fact — computers used to be pretty big, at least big enough to roller skate around inside. Today, the job market for such internal technicians is quite limited; even the high school vocational counselor who advised me to get into railroading probably realizes this.

Along similar lines, and for similar reasons, audio equipment has been shrinking. Digitization means smaller parts, smaller parts count, smaller power supply requirements, smaller mediums, etc. Pretty soon, a scanning electron microscope will be standard equipment for any technician’s tool kit, and anyone

who does remote recording will need a shirt pocket with a buttoned flap.

It is the question of smaller parts which concerns us this month. Specifically, much of the electronics required for audio processing is being fabricated as integrated circuits. Decreased size is only one of many advantages, including increased reliability, lower power consumption, and given suitable manufacturing volume, tremendously reduced cost. This points up the future influence which consumer audio products will have on professional products; it is primarily the high volume of consumer sales which will justify the integration cost of circuitry, thus the professional’s digital multitrack recorder will use chips primarily designed for CD players.

That is the economics of digital design. The important point is that all audio products will benefit from increased sophistication of integrated circuitry; complex functions will be accomplished with relatively few external parts, in a small space, with low cost. Let’s look at two examples of the phenomenon: a noise reduction chip, and a time code reader.

Dolby noise reduction is the familiar tape hiss suppressant for both professional and consumer applications; because of its popularity in consumer cassette recorders, the analog circuits which comprise its design have already been candidates for integrated circuit fabrication. But with the proliferation of portable cassette players, the need for a low-voltage chip became apparent.

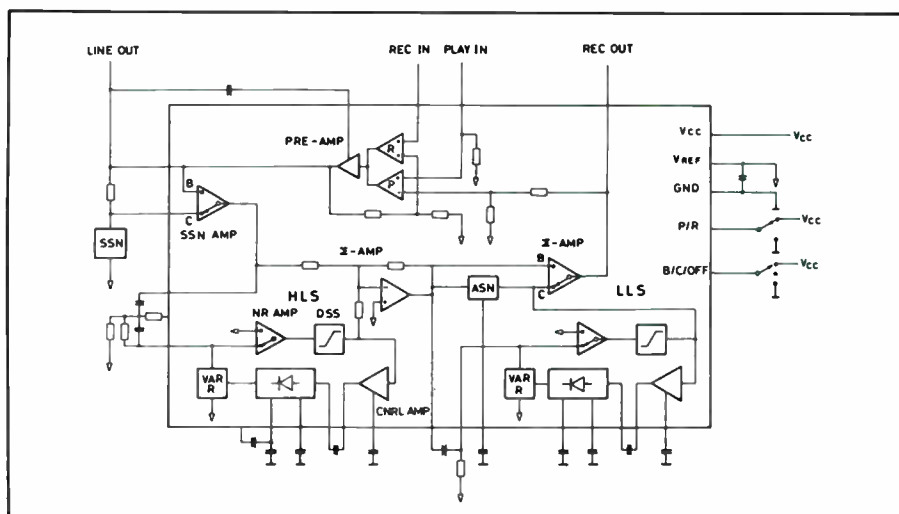
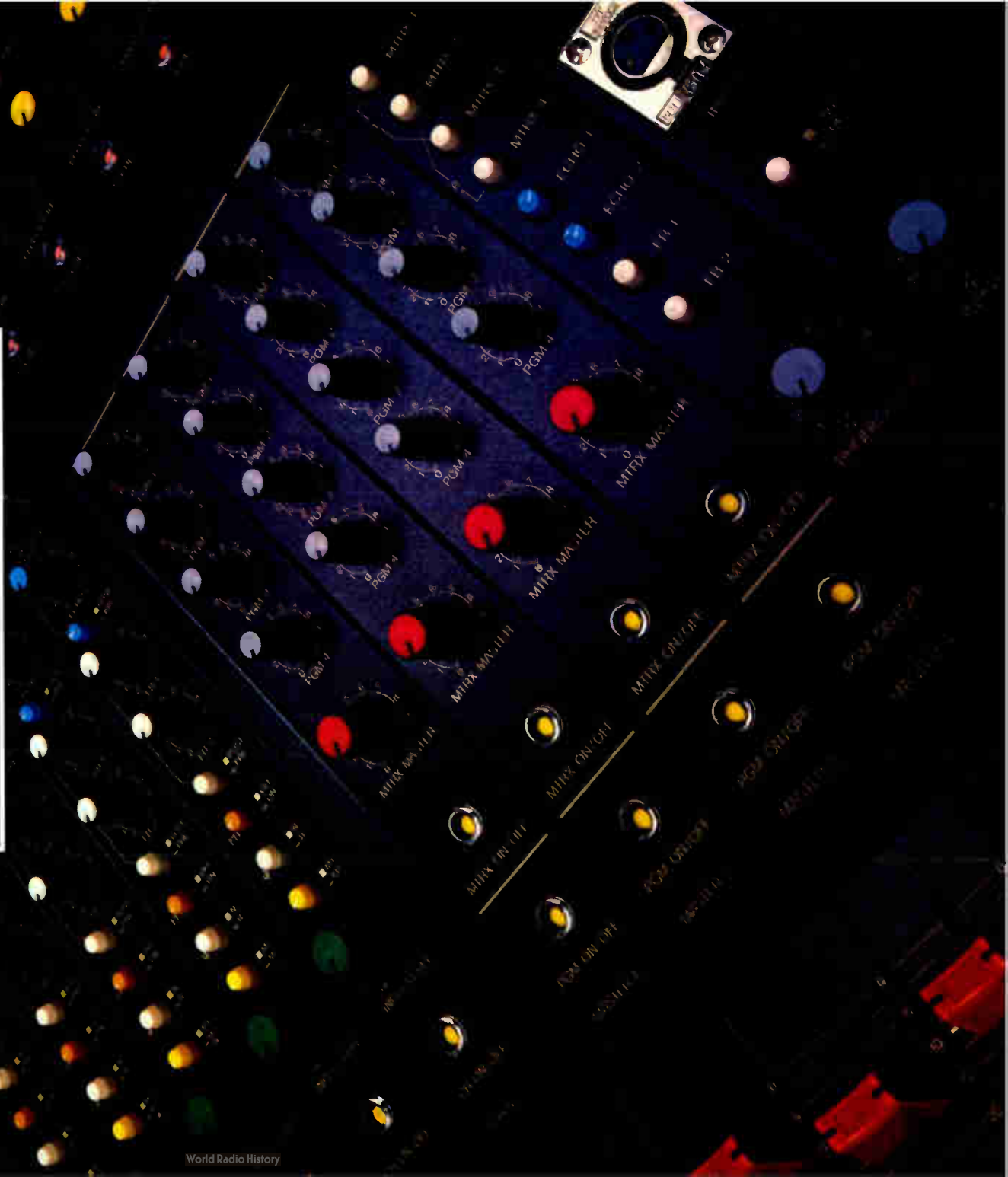


Figure 1. Complete block diagram of low Voltage Dolby B/C IC.

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M1516A



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FREQUENCY RESPONSE +0, -3dB, 20Hz to 20kHz; +0, -0.5dB, 30Hz to 15kHz.

TOTAL HARMONIC DISTORTION (THD)*

Less than 0.5% @ +10dB, 20Hz to 20kHz. Less than 0.1% @ +20dB, 50Hz to 20kHz.

HUM AND NOISE* (20Hz to 20kHz, 150Ω source, Input Selector set at "-60")

- 128dBm Equivalent Input Noise (EIN);
- 95dB residual output noise with all Faders down.
- 73dB PROGRAM OUT (77dB S/N); Master Fader at nominal level & all Input Faders down.
- 64dB PROGRAM OUT (68dB S/N); Master Fader and one Input Fader at nominal level.
- 73dB MATRIX OUT; Matrix Mix and Master controls at maximum, one PGM Master Fader at nominal level, and all Input Faders down.
- 64dB MATRIX OUT (68dB S/N); Matrix Mix and Master controls at maximum, one PGM Master Fader and one Input Fader at nominal level.
- 70dB FB or ECHO OUT; Master level control at nominal level and all FB or ECHO mix controls at minimum level. (Pre/Post Sw. @ PRE.)
- 64dB FB or ECHO OUT (68dB S/N); Master level control and one FB or ECHO mix control at nominal level. (Pre/Post Sw. @ PRE.)

MAXIMUM VOLTAGE GAIN (Input Selectors set at "-60" where applicable)

PROGRAM & MATRIX 84dB; Channel In to the corresponding output. EFFECTS 20dB; Effects In to PGM Out.
FB & ECHO 94dB; Channel In to FB/ECHO Out. SUB IN 10dB; Sub In to PGM Out.

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DIMENSIONS/WEIGHT M1516A 34" W x 36 1/2" D x 14 1/2" H 147 lbs. M1524 55 3/4" W x 36 3/4" D x 14 1/2" H 213 lbs.
M1532 55 3/4" W x 36 3/4" D x 14 1/2" H 231 lbs.

*Measured with a 6dB/octave filter @12.47kHz; equivalent to a 20kHz filter with infinite dB/octave attenuation.

The specs shown are for the 16-channel M1516A console. When you need the same outstanding performance but more channels, there's the 24-channel M1524 and the 32-channel M1532. All three mixers have remote rack-mounted power supplies and are ideal for just about any fixed or portable sound reinforcement or broadcast application.

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Hence the development of a low-voltage Dolby B and C type IC. This chip contains the complete record signal path: a 6 dB preamplifier, a series of RLC low pass filters called the spectral-skewing network (SSN), switching amplifier, high level stage (HLS) for 10 dB of noise reduction, anti-saturation network (ASN), low level stage (LLS) for an additional 10 dB of noise reduction, overshoot suppression (OSS), and summing amplifier. For playback, the inverse transfer function is obtained by using the record path of each of the two stages (HLS and LLS) as a feedback path also fabricated on the chip. These side chain paths contain a control amplifier, detecting circuit, and a variable resistance element. All noise reduction mode and type switching is accomplished on the chip, requiring only the logic commands from external switches. A complete block diagram is shown in figure one.

One of the principal challenges faced by the designers was the low voltage requirement. The noise reduction chip had to be operational at a voltage as low as 1.8 volts, thus, for example, no more than two diode drops could be in series anywhere in the circuit. This necessitates the use of multiple PNP transistors for level shifting but this creates a problem since regular PNPs fabricated with planar techniques generally have low bandwidths. To solve the problem, vertical devices were fabricated which behave like normal PNPs but use an NPN-like floating collector.

The design of the audio signal path particularly calls for high bandwidth; low DC offset, distortion, and noise; and good linearity. A common op amp design is used on the chip; it is non-inverting with a single input stage. The input differential pair is modified to accommodate switched inputs, wide common mode stage, and PNP input stage. The design yields 90 dB open loop gain, and operates at $V_{cc}=1.6$ volts. Dolby circuits require a control element to generate the sliding band characteristics of the compander; a variable resistance element is used for this purpose. It is designed around a transconductance amplifier and a current gain cell. This circuit has a 60 dB dynamic range, and operates over a wide supply voltage range. The variable resistance circuit is connected to an external filter and to the noise reduction amplifier; the output of the noise reduction amplifier drives the summing amplifier and the side chain path.

The side chain control path generates a DC control voltage which controls the variable resistance element; this feedback path is critical in the Dolby design because it effectively determines the dynamic and steady state response of the system. The LLS and HLS stages are about the same except that the LLS does not have B-type circuits. The first element in the paths is a high pass filter,

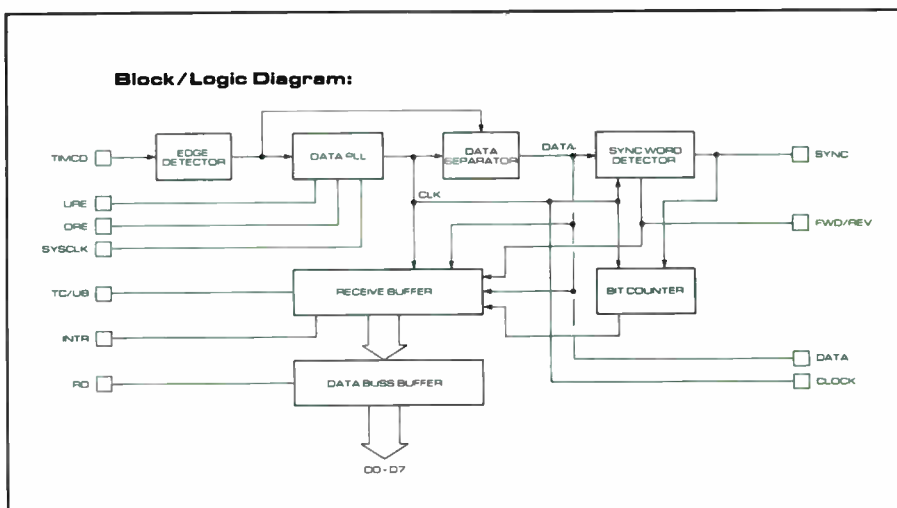


Figure 2. Function block diagram.

followed by a full wave rectifier for detection. A diode switch provides buffering; its threshold is set to match the characteristics of the original B-type circuit. The signal is then smoothed by an integrator with a speed-up circuit to shorten the integration time constant for large transients. The control signal is then buffered, converted to a current, and applied to the variable resistance element and hence the compander. Given some careful circuit design, paying special attention to the constraints of

low supply voltage, the result is a complete play/record noise reduction system, on a chip.

It seems like almost no one is doing audio-for-audio anymore; the recognition of the benefits of high fidelity for other mediums has spurred tremendous interest in audio-for-video, and audio-for-film. This necessitates the synchronization of a wide variety of recording and playback machines; positional and speed lock information has formed a new hierarchy of machine control in the

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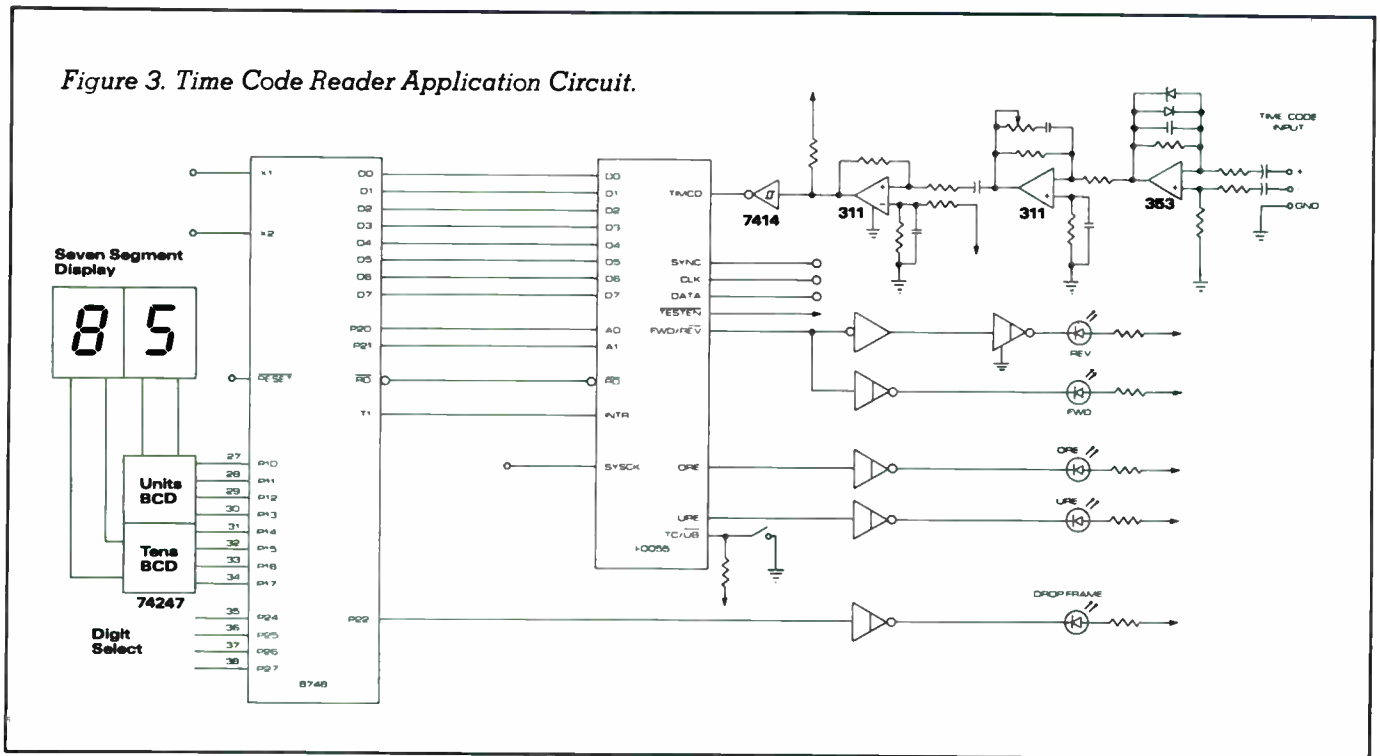
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Figure 3. Time Code Reader Application Circuit.



studio. Those more sophisticated post production techniques have even convinced many people that good old single machine audio tape recording isn't good enough anymore — they aren't satisfied until all of their audio recorders are locked together. To obtain simultaneity of material recorded on several machines, while having to fool with only one set of controls, some kind of code chase synchronizer is required. Essentially this a device which reads SMPTE time code from the master machine and uses the motions of the master to cause the slave machines to follow along (using their own previously recorded time code) in terms of stop, play, capstan speed, fast modes, etc. Of course, given that degree of control it is a relatively simple matter to include editing functions to arrive at a full fledged edit code synchronizer.

While all of that sounds simple, it isn't. Implementation involves a surprising amount of difficulty in the form of cabling, servo tinkering, custom interfacing and communications protocol, and dedicated hardware. If that sounds expensive, you're right. That is, until recently. The use of off-the-shelf computer hardware and more reasonable protocol has opened up new opportunities for synchronization. Another factor is the arrival of proprietary microcircuits, chips specifically designed for synchronization purposes. One example is the Otari I-0055 SMPTE/EBU time code reader integrated circuit. This LSI chip accepts buffered longitudinal time code as an input and outputs both 8 bit parallel and serial data. The input code may be anywhere from 1/100 times play speed to

100 times speed, the chip is user selectable to output either time code or user bits, output indication of internal overflow/underflow register is permitted as is tape direction. The CMOS chip uses a single-ended five volt power supply, the output lines use high-impedance tri-state drivers for no-load data buss interfacing, and the data outputs are asynchronous with the input time code thus data may be output at any rate, taking a potential load off the CPU.

A functional block diagram of the I-0055 is shown in figure two. When RD is set low, parallel data may be read at data outputs DO-D7. INTR signals that new data has been stored at the data output buffer, and it is reset when RD is activated. The data presented at the data output is formed as two groups of four bits each, and is selected by A0 and A1, and the TC/UB (time code/user bits) toggle. When UB is selected (TC/UB is low), each group is one user bit group. When TC is selected (TC/UB is high), the time code and flag bits are output. For A0 and A1 set respectively, the following data is output: 0/0 = frames, 1/0 = seconds, 0/1 = minutes, 1/1 = hours. ORE and URE signal internal register overflow and underflow respectively. SYSCLOCK is the input for the 10 MHz system clock. FWD/REV is the tape direction indicator (high is forward, low is reverse). SYNC outputs a pulse two clock periods wide when the time code sync word has been completely read. DATA is the NRZ serial data output at TTL level. CLOCK is the clock rate output derived from the input time code. TIMCD is a longitudinal time code input at TTL levels.

Figure three shows a typical application for the I-0055 time code reader. The external parts count is relatively small; the input time code must be buffered, and the reader's data output must be put to constructive use via a CPU, and that's about it as far as the reader is concerned. The system CPU can asynchronously access several I-0055s for master and slave reading. Of course, a reader does not an edit code synchronizer make, but it certainly forms the nucleus of one. With the addition of a resolver, the sync pulses decoded from the master time code could be locked to those decoded from the slave by controlling the slave's capstan motor, and other editing functions could be implemented. But more importantly, the time code chip illustrates the growing clout of audio chips. Long gone are the days when an audio IC was an op amp with a little stable gain. Today, in both analog and digital applications, audio ICs are saving time and money while augmenting the creative possibilities of hardware.

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THE BUSINESS SIDE OF RECORDING:

Recording for Advertising Agencies

by Tony Thomas

Anyone who has attempted to make a living in the recording studio business realizes, sooner or later, that the vicissitudes of the marketplace necessarily dictate that the studio owner or manager be as creative as possible in locating new sources of revenue — or to put it more bluntly — money. One of the most overlooked sources of new business is also one of the most lucrative: your friendly local advertising agency. While it's unlikely Madison Avenue will beat a path to your door (unless of course, you're centrally located in midtown Manhattan), it is very likely that you'll be able to attract enough business from agency row to pay the rent and turn a reasonable profit besides. While some recording studios have considered working with agencies an unnecessary foray into the evil empire of commercialism, others consider it their bread and butter — with more artistically fulfilling music recording providing the just dessert. The fact is, the small to medium-sized studio that does not seriously consider the advertising agency recording market does so at their own risk.

Breaking into the market

One of the reasons studios do not get involved in recording for agencies is because of the leg-work involved. Reaching any new market does require some degree of salesmanship, public relations and, yes — even advertising. Of course, once you develop a track record and a reputation for quality, the

“While some recording studios have considered working with agencies an unnecessary foray into the evil empire of commercialism...the small to medium-sized studio that does not seriously consider the advertising agency recording market does so at its own risk.”

going gets much, much easier. What is the best way to break into the agency market? By getting your feet wet in advertising recording, of course! (Back to the chicken and the egg syndrome) At first, it may be difficult to convince an agency to avail itself of your facilities. However, by offering certain incentives such as a discount, a money-back guarantee, or even by doing work on speculation (or “on-spec” as they say in the ad

business), your selling job may be eased considerably.

In some cases, it may be better to approach agency principals with your sales pitch, but usually you will deal with the agency Creative Director, Broadcast Producer, Copywriter, or Account Executive. A letter writing campaign, coupled with ads in your local yellow pages, advertising trade publications and newspaper business sections can help secure prospective agencies and clients. In fact, it might be a good idea to barter a block of recording time for the services of a local ad agency to develop an advertising campaign to reach other agencies. After all, who knows what an advertising agency looks for in a studio better than another advertising agency?

Phone calls, visits and other direct contact are by far the best ways of gaining new business. Plan on wearing out a few pairs of shoes “beating the street.” As an alternative, you may consider having an open house/buffet for the agencies on your list to get acquainted with their creative people and to allow you to show off your facility. Once you are able to build up a significant number of agency credits, then it's time to consider putting together a demo reel of advertising work that you have done along with a rate card/brochure geared to the advertising industry which could include quotes and anecdotes from satisfied customers. A good reputation and a strong list of credits — just as in the music recording segment of the business — are the fastest track to success in agency recording.

Studio set up

Setting up the studio to accommodate the needs of agencies and their clients differs little from music recording. Comfortable and pleasant surroundings providing the proper "ambiance" to fuel creativity is almost a necessity. Agency people are basically creative types who are used to the finest in creature comforts. The more you appeal to their sensory apparatus, the more likely you are to have a customer for life. Along with the proper surroundings, you must also have the proper equipment to do the job.

Many of the studios that appeal to agencies are not the megabuck multitrack monoliths that churn out the plethora of platinum permeating our airwaves, but small, comfortable two, four and eight track facilities. You see, except for jingles, the average needs of agencies generally call for very few overdubs. Some sessions consist of simply a voice track or two and a music bed. One investment you will have to make is for a record library consisting of music beds and sound effects. There are companies that specialize in providing music and sound effects libraries which can in turn be licensed for use by agencies and their clients. Having such a library on hand can be an attractive plus and an added selling point.

For commercials, a turntable, a

"Many of the studios that appeal to agencies are not the megabuck multitrack monoliths that churn out the plethora of platinum permeating our airwaves, but small, comfortable, two, four and eight track facilities."

complement of good quality condenser, dynamic or ribbon microphones, a small to medium-sized console and two and four-track tape machines may be all that is needed. If you want to do jingles, which require several tracks of music and vocals, a typical sixteen or twenty-four track music studio configuration is almost essential. Simple jingles with no orchestration can sometimes be produced on a four or eight track machine. Generally, a well-equipped music-oriented recording studio will have most, if not all, of the equipment needed to meet the needs of the most discriminating agency producer. In fact, ancillary

equipment like digital delay units, flangers, synthesizers and equalizers (all regular recording studio fare) can come in handy for producing the special effects often heard in contemporary commercials. Should you decide to produce radio programs for syndication then it will probably be necessary to have two or more turntables, a console with cue amplifiers and broadcast-type cart machines.

Interfacing with agency personnel

The three key words which facilitate good agency/studio relations are SPEED...SPEED...SPEED. The laid back

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atmosphere which sometimes accompanies music sessions is a rarity when ad agencies come on the scene. Sessions often last less than four hours and they are exemplary in their efficiency. There is very little wasted motion. And for good reason. Agencies are spending the client's money and are held responsible for the results produced by every dime. Hence, they are notorious clock watchers — and rightfully so. Studios that are able to produce "more bang for the buck" are held in high esteem. An engineer that is quick on the draw is an asset. Lightning fast setups and changes are an absolute necessity. Professionalism and pleasant demeanor are expected. Flexibility above and beyond the call of duty can put you on top of the heap. While

some may believe such speed can erode studio revenue, this is a short-sighted view. Advertising is a volume business. Commercials quickly become outdated, new commercials and jingles are ordered, and agencies which serve several clients may block-book time in the studio on a regular basis to keep up with their creative output. In this business, a minute saved is a dollar earned.

Doing it yourself

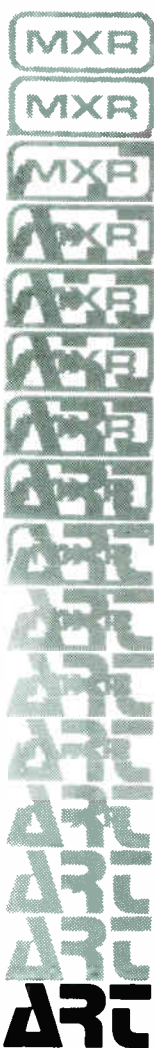
Another possibility for generating revenue for your studio is by creating your own production company. That way, you can hire the announcers, musicians, actors and other talent, write the copy, produce the spot, and deliver the finished product to the

agency or even work directly with the client. Such companies are always in demand since agencies often cannot keep up with the creative needs of every client. This is especially true in the areas of jingles and comedy-oriented commercials. If you have a good jingle or comedy-writer on hand, plus the necessary musicians and/or actors, it is possible to develop an award winning repertoire that could open many agency doors. It's a long shot, though, since much of the jingle work done nowadays is awarded by competitive bidding on a speculative basis. This means you may be in competition with other production houses many hundreds or even thousands of miles away. You really have to be good to survive the final rounds of such a competitive process. Even so, it is a lucrative business, sometimes yielding a four to five figure sum for a single jingle.

A word of caution is in order, though. Comedy that works in advertising is a rare commodity indeed. Some of the funniest, most memorable, award winning, national spots failed to spur sales for their sponsors. And in the advertising business, results are all that matter. One national client fired their agencies every year or two even though the agencies in question pulled in award after award for their very funny spots. The public and the media loved them as they were really entertaining. Sales, meanwhile, took a tumble for every accolade received. Needless to say, that particular client was not amused. The moral to that story: "Be funny at your own peril." The best approach to take when contemplating going the production company route is to spend some time working with an established agency creative director, copywriter and producer before stepping out on your own. That way you will be able to build upon a track record, rather than starting out as an unknown quantity. In addition, you will begin to get a feel for what will and will not fly in the marketplace. Such an education will prove to be invaluable in establishing a firm foundation that you can build upon.

The bottom line

The bottom line is what you will be able to add to *yours*. Time is a commodity that loses its value immediately. Hours left unbooked can never be reclaimed. It is up to you, the studio owner or manager, to provide the clientele needed to make your studio profitable. In this competitive market, this is not always as easy as it sounds. Advertising recording can be the vehicle which will add a whole new dimension of profitability to your studio, while yielding the possibility of spinning off other potentially viable, and equally lucrative, endeavors. ■



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Tony Mitchell talks to

Tracking Sting down to his lunchtime retreat within the maze of Shepperton Studios, where he's currently filming 'The Bride', proved to be less difficult than I'd feared.

I simply followed the long trail of glitter which led to the control room of the recording studio where he's doubling as producer for a new band called 'A Bigger Splash'.

My initial belief that Sting had succumbed to an early seventies fashion kick was dispensed only when I learnt that he'd just been filming a glitter party scene for the movie – a romantic version of the Frankenstein story said to be more in keeping with Mary Shelly's original story than the Karloffian video nasties we're all familiar with.

And there he was, lounging against the control room wall clutching a Fender bass and looking only slightly 18th century in ruffle-necked shirt, brocade waistcoat and riding breeches. His assistant Danny was despatched to make some tea.

Sting bought his Synclavier just six months ago, and like a good novel he's hardly been able to put it down since. His enthusiasm for it is impressive – a combination of reverence for its technical achievement and childlike amazement at the creative possibilities he's still discovering. Ask him to sum up its potential impact on music making and he'll come up with a modest comment such as:

"It's as radical and important an invention as the piano was centuries ago." And so, on to the first question.

MITCHELL: "What was it that first made you think this might be the machine for you?"

STING: "It was a sort of dream of mine, when I first started to actually write music down on a stave – you know it's impossible to read after half an hour – that it would be great if everything you played on a keyboard immediately transmitted into notation. I was sure one day someone would invent it. And one day I was looking at some roadie's magazine in America – and there it was! The Synclavier did it.

I was totally over the moon and it was only then that I got to find out about all the rest of the functions of this amazing machine. And it's great fun, it really is.

Now it's kind of taken over my life. It takes a lot of technical application which I think is fun, because it's about learning something totally new, but there's no way you can use it the day you get it."

"It's as radical and important an invention as the piano was centuries ago"

MITCHELL: Between hurriedly gulped mouthfuls of salad – he went on to explain that he'd become very disillusioned with synthesisers and synthesiser bands "because they all sound exactly the same," and because he was inspired to write music by the sound an instrument makes, he was always trying new instruments, and that the synthesiser element of the Synclavier had "this wonderful range of warm, organic, rich sound which makes me want to play with it"

And with the computer, he says, you have a system which allows you "to compose beyond the limitations of your physical skill – in fact beyond the limitations of anyone's physical skill!"

STING: "Another thing is that I've never worked with an orchestra before it would be a very expensive experiment for anyone to hire an orchestra for the day

to see what happened. But with the Synclavier I have an orchestra at my fingertips."

MITCHELL: If that sounds a mite indulgent, then don't think Sting isn't aware of it. He knows devices like the Synclavier are often branded as rich men's toys but the integral facilities and the constant updating process initiated by the Synclavier's designers convinced him that it would be a very sound investment.

STING: "It's almost the responsibility of those with enough bucks to invest in this kind of thing. It's like, the only people who could afford orchestras in the days of Mozart and Beethoven were the crown princes of Europe. And us rockstars 'ave taken over from that. I see myself as a kind of Medici of the Arts in the 1980's – know what I mean?" (ha-ha)

"One interesting feature of the Synclavier is that it translates tempo to frame time"

MITCHELL: "Has your experience with the Synclavier turned you on to computing generally?"

STING: "No – I'm not really into home economics!"

MITCHELL: "You don't feel the need to have a machine that'll address a lot of envelopes for you?"

STING: "No, I've got Danny to do that!"

MITCHELL: "Can you use the computer for anything else?"

STING: "Well there's a floppy disc floating around somewhere, so you could do your accounts on it, in between scoring something."

MITCHELL: Stifling an inclination to say what a good idea it was to have a musical instrument that can tell you how much you've got left in the bank after you've paid for it, I moved on instead to raise with Sting one of the criticisms which is sometimes voiced against the Synclavier – its restriction, on the digital sampling side, to monophonic sampling.

STING: "Yes, monophonic sampling. That might be a temporary disadvantage but polyphonic sampling is only a short time away. In the meantime, if you want, er, a chord of milk bottles breaking or something, you can do it with a tape machine."

MITCHELL: "One application of the Synclavier that's bound to appeal to a man with tandem careers as an actor and musician is in the creation of film scores. Had that opportunity presented itself yet?"

STING: "Well I've been asked to do the music for this film. And one interesting feature of the Synclavier is that it translates tempo to frame time. You could have written a piece of music that lasted 30 seconds to fit a scene exactly, then the director says he's gonna cut a bit or add a bit to it, and you're stumped. What do you do? You either cut a bit off the music or re-record it. But with the Synclavier you just punch the relevant keys and the music is translated through frame time into the right length, either shortening minutely each note or lengthening it. And that is... outrageous!

I also like the idea that I can play something on the keyboard, record it on the memory recorder then translate it to screen editor so it comes up as computer language, and then you can perfect it. Using the integral recorder is so quick, you can try out things with different voices so quickly. And once polyphonic sampling comes in, you won't need a studio at all, you'll just need a Synclavier. You'll be able to make a record without using tape."

MITCHELL: Not surprisingly, Sting has no qualms at all about using the device on stage with the Police – he thinks it will be great fun. But I wondered if he'd embarked on a sampling programme, perhaps walking around Hampstead or jogging to the studio each morning, to equip himself with new and unique sounds for that purpose.

STING: "I haven't had that much time, to be honest. I'm quite interested in things I haven't got around the house, like timpani, cymbals or a snare drum. You can just hire them for the day, mess around with them and you've got the full range of what they can do at your fingertips."

MITCHELL: "Do you have the Synclavier in a music room at home?"

STING: "No, I have it in my bedroom. As I crawl out of bed in the morning, I turn it on, I plonk away, and if I hit a good chord, I carry on, and if I don't... I have breakfast."

Actually we haven't talked about the resynthesis angle, which is quite new. It basically records a sound and it comes out as a spectral display, a wave form. You can increase the intensity of it and copy it. You can do as many as 54 sections of that wave, so resynthesis is actually very, very close... and as a learning device, it's a wonderful way of finding out how sound is constructed. I haven't written any music lately, I've just been doing spectral displays!"

MITCHELL: "But getting back to your disillusionment with synthesiser music because it 'all sounds the same', don't you think there's evidence that exactly the same thing is happening even with these sophisticated sampling devices? Isn't everyone using them to make the same kind of records at the moment?"

*"You can compose beyond
the limitations of
your physical skill- in
fact beyond anyone's
physical skill"*

STING: "That's really where you have to bring back the human element. When the electric guitar was invented you had the same sort of thing – Oh God, everybody's going to sound the same. So you wait for the Bert Weedons to come along and show the way. You can't replace human beings. It's just gonna be different."

At the moment anybody can do it. Everybody thinks they can make a David Bowie record. It's time something new happened and that's why someone is going to have to take it somewhere else."

MITCHELL: "That's got a lot to do with current record industry attitudes – they 'sign up some haircuts and get a producer in to do the rest' syndrome."

STING: "Listen, I was signed up on the strength of my haircut. I mean, let's call a spade a spade."

MITCHELL: "I know, but you had other qualities as well."

STING: "Tight trousers."

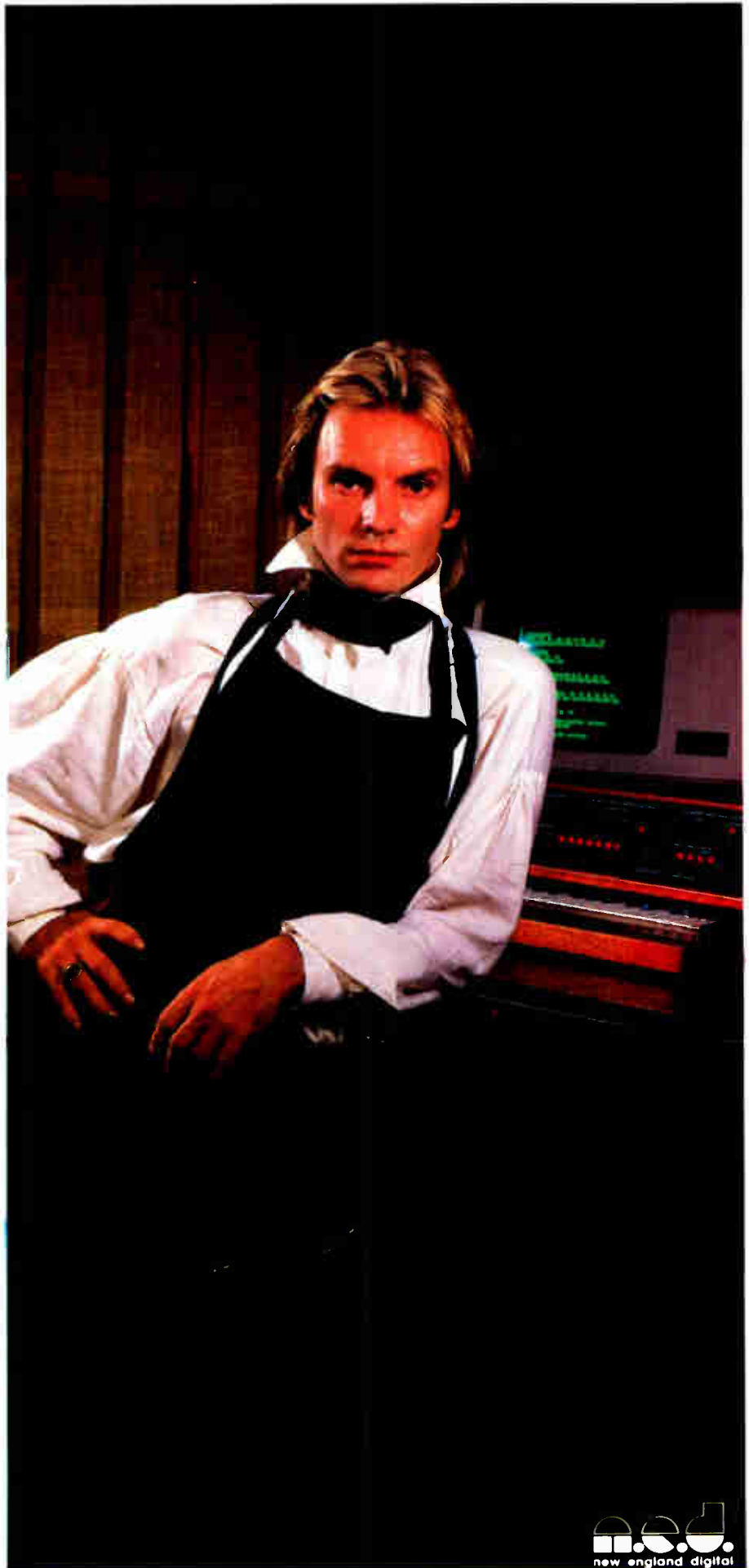
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MIDI

AT

MIDSTREAM

by Roger Powell

Unless you have spent the last couple of years in musical hibernation, you probably have observed some curious activity unfolding in the synthesizer jungle. We're not talking about the flood of new keyboards being released by the world's electronic instrument makers—a ritual practiced with such fervor as to bewilder even a confirmed synth fanatic—no, the new game in town is called "MIDI" complete with a fresh set of rules and rewards for the players. The letters stand for "Musical Instrument Digital Interface," a rather faceless banner which hints only broadly at the rich musical potential that MIDI offers. In providing the hardware and software guidelines by which instruments from different manufacturers may be inter-connected as well as interfaced to personal computers. MIDI has assured itself a prominent role in the production of contemporary music with real power for both composers and performers. In this article, we'll take a quick look at the background of MIDI, its current usage and directions for the future of music data communications.

There are several reasons why MIDI was conceived in the first place, most of them centered around extending the flexibility of keyboard synthesizers in recording or performing situations. As the number of diverse keyboard instruments in a performer's arsenal begins to



reach the totem-pole stage, the realization ultimately occurs that one has only two hands and therefore only two physical key manuals are needed at most! In many situations, one long (five or six octave) manual could be used given the ability to program key "split" points for assignment to separate tone colors. MIDI is the solution, allowing the sound generating electronics to be neatly sub-packaged and absorbed into the studio/stage racks which the performer operates by remote control. Creative use of control room or stage space is enhanced by this concept and it's also attractive financially via the elimination of redundant, expensive keyswitch assemblies. Hopefully, these savings will be passed on to the consumer!

Some readers may ask why all the fuss about access to internal "software" since instruments are usually designed to hide the operating system from the user. The software encoded on EPROMs inside the instrument is respon-

sible for reading the performer's key depressions and front-panel movements and translating those gestures into controls for the sound generating modules. Modern keyboard synths sport microcomputer systems that perform all the wonderful house-keeping functions we now depend on, including: storage of hundreds of preset voices on-line, instant patch editing, saving of voice banks to disk or tape, etc. MIDI acts as a tel-

ephone network enabling conversation between computers and instruments that speak its peculiar dialect of music. Once the hook-up is established, it's possible (and desirable) to re-program the functions of the MIDI-linked devices to assume new configurations—dynamic re-patch, essentially. Of course, with a hard-disk equipped computer, the library of stockpiled patches of sound textures instantly accessible may reach epic proportions and cause occasional detours of musical activity into database management.

From the hardware standpoint, implementing a MIDI system is comparatively routine if you're familiar with serial communications protocol used for transferring information between non-musical computers such as the ones that keep tabs on your car loan payments. In order to simplify the sharing of information among various computers in, say, a large bank, a scheme is used whereby big chunks of data are sent out in little bits

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MIX VOL. 9, NO. 2

Bob Margoueff on Synthesizers in Production

by Armand E. St. Martin

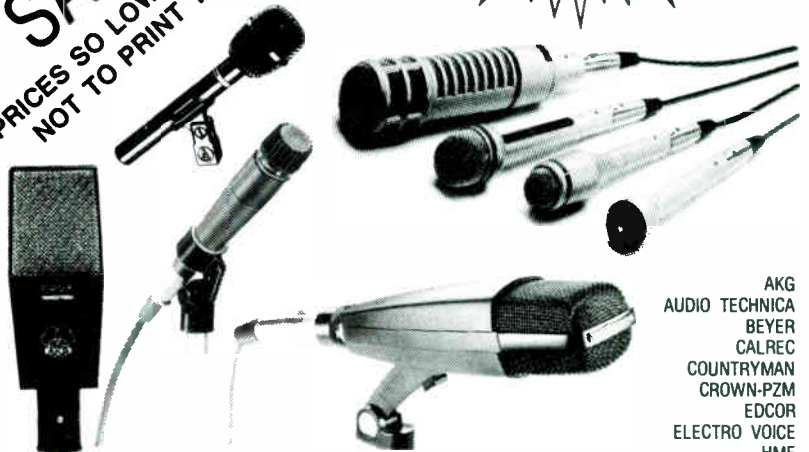
Bob Margoueff began working with synthesizers in 1967 with the Moog 3. He became the resident synthesist at the then new Media Sound, in New York in 1971. Doing mostly commercials at this studio left the evenings free. With his former partner, Malcolm Cecil, Margoueff began experimenting in the spare time with their 24 oscillator, five keyboard synth, and created the first attempt at real-time performance of electronic music. From these experiments came "TONTTO's Expanding Head Band," TONTTO being an acronym for "The Original Neo-Timbral Orchestra." Herbie Mann brought TONTTO to Atlantic Records, and a year and a half later Bob and Malcolm met and began working with Stevie Wonder, going on to become involved in the production of some of Stevie's greatest achievements (Talking Book, Innervisions, Fulfillingness First Finale). Bob also produced a Devo album and their big hit "Whip It." He is not only a producer, but an eloquent and thoughtful philosopher of music, sound, acoustics, and psychoacoustics.

Margoueff has been intimately involved in the evolution of the use of synthesizers in pop music. In the early days, "People thought I was some kind of mad scientist. People are are very wary of something new. The more established people tend to resist change. The first sounds used in synthesizers were imitations of real sounds. But a synthesizer is really meant for creating new sounds from moving electrons, not a plastic copy of an acoustic instrument. For me, electronic music really helps to set the scene, to feel the space, the setting of the song. With synthesizers you can create a sense of atmosphere, mood."

"I don't like to use sounds that come stock from the factory," he continues, "I like to tailor, and see that the band tailors every sound to the track, to the meaning of the song. Before, as a musician, you settled on one, or several, specific instruments to create mood — like for something very quiet, you might use violins, gut guitar, and flute. With synths you are constantly creating new instruments. In electronic music, before you decide what the instrument is going to play, you have to decide what it is going to be."

—PAGE 39

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sequentially over a pair of wires from one computer to another. This is naturally slower than a system that sends a whole chunk all at once (parallel transfer), however, the circuitry is much simpler for the serial transmission method. The technique, known as "RS-232 serial," is also significant because of its use in telephone links between remote computers.

On the surface all appears smooth, but MIDI adds a twist to the simple serial interface. It would have been so convenient if the rate at which musical data passes through MIDI had been matched to the speeds of the IEEE RS-232 standard; unfortunately, this was considered and rejected by the MIDI standards committee owing to the tight

time requirements of musical events. A non-standard, higher rate of 31,250 bits/sec was substituted. Even at this rate, circumstances can arise involving multiple instruments playing lots of notes where time-lags will be objectionable, but in normal practice uniting several instruments should cause no problems. Extra MIDI hardware could be stacked to maintain several independent transmission lines, but then instruments not on the same line could communicate only through the host computer. It's still early and we await more sophisticated systems that address the data bandwidth problem.

Historically, MIDI has been developing since about 1981, several years after the introduction of microprocessor-

controlled synthesizers such as the Prophet-5 and Oberheim OB series polyphonic keyboards. Dave Smith of Sequential Circuits, after consulting with American and Japanese manufacturers, presented a proposal to the Audio Engineering Society Convention in the fall of 1981. The theme of the paper was the design of a "Universal Synthesizer Interface" and it spurred a subsequent round of meetings among manufacturers to blueprint the concept of MIDI. It took a couple of years to settle the myriad matters of protocol until August of 1983 an initial "standard" was finally released and keyboards began busily talking to each other. Since then, the International MIDI Association has formed, operating as a clearing-house for MIDI-related news and official source for the current specifications. The International MIDI Association can be reached at 8426 Vine Valley Drive, Sun Valley, CA 91342.

A performer has many options when deciding how to route the MIDI cabling among instruments to achieve a desired musical intent. Each instrument in the ring is equipped, or should be, with three MIDI connectors: MIDI In, MIDI Out and MIDI Thru. Musical note data in the form of key depression data are sent from the instrument being played out the MIDI Out connector, received from other transmitting instruments at MIDI In, and passed on to others in the chain, or "muled" via the MIDI Thru.

A typical set-up might consist of one master or host keyboard controller and a handful of other synths, either sound modules alone or integrated with a keyswitch manual. When a note is played on the host, the numbers of the key switches depressed are sent (almost) simultaneously to the slave synthesizers who respond as if being played on their own keyboards (if they have one). This arrangement proves useful in building the dynamics of a keyboard part throughout a song or composition by playing the host keyboard during the richer parts of the arrangement and dropping to the single sound of one of the slave, local keyboards for a change of texture.

At this point, I must mention that everything said here applies to devices other than keyboard synthesizers—popular items like digital drum machines and even lighting consoles are now also MIDI-fied easing their incorporation into a unified system. Composition and sound data may be centralized on diskette. This is alluring not only because of the taken-for-granted retrieval speed advantage over cassette storage, but is also preferable to the restriction of having to keep separate files for drum machine and keyboard sequencer data, an obstacle generated by gear not designed as part of an overall system.

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It seems that we have reached a hardware plateau of sorts; certainly new instruments will continue to be developed by the Rolands and Yamahas of this world, but the challenge is clearly in the software arena. We presently enjoy a terrific array of sounds emanating from instruments making musical waveforms by one of three methods: sound sampling, analog synthesis and digital synthesis. Each category is supported by a growing number of products and represents a distinct approach resulting in three recognizable classes of contemporary, electro-acoustic sounds. It's natural to expect these means to be employed with greater fidelity in future instruments, however, we must also move forward on the frontiers of composition, sound editing (orchestration) and music education. This is the task of properly designed software running on a host of personal computers.

A newcomer will undoubtedly find it no picnic to track the maze of MIDI-related products being pitched at the unsuspecting musician. One must simply use consumer-sense and take a little time to learn about the target item before draining any major cash reserves. If you're just starting to piece together a whole system or looking for a computer to base a system around, you should



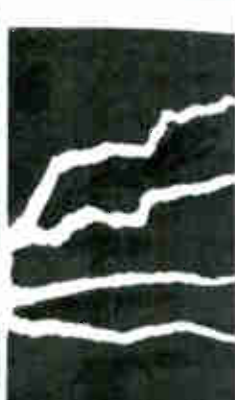
Author Roger Powell, while perhaps best known as the synthesist with Todd Rundgren's Utopia over the past decade, also has considerable talents in other areas including: music composition and scoring (his 1978 Air Pocket solo album was named the best keyboard album of the year by Keyboard magazine's reader poll); musical instrument design and consultation for ARP, Moog, and his own inventions such as the Probe and Databoy; audio engineering (dating back to Joe South's 1969 hit single "Games People Play"); and his current position as director of product development for Cherry Lane Technologies in Port Chester, NY, a division of music publishing giant Cherry Lane Music.

probably consider locating the proper software for your application first, then purchase the most appropriate computer that can run your chosen software. Software for MIDI operations exists for distinct musical purposes, such as packages like PRO-DX from Yamaha that runs on the Apple offering voice-edit capability for the DX-7 and DX-9 keyboards. Similar voice-editors for other manufacturers' products are expected soon in addition to a wave of sequencer or note-

storage/playback programs running on everything from Commodore 64s to IBM PCs. I have jumped into the fray myself with a block-structured composition system called "Texture" whose basis I'll touch on in a moment. Computers should be judged according to memory capacity, speed and ease-of-expansion, as well as price. After all, you'll eventually want your system to do more things than may have been envisioned at first, so it's wise to plan ahead.

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Whatever computer, keyboards and other MIDI devices you might have around, you'll still need the interface that plugs into the computer allowing it to chat with the synthesizers. At the moment, these interfaces are usually tied to the software and are sold as a package with the promise that more software will be coming later from that company to support your investment in the hardware. This permits all future programs or improvements to be used instantly without a hardware swap. As I write this, there are several choices for MIDI interface hardware: Passport Systems with their popular board for the Apple; Roland with the MPU-401 available for Apple, IBM and rumors of others (PCjr & Macintosh); Cherry Lane Technologies with the IMS system for Commodore; SCI with Commodore product and Hybrid Arts also with a Commodore system. All of these items have specific software already available and new pro-

grams are evolving rapidly, many from third-party developers outside the manufacturers. In fact, traditional music publishers such as Cherry Lane Music and Sight and Sound are getting involved in software distribution drawing from their extensive database of composition licenses. MIDI-encoded diskettes of catalogued music will provide a great deal of pleasure and a means of education during the coming years as the cost of a computer-based, multi-voice MIDI system sinks low enough to insure installation in the homes of amateur musicians and average families usually prevented from owning such equipment.

This form of music recording and playback could supplant, if we use a little imagination, the functions of a record player or cassette, allowing you to remix your favorite instrumental albums to suit your taste or play "music-minus-one" with professional accompaniment. Add to this a flexible composition pro-

gram and you've just been handed a tool Bach would have drooled over.

Software for arrangers and composers at this stage falls into two areas: one is oriented around a linear tape recorder model and the other more closely follows the "pattern/song" modes found in stand-alone programmable sequencers or drum machines. With the linear mode, the user is presented with a blank length of "tape" and can record event data on several tracks. Each track will generally be connected to a single, polyphonic MIDI instrument so the process has definite similarities to normal multi-track studio techniques. This process is good for preserving performances of talented musicians and for recording pre-composed material; it may be difficult, however, to manipulate ideas at the composition stage unless a refined set of cut-and-paste operations are provided in the program. The other approach is modular, allowing the creation of segments of finite length which are ultimately strung together to produce a seamless piece. This technique has many advantages in the editing department which will be useful to composers and arrangers but may not be suitable for real-time performance documentation of long keyboard solos, for instance. Either method is usually accompanied in the program by transposition, punch-in and -out, and file saving and loading functions. The more expensive programs may attempt to emulate the remarkable music printing option of New England Digital's Synclavier, certainly a goal that's desirable, albeit an ambitious one to realize on a personal computer. Tape sync of the MIDI clock information is also provided with most packages to allow multi-track composition using fewer source synthesizers. SMPTE/MIDI interfaces and software are just beginning to surface but will become more important, especially for film work, as MIDI ripens into maturity.

My own program, Texture, is designed to run on both the IBM PC and Apple II with the addition of a Roland MPU-401 interface. The nice thing about the Roland interface is its availability on a variety of computers. This means that, with the suitable programming tools, I can write the program once and have it run on totally different machines! The MPU-401 is also being supported by several developers which means that there will be a variety of software to employ with it. Roland has also taken a lead in pinning down some standards for MIDI diskette files so that programs from miscellaneous manufacturers can read each other's files. In Texture, for example, you could create a series of patterns that could be processed later by a music printing program, or included in a keyboard training program. The modu-

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Circle #020 on Reader Service Card

—FROM PAGE 35, MARGOULEFF

In production, Margouleff demands a great deal of consciousness directed towards the blending of various synths together for the optimum effect. He will mix several of the instruments together to "trick and tease the ear," for example, using a Yamaha DX1 for cello, and Jupiter-8s and a Crumar string ensemble for the middle and high strings.

Margouleff has recently completed producing a new group for Epic Records called Bang Bang. "In this particular band," he says, "we are using the synthesizers to create these large washes of color, of atmosphere and space. There is no lead synthesizer playing in Bang Bang — almost a very stylized, formal use of the synths in a very specific way."

Margouleff has specific visions for the future in synthesis and electronic music, dating back to his roots with TONTO. "In 1978, Malcolm and I were experimenting with more than one person playing the same instrument at the same time, plus the instrument playing itself. We had a master tuning buss that modulated the entire 16 oscillators up and down in pitch. We would have a computer, an EMS-256, transposing the whole synthesizer in set patterns that would follow the bass line of the song. The clock was also running a rhythm pattern that involved a lot of the sequential programs. On top of that, if I wanted to play a string pad in C major, and bass went, for example, to G, I would then be playing in G major. So, in theory, if I only played on the white keys, and the rest of the instrument was transposing along with the bass line, I would never be playing in the wrong key and I would get incredible string colors."

Margouleff sees the synthesizer expanding conceptually: "Whatever the medium for each individual sound source, whether blown, struck, beaten, strummed, whatever, they will all interface through a central computer, or other device, and actually affect what the others are playing as they are being played."

"Nowadays, we are sort of dependent on the technology itself; it's a part of the performance. It enables us [in the studio] to re-arrange the perspectives of what we are hearing. Here at Crystal [Crystal Sound of Hollywood, CA, of which Bob is now the owner and operator] we have begun to use our very large control room, particularly with synthesizer-oriented music, as a 'windowless studio,' set up so that the engineer, musicians, controls, instruments, producer, and practically everything involved are as one in the same space." ■

lar concept extends admirably to software as well.

In the end (if there is one), the MIDI system user will probably have a software tool kit of several programs, each optimized to perform a particular chore in the production of music—say, a program for composing and editing, one for voicing various synthesizers, another for formatting and printing of sheet music, and others for musical education applications like sight-singing, using MIDI-speaking pitch-recognition devices. That sizzling sound you hear in the background is just the fuse being lit—it won't be long before we see an explosion of software covering all stages of music

creation. Sounds pretty colorful, eh? Maybe we should stick around for the fireworks. . . ■

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See Page 159...

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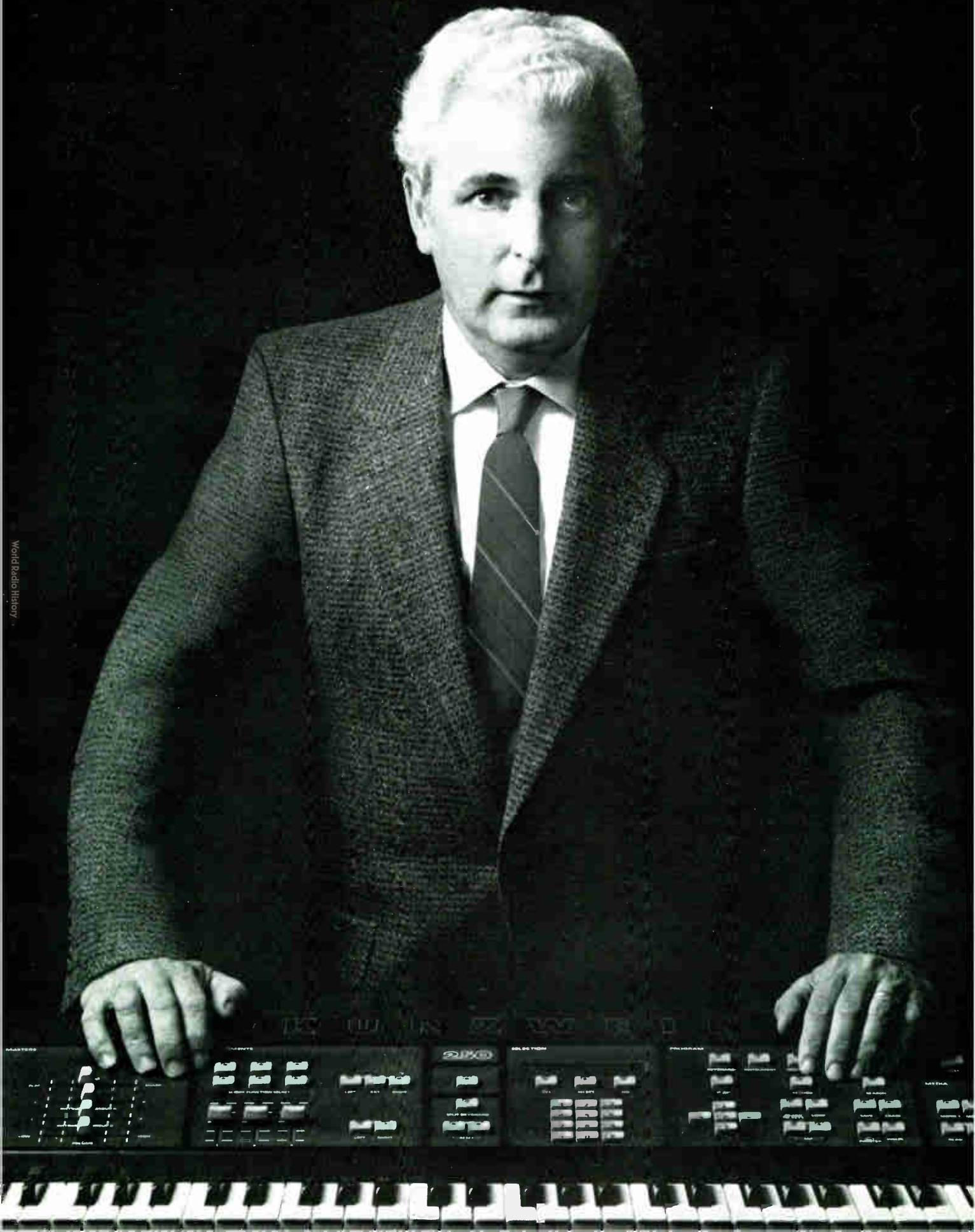
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PATCH PATCH NAME VOICE 1/7 VOICE 2/8 VOICE 3/9 VOICE 4/10 VOICE 5/11 VOICE 6/12 CURRENT PAGE

102 XPHANTAS 10 11 14 20 49 47

MODULATION PAGE
MULTI PATCH PAGE

SINGLE PATCH MULTI PATCH PATCH EDIT VOICES 1-6
VOICES 7-12

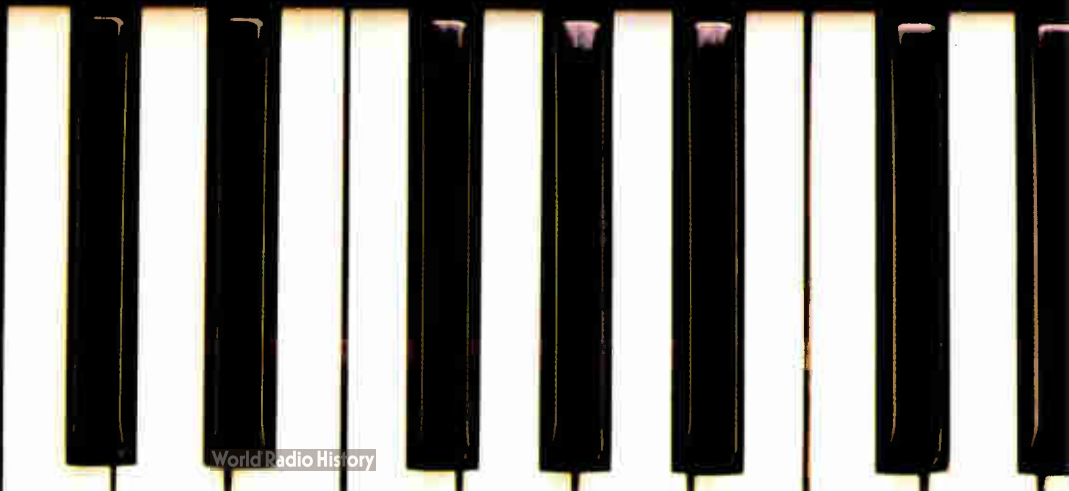
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THE ART OF TOURING IN '85

by Brooke Sheffield Comer

During the past decade, touring has evolved into a highly specialized art. Fifteen years ago when Blood, Sweat & Tears went on the road, their crew consisted of a road manager and two roadies, and the weekly budget, according to guitarist Steve Katz, totaled \$20,000. Today, with the advent of computer technology and a demand for exotic visual effects, a major tour is virtually a corporation on wheels. An act the size of Billy Joel travels with a crew of at least 35, including a tour manager, and assistant tour manager, a tour accountant, a production manager, technicians, sound engineers, set designers and assistants. Tour accountant Neil Quateman estimates the weekly cost of a major tour today to run from \$125,000 to \$250,000.

"Factors such as travel, production, and venue costs are largely what has affected the costs of a band on the road today," says Quateman. "The sophistication of the industry has changed dramatically in 15 years." Quateman's job didn't even exist then. Touring has become an art so recently that its many facets are still evolving. The tour manager coordinates each facet into a main scheme, a whole picture. A successful tour depends on the careful integration of these facets.

Tour manager Harry Sandler epitomizes the qualities it takes to run a major tour. When an airport is fogged in, or a hotel suite is too small, it takes a special temperament to placate a high-strung star and a crew. Although he can't explain how he acquired it, Harry Sandler is sure of one thing: Without an even temper and a resourceful nature, he would not be where he is today, one of the most sought after tour managers in the business. "What I always wanted to do was take charge, and make decisions," he says. "I was always looking

for something different. Being a tour manager is a very regimented job; you have to take one attitude with everybody. Being in the army helped, watching one person move large groups around. It's become a natural thing for me." Sandler worked as a rock photographer, sound man and road manager before filling in for Bruce Springsteen's tour manager in 1980. He went on to manage tours for Stevie Nicks, Billy Joel, and most recently, for the Big Apple Circus.

Harry Sandler, Tour Manager

Mix: Who decides what route the tour will take?

Sandler: Sometimes the manager and the agent route the tour, and it works out fine. I deal with the agent to make sure the route will work. Since they don't go out on the road all the time, there may be a problem they don't know about, like a highway that's not really fast enough to make it on time. The booking agent starts booking the halls long before I get involved. This has to be done so we know the route. Then the booking agent comes to me with what he has, and the manager gets involved. He'll say "keep two days off after Philly in case we sell-out the first show and add a second show, so things don't back up into each other." Some agents work with so many bands that they forget these details. After the halls are booked and the tour is routed, I get together with the production manager and hire the crew and make sure everybody's salary is locked in.

Mix: Are you responsible for hiring the crew? What input does the production manager have?

Sandler: The production manager wants to have his own production peo-

ple working. We're pretty equal in the hiring process though. I'd rather have someone who's not so good but fits in rather than someone with an ego problem, or a drug problem, even if that person can do a great job. I mostly watch the personalities. I like to work with people who are unknown, because they'll work really hard to get somewhere and they won't have years of bad habits. This is where my instinct comes into play. Sometimes I hire people who've never been on the road before. On Billy Joel's tour, I hired a stockbroker trainee from Philly, and he did a great job. He's still on the road. A good crew person should have a lot of loyalty. Technical people have to know what they're doing, but valets, assistants, people that don't need a specific skill are friends that get recruited. But loyalty's the key.

Mix: After you hire the crew what is your next step?

Sandler: There are always decisions to be made, and I make them. The production manager gives some input, especially into the routing, since he's out there with the trucks. But if the route can't be changed, and there's a problem getting from point A to point B in time, he has to cope with it. He can bring in extra drivers, and drive constantly, maybe for 10 hours without stopping. He has to find ways to drive as far as possible in the least amount of time. When he gets to the rehearsal hall, he has to make sure the players have their instruments, enough strings and picks and things. The only time I have to make any decisions is if it's a question of whether to buy an amp or rent one. You ask the tour accountant and he figures that out. A tour accountant can be hired for the tour, or he can work with the artist's management. It's different with every tour. I've ended up hiring everybody at one time or another. Sometimes a band will come with one guitar player and I've hired the rest of the band. If no one hires a sound company, I ask the sound engineer who he wants to use, and go make the best deal. If he picks a sub-par company, I'll try to add some input. I never tell him what to do, because it's not my gig to do sound. I just point out what I think might be better. Then I contact the promoters in each city, and tell them what we need.

Mix: Who takes care of ticket arrangements?

Sandler: I get the seating charts for each venue and write letters to each promoter in each city, saying "hold this space for the mixer, don't hold anything here," etc. In some cases we cut off the back of the house and those tickets can't go on sale until the rest of

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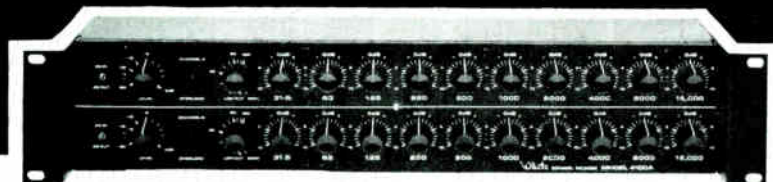
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the house is sold. In a lot of cities we play to ¾ houses, and we'd rather put up a drape than have it all open and play to a spotty audience in the back. The bad sightline seats we hold. I hold the tickets for the band's use, and I make sure that the first 20 rows are sold to kids. It's only fair that the fans who support the artists get the better seats. As far as the artist can see, he should see fans, kids.

Mix: How soon in advance do you book hotels?

Sandler: As soon as possible. I work with Paige Kevan's Tour Company. Paige will immediately overbook and overlap cities to make sure we're covered in case any dates change. Then about two weeks before the tour when we're positive, she'll confirm everything, but not until we're locked in. Then we will contact the limousine companies, and give them arrival and departure information. Paige has been doing this for a long time now, and she knows everyone's needs, who prefers a big suite, who won't stay in a certain hotel chain.

Mix: What is your next step?

Sandler: After all the travel and hotel accommodations are arranged, I make sure all of our contractors, i.e. trucking, sound, lights, etc., have an itinerary and all pertinent information. We process payroll information, and passports are issued if we're leaving the country. Then I work with the promotion men from the record companies. If the band does press, I get involved in that. The management offices may have someone to interact with the press, but usually I figure in the planning stages for the press in relation to the artist on the road. On Billy Joel's last tour, we didn't do a lot of press but the record company people had to be given passes, and we had before-show hospitality for radio and retail people. For ten minutes before the show, Billy signed autographs and got photographed with the guests. It's always nice to stay in touch with what's going on around the country.

We always book the hall for the day before the show, so we can load in the day we arrive and rehearse before the show. If it's a band that is just starting the tour, the rehearsal in the hall is a good warm-up. It's important to think in terms of the day before. That way, everyone gets in the groove, instead of flying in cold. After that, it's just day to day, making sure everyone's doing their job.

Mix: What is most important in running a smooth tour?

Sandler: If everything's done in advance, it will work out right. That's the

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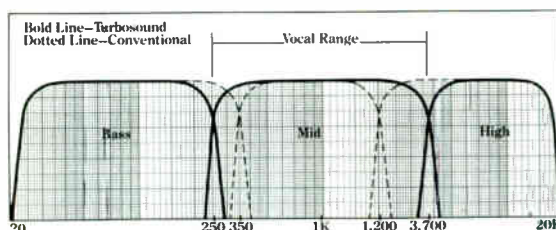
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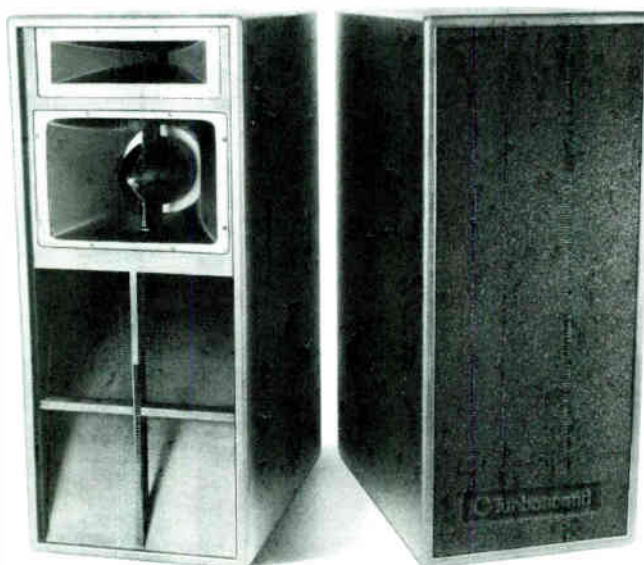
nique which pressurizes both sides of the speaker cone. It enables our TMS-4 full range enclosure, for example, to develop a peak SPL of 132 dB at 45 Hz in a total enclosure volume of only 14¾ cubic feet. The uncompromised accuracy and physical punch of Turbosound's low end make a difference you can feel as well as hear.

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World Radio History

key. There are a lot of interests out there, the sound company, the lighting company, and the trucking company. It gets political, even to the point of who's going to park their truck where. Mostly, it's the day to day dealing with personalities and dealing with whatever problems come up. Staying on top of problems is the key to a smooth tour.

Mix: Have there been any near crises that you averted?

Sandler: Once we finished a show in Chattanooga, and we had to charter a plane to get to Philadelphia that night. It's always best to travel to the next city right after the show, before the crowds start searching the hotels. Everyone was psyched about having a private plane. Someone on the tour had worked with Bowie, who always charters planes, and that person really built up how great it was going to be, so everyone was excited. When I got to the airport, everyone was standing at the steps of the plane, shouting. It turned out that Philadelphia was fogged in, and we couldn't fly. The panic was fierce, but I stayed calm. I got everyone in the plane and had Chinese food brought in. I called some vans to take us back to the hotel, and we flew out the next day. It could have been a catastrophe, but I was calm, so everyone else calmed down. I'm probably too calm.

Mix: Do you have any advice for a small act's first tour?

Sandler: If you're on a small budget and can't afford a tour manager, look for people on your level. You're an aspiring star, so look for an aspiring tour manager, a friend with a disposition that will work. That person should be mellow, but in charge, soft spoken but always in control. Before you're famous, you're dirty and ratty, and no one wants you around. When you're famous, everyone wants your autograph. If I was in a young band, I'd get a bus and sleep in a bus, and on days off sleep in hotels. Buses are cool because they have videos and bunks; it's like a big dressing room on wheels. You need a dressing room anyway when you play those small clubs. All you really have to have is a sound guy, who does the tour manager gig, and a roadie and a lighting director, who sets up the gear and does the lights in the club, which are pretty minimal.

Mix: How has the computer age revolutionized touring?

Sandler: Computerized technology helps run a tour more effectively and efficiently. A lot has happened in five years. Touring has become more sophisticated, with computerized accounting programs. We have computer

PHOTO: © JIM MARCHESE 1984



Harry Sandler with Billy Joel and the clowns from the Big Apple Circus.

mailboxes, called E-mail, so I can send little messages, telegams and telexes from my computer. We call it "on line". The booking agent, manager, the travel agent and Paige Kevan are all on it. It allows information to be processed in the least amount of time, such as show settlement information. After the

accountant does the settlement, he sends the information off to the manager, agent etc, so that in the morning when they get in, they're up to date. Other uses are being able to send telexes, mailgrams and letters from any phone in the world. When Billy Joel was planning his trip to Japan,

we communicated with the Japanese promoter, Mr. Udo, completely by computer. It made life a lot easier. The computer can also store vast amounts of information on a small disk, which lightens the load on the road. We have just scratched the surface with computerized business management. I'm hooked on them.

...

Ron Delsener, Promoter

Booking agents and promoters are hardly a new phenomenon in the music industry, however as touring comes of age, their responsibilities grow and diversify. Tour companies hardly existed at all ten years ago, but now they're an integral part of a major tour. The interaction between booking agents, promoters, and tour people reflects the diversified roles each group now assumes. With the tour manager as chief coordinator, the three companies work to lay down a structure, which is the backbone of the tour.

Barry Bell, booking agent for Premier Talent, is a key element in some major tours. Bell, whose agency handles many major rock acts, including Cyndi Lauper, Van Halen and Springsteen, is essential in establishing the tour route and working out the

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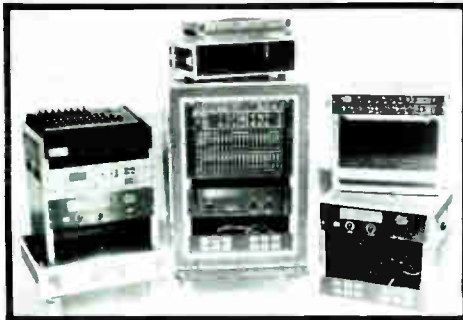
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Ron Delsener

deals for his acts. Bell's work begins when a manager calls with the release date of his artist's LP. "We like to give the tour a six to eight week lead time," Bell explains, "to make sure the music is out there, that the kids are familiar with it, that it has had a chance to take hold. More and more it's important to have something on the charts now. Then we start getting availability depending on what route the manager, promoter and I decide to take. We might start where the artist is strongest, in a particular part of the country, and get available dates from all the halls, then work out the deals."

Bell notes that merchandising is one of the biggest changes in the tour industry. Sales of T-shirts, posters and paraphenalia gross as much, if not more, than ticket sales now, whereas merchandising was not grossing nearly that amount seven years ago. Another new factor that Bell must contend with is competition for indoor venues from winter sports.

"Between September and May, major cities have few availabilities indoors. You need at least six months in advance for a booking now," says Bell. "In the summer you have more leeway, because you don't have basketball, soccer and hockey to take up halls. There are also outdoor venues, like Pine Knob and Poplar Creek, which are quite popular now. At first, bands didn't think they'd get a big audience outdoors, but they do. The gross potential for these shows is less though, because lawn seats go for less, and because one ticket will be purchased for four acts, so ticket sales aren't really

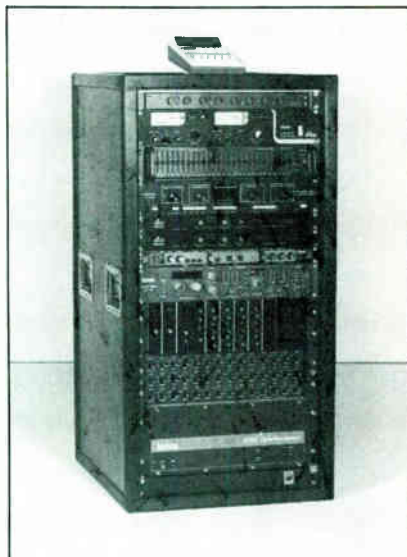
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AUDIO ANALYSTS: On the Future of Touring

Pierre Pare founded Audio Analysts in 1968 to provide Canada with the state-of-the-art equipment he saw in touring American shows. A European tour with Les Grandes Ballets Canadiens, and a stage production of the rock opera "Tommy" followed. Audio Analysts secured a name for themselves in the business when they were hired to coordinate sound systems for the 1976 Olympics in Montreal. Pare, his brother Bert, who joined the firm as a logistics specialist, and Albert Leccese, a former JBL service manager who is now the vice president, operate out of a Montreal office, but the main shop is based in Plattsburgh, N.Y.

As touring grows from a basic transportation system to a big business, Audio Analysts are one of the facets that grow with it. What stimulated this growth? "More and more money has made the touring industry a major business," notes Pare. "Bands are becoming more aware of the available funds," adds Leccese, "and they want to see concrete professional developments. More and more artists care about appearance and the show that they put on for the kids."

The future of touring, Pare and Leccese agree, is wide open. "There will always be a touring industry," says Leccese, "because even with videos, you still don't get that whole picture. There's still the live exciting feeling of being there that you only find in a live show. Basically, we're interpreters; we take what the artist is trying to get across to the audience and present it to the people watching the show. It's our



Typical house effects rack used on A.A. tour.

job to use whatever technology is available to do a good job. We take the artistics, and with the use of technology, we send a message across to 20,000 people. Maybe it's a bit presumptuous, but I think my job is to make sure the technology doesn't get in the way of what the artist is trying to do or say."

Audio Analysts' snake system is one of their most innovative pieces of equipment. "Our snake system is very versatile," explains Leccese. "It takes into account house monitors and remote recording. It also has subsnakes that hook into a master stage box through a multi-connector. What that does is keep the stage neat and clean by not forcing you to use any cable over 25 feet long. I designed this particular one, and also the motor control which is revolutionary in the sense that it involves the remote control of 12 or 18 chain motors, that are used to fly the PA system. It's used to control 12 motors individually, or in tandem, in either direction, up or down. It's still state-of-the-art, even though it was designed eight years ago."

Perhaps the most exciting piece of equipment, though, is AA's Time Energy Frequency computer analyzer, a Crown trademark. "The TEF looks at audio from a different viewpoint," Pare explains. "It's closer to the point where measured results and perceived results correlate," adds Leccese. "It's a new kind of analyzer. Before, even though two things might have the same spec, whether it was a speaker or an amplifier, there was still a difference you could hear, it was very subjective in terms of evaluation. With the TEF, it's not really a case of 'this is better than that,' but it takes into account more details so you can get closer to a better product than ever before."

"Before, you could only test so many parameters and say 'to the best of my knowledge, this is the ultimate we can achieve.' In conjunction with the normal auditory process, this is a tool that permits you to look with even more detail into why various differences exist."

The TEF frightens some manufacturers, according to Pare. If measurements aren't made correctly, the results can give a product bad publicity. "You have to be very careful," Leccese warns. "If you don't know what you're doing, the results can be interpreted in such a way that can endanger the product's reputation. It's not an easy instrument to learn. You have to have a background in physics, and also in

—PAGE 58

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indicative of one band's sales strength."

Booking agents, according to Bell, work at two levels, booking and coordinating. "You don't always agree with the manager," he explains. "We may say, 'I don't think you should play a 20,000 seater, the promoter says we'll only get 2,000,' and he'll say 'yes we can, the record is going to be a hit.' Once he makes the decision to play the big hall, we have to do our best to sell that house. That's the basic job of a booking agent."

New York promoter Ron Delsener calls himself a "beggar-gambler." "We beg the act to play for us, then we cater to them backstage," he explains. A promoter's job, according to Delsener, is to secure a venue, underwrite expenses, creatively entice the public to buy tickets, and gamble that the show sells out. "A promoter is also a gambler," says Delsener, who has promoted such acts as The Rolling Stones, Elton John, and Bruce Springsteen. "The promoter will put out the money to guarantee the act's salary, and he'll also underwrite the advertising, sound and lighting costs, etc. After expenses, you work on a percentage. Usually, a promoter gets 10% and the act gets 90% or you may get 15% of what's left of the gross receipts against the expenses, and the talent gets 85%. Say there are 1,000 seats and the tickets are \$11. Gross of the house is \$11,000 and the expenses are \$5,000, so there's \$6,000 left. I would get \$600 and the artist would get \$5,400. A promoter has to gamble that he'll make 10% or 15% on a sellout. If he loses, there's no ceiling on the loss. If he makes money, there's a 15% or 10% ceiling. So if you only take in \$2,000, and your expenses are \$5,000, you lose \$3,000. There's a big risk. We do about 200 shows a year so we spread our risk."

Delsener launched his career in 1966, when he created the idea of one-dollar shows in Central Park. "That idea gave me a start," he explains. "You have to come up with a concept that no one else has, or it's very difficult. Since then, we've had a lot of competition. Promotion has come full cycle from the time when it was just a great thing to do for the people, back in the '60s. It was more simplistic then. When the Beatles played Forest Hills Tennis stadium back in '64, the stage was two feet off the ground, and the lighting was two poles with lights on them, 'trees.' There was no truss lighting and the sound system was two boxes; speakers on the ground. Now they fly tons of equipment off the arena floor and there are stacks of speakers on the stage, and thousands of pounds of lighting and myriads of xenon and

—PAGE 54

Going the Distance:

WOMEN HIT THE ROAD

by Rosanne Soifer

"Are you the singer?"
"Why would a chick want this job?"
"Whaddya mean, *she* works for the band?"
"Need help, sweetie?"
"Are you the guitarist's girlfriend?"
"Who carries your equipment?"

Women have certainly gone on the road before—as singers, the manager's wife, the drummer's girlfriend, or the band's groupie. Occasionally, women musicians and crew have had opportunities provided for them by boyfriends or husbands who played in bands. For the longest time, male sponsorship was usually the only way women get anywhere in the business. This is finally starting to change.

No one will argue the fact that men and women react similarly to common road situations like sleeping in a van (sitting up), the gastro-intestinal challenges frequently posed by 24-hour restaurants, and the if-it's-Tuesday-this-must-be-the-Midwest disorientation syndrome. However, both men and women are experiencing the growing pains often caused by the entrance of women as active participants into previously male-dominated areas of the music industry. (Ina Jaye, a staff member of the student admissions department at the Institute for Audio Research says that women account for roughly 20 percent of the school's enrollment, and this figure is steadily rising.)

Tina Weymouth, bassist for the Talking Heads once said, "Women musicians tend to be treated by critics [and, one might assume, by their male peers] like women drivers. If they aren't much good, well what can you expect? And if they're hot stuff, it is despite the fact that they are women." One could equally apply her observation to women roadies, engineers, and techies.

To follow this up, I spoke with several women who've worked the road for measurable lengths of time and distances—as roadies, sound engineers, light techs, and musicians. I included my own experience as a pianist in a country road band. (1) The woman must have gotten the road gig on her own merits and not through a husband or boyfriend. (2) She must have travelled with a group that was predominately male (no all-girl bands). (3) She must still be active in the business.

THE WOMEN



Judi Dozier

Current Gig: Keyboard and synthesizer player (Roland Jupiter 8 and Yamaha DX 7) for Chrystalis artist Billy Idol.

Background: Singer and keyboard player for various Southern road bands including the Georgia Prophets.



Mary Culum

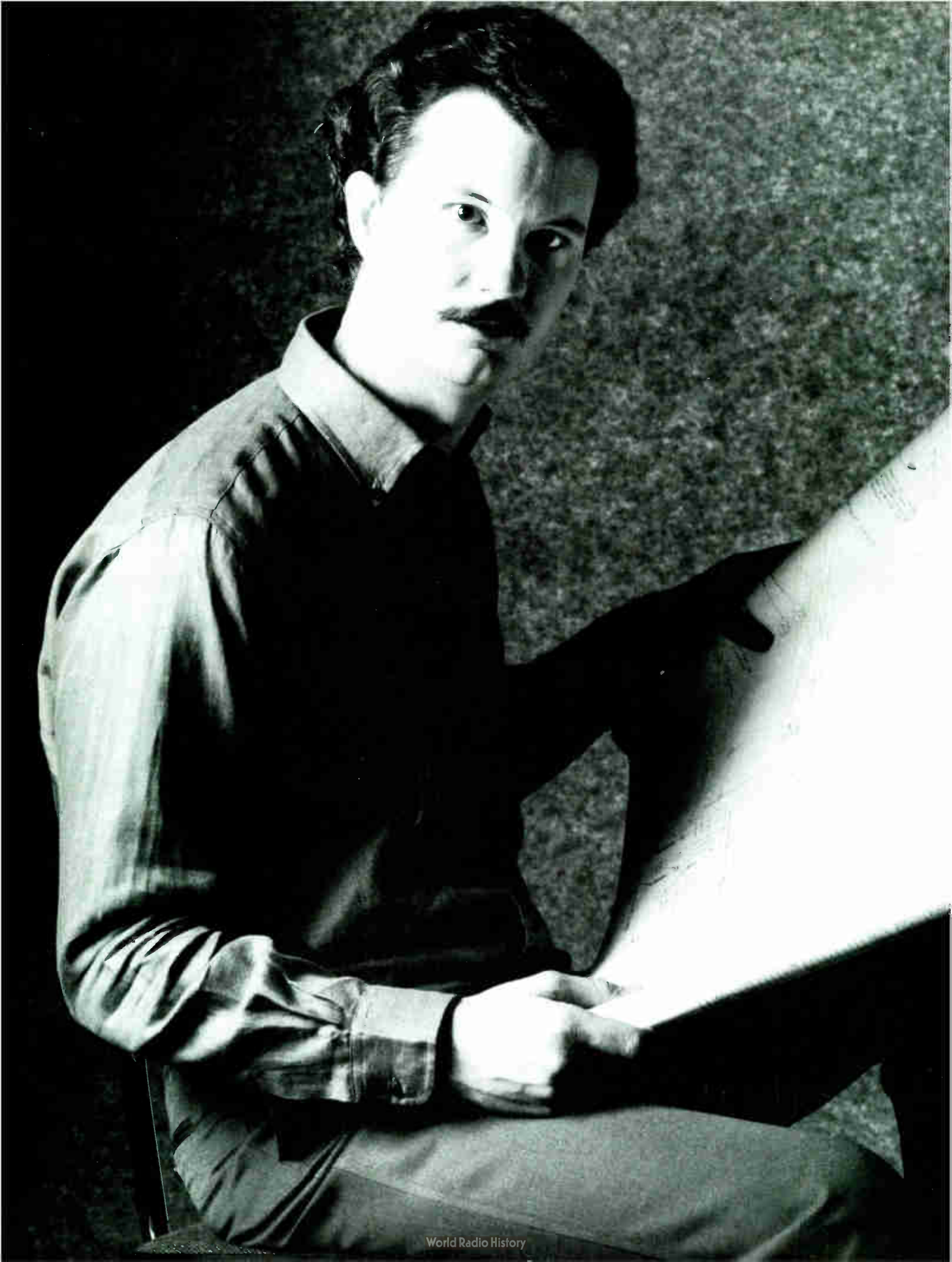
Current Gig: Studio manager for Electric Lady Studios, New York City.

Background: Sound, light, and roadie work for the Ramones, Holly and the Italians, Billy Idol, Montana-based band Crystal Vision (now Fanatic).



Holly Peterson

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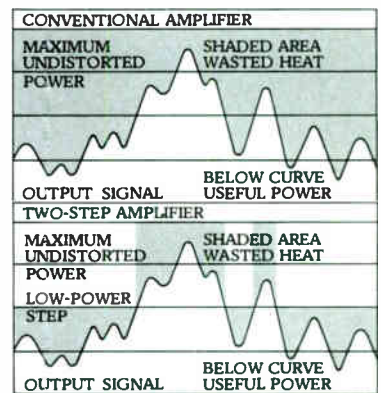
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super trouper spotlights, maybe 10 or 12, when there used to be one or two." The highly specialized technical equipment increases a concert's cost. The extra crew members needed to unload and install lights, sound and extravagant sets can add hundreds of thousands of dollars to the expense budget, putting the promoter/gambler in a high-stakes game.

...

Paige Kevan, Travel Coordinator

Paige Kevan's Tour Company is representative of the burgeoning tour industry. Seven years ago, her special-

ized services had not yet evolved into a necessity. Today, Kevan runs a top-line company with clients ranging from Springsteen to the Stones. Organization and advance planning are the keys to Kevan's Tour Company. She works with the artists and tour managers to assess the specific needs of each tour, and then arranges accommodations to suit her clients. Travel agent Carol Green works with Kevan to book flights, secure desired seats, and insure that the tour will arrive at its destination on time.

Paige Kevan began booking accommodations for rock groups when hotels were still leery of the music industry. Many hotels were reluctant to take bands. This reluctance challenged

but did not deter her from securing the desired rooms for her clients.

"I do everything in advance and visit hotels on a regular basis so that I am thoroughly familiar with their facilities," explains Kevan. "When I book the hotels, I look at floor plans with the tour manager and pre-block rooms with a view toward security, comfort and convenience. I also negotiate a better than average deal for the groups. We want to keep the costs down, to save them around \$800 a night. When groups are on the road for six months or longer, travel expenses can become quite substantial. When you can save a group \$800 a night over that six month period, it adds up. Hotels are willing to work with me on providing reasonable rates, especially chains. In the case of a chain, working with a tour is even more attractive since the chain is simultaneously negotiating for several of its properties across the country. We try to accommodate every group's budget. We're usually successful given our willingness to work both for our clients and with the hotels."

No matter how much advance planning she does, Kevan finds change is the nature of the business. "You can't be affected by it and you have to get right on to the next thing, even if that change sends a whole month's work into the garbage. If there's a major problem, that can't be handled over the phone, I fly out and take care of it. Four years ago, I spent more time on the road with bands, getting everything set up, i.e. advancing hotels, and blocking rooms. These days, a lot of arrangements can be handled over the phone. When a band is touring for a long time, hotels are home away from home. It's our job to make all accommodations as comfortable as possible."

Harry Sandler, Paige Kevan and Carol Green, a travel agent who works for Kevan, communicate by phone, and by computer. "E-Mail," or electronic mail, is a message service via computer. The six-pound, Radio Shack TRS-80 model 100 is portable enough to fit in a briefcase. On a subscription based system, one can get on line and have access to a computer network. With booking agents, promoters, hoteliers, airlines and venues all on the same line, communication is expedited enormously, and plans can be made with maximum efficiency.

If the age of the modern tour is just beginning to come into its own, with its highly specialized components building a more efficient and intricate network, what will state-of-the-art touring encompass in the next decade? Innovators like Audio Analysts and Tait Towers have only just begun to tap the resources of computerized sound,

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stage and lighting techniques. The computer itself is a relatively new tool in the music and touring industry. While booking agents, tour managers and promoters can all communicate more directly through E-Mail, only a fraction of the entire tour industry subscribes to the line.

Modern technology has taken the touring industry to new heights, but technology basically affects economic and acoustic aspects of a tour's success. Perhaps staging specialist Michael Tait puts it best: "With a great band, like Springsteen, you don't really need much of a set or staging materials," says Tait. "Bruce owns his own stage, and it's very basic, just a couple of risers. As long as you can hear Bruce, that's all you need." Despite the trend toward exotic sound effects, lasers and lights, what really draws people to a live show is the emotional rapport between artist and audience. You can embellish an image, but all the money in the world can't buy what Springsteen's got. There's nothing like a sincere and spontaneous delivery to win an audience over. Despite peripheral changes, in 21 years, from the Beatles to Bruce Springsteen, that ability to simply mesmerize an audience by sheer charisma has remained unchanged.

...

Michael Tait, Staging Specialist

Tait Towers Lighting is a deceptive name for a company that creates everything a rock band uses onstage — except the instruments. "We call ourselves conceptual engineers," explains Australian-born Michael Tait, whose stages have served such acts as Van Halen, Diana Ross, Yes and Kiss. Tait formed Tait Towers in London in 1976, primarily "to avoid being an employee of Yes. I worked with Yes since their inception in 1968, when they needed someone to drive their van. Since then, I built practically everything they used on stage. I immediately saw a band that was going to be successful. But being their employee made me taxable. I became self-employed, sent them an invoice every month, got deductions, and paid less taxes. It was quite legal." Following the demise of Yes in 1980 (they reformed in '83) Tait set up Tait Towers U.S. in Lititz, PA.

Staging was just beginning to take off as an industry when Tait Towers evolved. "At first I envisioned the company doing just lighting and lighting rental," says Tait. "But as time went on, I found no one on the East Coast was building rock and roll stages. In the

early days, no one had lights, not even headliners. Now of course you wouldn't dream of going out without lights and a sound system. I built the rotating stage for Yes, as well as more or less everything else they used on stage." When Yes toured America for the first time, they brought 12 lights. On their last tour, they used 300. A Van Halen show uses 1500. With the revolution of special effects and lighting, it's no wonder Tait Towers expanded 400% in the past year alone.

In the small world of stage settings, "There are only a half-dozen sound companies and a half-dozen lighting companies that mean anything," according to Tait. "People looking for stages know of my existence," he adds. With 14 people working in his shop, seven of them full time, Tait Towers has a full complement of employees, from welders, carpenters and set designers, to assistants and students who come in after school and move metal and stack plywood.

Two factors make Tait Towers very attractive to prospective clients. In terms of price, the company is not under union contracts like its Los Angeles and San Francisco rivals. "Those companies have union workers to a larger or lesser extent," says Tait, "especially in L.A. which is based around the TV and film media. Thus, the cost per man per hour in the back of nowhere in Pennsylvania is less. Even in building the same item, without making less profit, my cost would be less. Secondly, we have the advantage of my 15 years on the road. I know what's necessary for a touring rock and roll band, more so than a Broadway scenery company, or a TV set designer who are used to building something that will look magnificent for one day, or that you couldn't possibly contemplate moving from point A to point B. A lot of these places have an idea of portable that involves screwing a handle on one end and that's it. Acts who were forced to use these companies took their set on the road and had it fall to pieces in a week. I get of lot work because the sets we engineer are constructed in such a way that they're easy to assemble, and truck modular, easy to transport."

Tait used to design stages from the initial concept, but he's shying away from that now. He'd rather concentrate on engineering. When a designer brings in an artist's impression, he'll make an engineering drawing and build a set that works. The bands may have a concrete idea of what they want, but if they don't, Tait steers them to a designer. "I was sent a drawing for a Kiss stage," Tait remembers. "It had ramps and risers and stairs, and as I looked at the drawing, I suddenly

realized that the incline of the ramp was such that you'd have to be a mountain goat to climb it. The band was in Europe, but Paul Stanley called me, and I said 'do you know how steep that ramp is?' and he didn't, because he can't read a blueprint. The band re-designed it, over the course of four days and I engineered it so it was workable, and would still fit into their budget."

Tait cautions bands not to spend much more than they're going to gross. "If you're only doing 20 shows, you shouldn't go out and spend \$100,000 on a set," warns Tait. "But if you're doing 50 shows, you might spend that much. Today, \$1,000 a show is not outrageous. Basic rates vary from \$250 a night, to the most extravagant stage I've ever done, for The Cars. For 40 shows, they spent well over \$100,000."

What factors brought about this trend for exotic staging? Tait credits competition with MTV and film. "The visual stimulus in film progressed a long way," he says. "Besides, rock and roll is a new item, and big concerts are new. Anything new evolves. The first thing to evolve was the sound system. Then lighting, and the next thing was stage sets. Initially, groups just stood and played, then they started to move

and everyone wanted something to make them look better."

Tait Towers has maintained a reputation for using the best equipment over the years, and they continue to seek out technically innovative materials. Instead of using traditional plywood staging materials, Tait uses a plastic honeycomb decking, a by-product of space industry research. The composite of aluminum with plastic honeycomb, which is made in a machine, produces a lightweight but rigid board that is quite durable. Another new development, aluminum grill, allows light and sound to come through it, and it can be walked on.

The aluminum grill made its debut on a Yes stage, and the rotating stage that Tait designed for Yes proved to be an extraordinary device, both economically and acoustically. "The beauty of the rotating center stage is that the front row is 110 feet long instead of 50 feet long," explains Tait, "so everyone is twice as close on average. You can scale the ticket prices higher. Yes grossed an extra \$10,000 to \$15,000 per show. It was a big breakthrough in concert economics. Soundwise, you do need more equipment, but you don't have to throw as far. The worst place for sound is right back at the center of the stage where you get slap back. So

the artist has the worst sound, but for the audience, it's great."

Computer technology has helped to revolutionize lighting and create a more compact, portable system. "Our automated lighting systems involve some innovative equipment," Tait reveals. "We have lighting trusses with the dimmers built into the truss, and then a computer signal is sent to the controls. This means far less cabling, and a simpler looking system."

Tait Towers' "performance room" is a novel attraction, offering a band the chance to play live in the 35 foot high, 65 by 65 foot room A 40 foot by 15 foot control room is elevated and separated by glass. This way the act can perform with their stage setting before taking it on the road, to correct any problems. The performance room walls are made of Tectum, which consists of 16-inch wood fibers held together by cement. Behind this layer, fiberglass soaks up sound. None of the walls are flat, thus the room does not have the resonance of a building its size. One hard wall is set up for more live sound.

With stage design only its first phase of evolution, there's no doubt that Tait Towers will evolve with it, to meet the growing needs of a burgeoning industry. ■

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—FROM PAGE 49, ANALYSTS

acoustics. Without this background, and insight, the TEF can be misused.

"You don't want to publish the frequency response graph and say 'this is why my speaker's better than that speaker,'" Leccese continues. "There are also manufacturers who fear that the TEF will undermine their 'black magic.' There's a lot of 'magic' in equipment. A friend of ours once said that some products have an element called 'unobtainium,' meaning that one company has a product that no one else can reproduce, because it has something that no one else can get."

Perpetual research, through a variety of resources, helps keep AA on

top. "We do all our own research," says Pare. "We keep in touch with manufacturers, we put the same test conditions on all products, and some sound better, some sound worse and some burn out. Out of all these products, we'll come up with one that we'll use. It may require modifying to suit our needs, and a lot of times the manufacturers are willing to work with us that far. If we specify a certain type of wire or a certain type of support tube, etc., we can in effect design our own loudspeaker, to use on our own box."

Cabinets are traditionally made of wood, but AA have experimented with various materials other than wood, that are just as light and just as

strong. "Who knows," Leccese speculates, "maybe six months down the road we'll find this new property, and build our cabinets out of this magic material."

Assistance from manufacturers has proven invaluable to Pare and Leccese. "We've worked closely with many console manufacturers to develop a console that I think was state-of-the-art. The Soundcraft Series S4 was very nice of the Soundcraft people to design for us. We added our input, and they put together a console that sounds great, in the way it's put together. The features are incredible. It's not an exorbitantly expensive console either. We do the same thing with speaker manufacturers, JBL for instance. They build speakers to our specs. A lot of manufacturers are aware of the fact that what we put out, a lot of people hear. They tend to listen to our ideas and work with us. If we ask them something, they don't mind putting in the time to help us."

"We're not doing our work to be the best," says Leccese. "We're doing it to do a good job. If we become the best along the way, great. But if the people who buy tickets aren't happy and they stop going to shows, then we're out of work. We have to make sure the artist puts on the best show he's capable of putting on, and not allow the technology get in the way of his performance. That's why we spend that much money on research and development. In the long run, the artist benefits from R&D. The TEF costs about \$15,000. We never rent it out; we keep it here to better our equipment. Whenever a piece of gear improved by our R&D goes on the road, the artist benefits. If he gets a monitor speaker that is lighter, smaller and sounds better, it is to his advantage, our advantage, and the kids' advantage. One reason you seldom see groups that own their own equipment is because they take that into account. They know that if they buy their equipment, they won't profit from all the R&D that a company like ours can offer."

Despite advantages of superior equipment and a loyal crew, the nucleus of AA's success is intrinsic to the principles of honesty and truth that Pare and Leccese generate. "These are very simple values that people tend to overlook these days," says Leccese. "They are a holdover from my immigrant parents. In this industry, sometimes it hurts you more than it helps you to be honest. But in the long run, it helps. You get a reputation for doing what you know how to do best, and never saying you can do something when you can't do it."

—Brooke Sheffield Comer

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16:2:1 12:4:2:1 16:4:2:1

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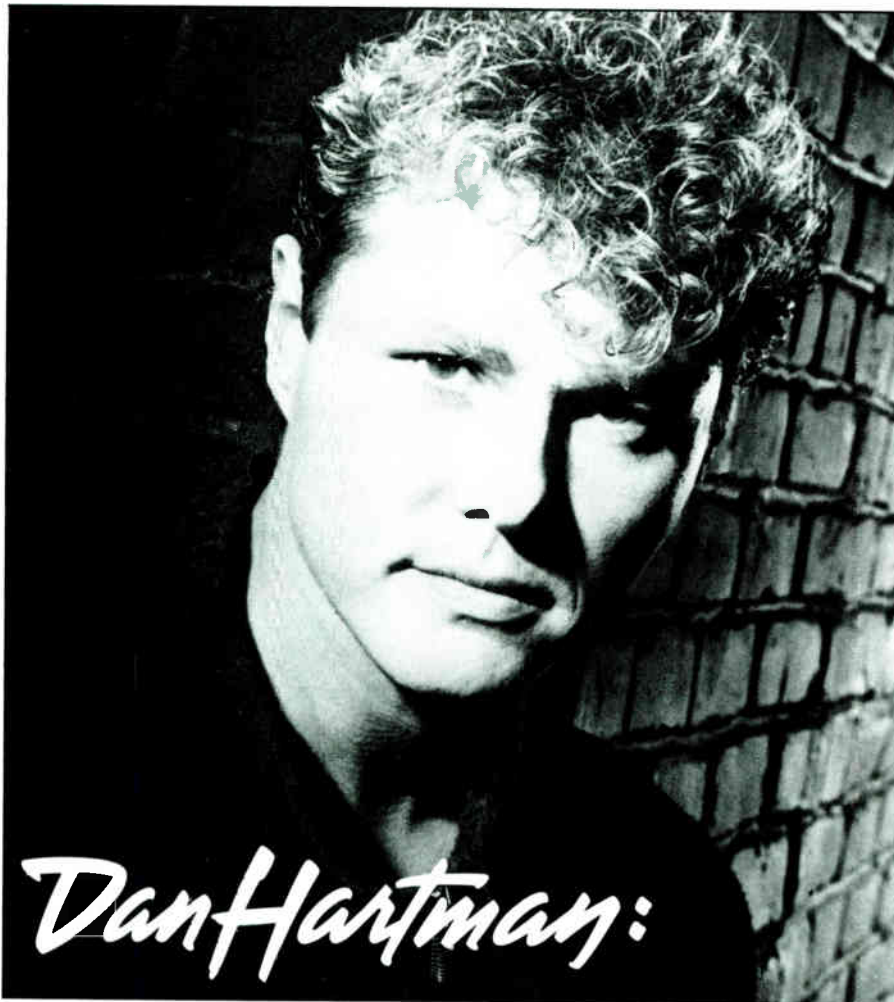
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MULTI LEVEL

by Brooke Sheffield Comer

Real estate agents in Westport, Connecticut, looked askance when Dan Hartman asked for a "house with a sound." He looked at 60 before choosing a 16-room colonial as the site for his most recent home studio, Multi Level. With a control room, two performance studios, glass, and every room wired for sound, there's a fine line between Multi Level and a professional

studio. If anything, Multi Level, with its 16 rooms on nine different levels (hence the name), offers more diverse sound potential than the average professional studio.

An aficionado of home studios since his first, in a 35-room Long Island estate with the Edgar Winter band, Hartman has upgraded his equipment and saved certain original pieces, like his three Teletronics LA2As, to create a room that gives him the exact sound he wants, a sound that sent "I Can Dream About You" to the top of the charts. "My AKG BX20E echo units might not

be state of the art, but I've had them a long time and I like the sound, so I used those chambers on my records," says Hartman, whose writing and production credits cover a range from Diana Ross to Neil Sedaka. "It's a personal thing," he explains, "having that private affair between you and the creative process. You can only capture it by having your own studio. I'm looking at a Sympatico 2 to work with in the studio, but you can keep upgrading studios forever and that isn't the point. The point is to get the magic out of a studio and that's what I'm able to do."

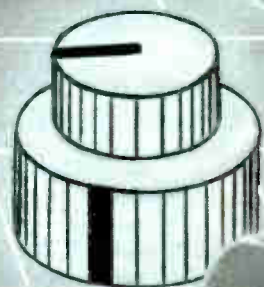
Hartman's studio is in a separate section of the house, but under the same roof. Since all the rooms on the various levels are wired for sound, the house has four or five very different sounds. "You can put actual musicians in any of the rooms and mike them or the ambient sound," Hartman explains. "I wanted a control room in the house so I could go in any time of day or night; some place that would lend itself to acoustically exciting areas so it wouldn't be like you were trapped in one studio."

Multi Level has two main playing studios, one higher than the rectangular 15' x 19' control room, and adjacent, on the other side of a glass wall that is actually two four-foot doors. The other 16' x 18' studio is lower than the control room, in another part of the house with the control room in the middle. "That's the beauty of the house," Hartman says proudly. "I found it in that state, and all I had to do was the acoustical work inside the control room."

The console is an automated, 24 track MCI 538 series, and the speakers are Big Reds, which are Altec 604E, triamped with Crown amps. Inspired by the sound in London's Trident Studios, Hartman followed their example and put his monitors on the floor in front of the console. "I've always loved Trident's sound," he reveals, "and a friend said 'why not try putting your Altecs on the floor and stand if you need to hear something critical but then sit down and turn them off, and it will sound perfect.'" The monitors are run completely flat, with no equalization or baffles around the room. Two of the side walls have quieting fabrics and the back walls are hard, so the room is live.

—PAGE 62

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The performance room adjacent to the control room is elevated about three steps on concrete, and holds the seven-foot, conservatory sized Yamaha piano. The 19' x 18' space has a cathedral ceiling, fireplace and 32 mike inputs. This completely sound-proofed area has been the site of recording sessions with Muddy Waters, The Plasmatics, and Johnny Winter.

Another main area that Dan finds very valuable is a 20' high space extending the full two stories, with double story glass facing a river. The floor is brick and one of the walls has a brick fireplace hearth that stretches the full two floors. There are no carpets or drapes, so Hartman can send drums into a

stereo system and re-record the ambience through a set of stereo microphones that stay in there all the time. "I've researched and finally gotten the perfect sound blend that I like," says Hartman. "It's on *I Can Dream About You*, and my other albums. It's an ambient sound I can choose to elect and send through the system when I want an ambience on vocals, and I happen to like this sound a lot."

In addition to the basics, Hartman uses stereo parametric equalizers perfected by and purchased from George Massenberg; his original, and now valuable LA2As; regular 1176s; dbx 160 compressors; 949 Eventide Harmonizers; AMS and old Lang

equalizers. "I don't have a lot of out-board stuff," he admits, "but what I have is collector's kinds of things that help me get the kind of sounds I like. I don't have any preferences as far as mikes go. I have everything from Neumann 47s and 87s to Crown PZMs, maybe a total of 20 or 30 in the studio. There's also a harpsichord."

An engineer as well as a writer, musician, vocalist and mixer, Hartman has never done a lead vocal outside his own studio, and he always engineers his own work, as a personal signature. For mixing he goes out to see what the sound is like in another environment. "That's where you can make a mistake in your home studio," Hartman warns. "You can get so tunneled into your project that when you make a final image of it, it doesn't translate to people outside. So I go out and mix with an engineer. On my last album though, I did three mixes here, and everyone like my mixes best." When he goes out to mix, Hartman's choice studios are Studio 55 and Image Recording in Los Angeles, and Sigma Sound and the Power Station in New York.

One problem Hartman finds when he records on the MCI and mixes on an SSL is a brittle sound. He uses Scotch 250 tape instead of Ampex for warmth, but finds the best combination is to work on an SSL to begin with, or to take something he did on the MCI and run it on a Neve. "It runs like a Rolls Royce on the Neve," he says. "I'm looking at a Neve board with Necam computer, and also a Studer two track and an Otari 24 track. I hate to be boring though, and everyone gets Neve or Studer. I think Otari's more exciting. I want to change the two track from MCI to Studer eventually though. You have to be careful about how much EQ you have on an MCI, or you can screw up the sound by pointing it too hard at any one point. I've developed a technique of adjusting the synthesizer or the mike placement to get just what I want."

Multi Level is both a convenience and a monster for Hartman. Though he admits it's necessary to have a place to put down ideas a certain way as soon as they strike, such easy access to the studio is "both a luxury and a downfall. Not that I'm a goody two-shoes workaholic," he explains, "but there are times when I can't stay out of the studio. When you work in a professional studio, you have to leave so someone else can come in. It's easy to overwork when you're creating something passionate and exciting. Who wants to quit? Who wants to eat?"

With the close proximity of the kitchen to Hartman's control room, at least he is spared the fuss and bother of sending out for burgers. ■



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Brian Eno is something of a paradox. He is at once associated with the avant-garde and an artist/producer who has actually had his share of broad commercial successes. His most recent work as a musician is a collaboration with Los Angeles-based piano-colorist Harold Budd that will likely find only a small but devoted following, while on the production front, he was behind the board for U2's current smash, *The Unforgettable Fire*, which will likely sell millions. Eno refuses to be pigeon-holed, and for that reason he has always been regarded as something of an eccentric. That is probably unfair, though; the truth is that he has broad interests and broader musical tastes and prefers not to be professionally walled in by the limiting expectations of others.

Eno has always stood outside of the mainstream, even as his name has popped up in connection with the likes of Roxy Music, David Bowie, Talking Heads, Devo, Ultravox and now U2. He was a founding member and synthesist for Roxy before their greatest commercial successes, and his production work on albums by the other artists mentioned hardly constitute a bow to commercialism. Consider that the three albums he made with Bowie—*Low*, *Heroes* and *The Lodger*—were unquestionably that artist's most adventurous and least commercial efforts; he was at the controls for Devo's highly idiosyncratic debut; likewise with Ultravox; and despite growing popularity over the years, Talking Heads (three albums) and David Byrne (with whom he made the truly bizarre but fascinating *My Life in the Bush of Ghosts*) are not exactly Top-of-the-Pops. The U2 LP may well be the most commercially successful project he has ever been associated with.

His own music has covered a broad range of styles over the years, from the kinetic rhythms and rock of his early solo LPs like *Here Come the Warm Jets* and *Taking Tiger Mountain by Strategy* to his collaborations with Robert Fripp and his gorgeous albums of soothing ambient music such as *Music for Films*, *Music for Airports* and (though not technically part of his "ambient" series) *Discreet Music* and *Apollo*.

Recently, writer John Hutchinson of Ireland caught up with Eno to talk about his multi-faceted career. John's interview touches on Eno's work with U2, Roxy, his intense interest in the visual arts and much more.

—B.J.



MUSIC WITHOUT COMPROMISE

BY JOHN HUTCHINSON

Mix: Your recent recording project strikes me as a curious step for you to take. How did you come to be involved with the production of the new U2 album?

Eno: I don't know the source of the idea, but the first person I spoke to in the band was Bono. I actually turned down the project at first, because I wasn't interested in producing rock music at the time — I thought that I wasn't close enough to it any more. I called Bono to explain why I didn't want to work on the record, and while talking to him I very quickly appreciated that he had a certain intelligence and commitment that is very uncommon in this business. He had a sincerity, really, about what he was doing.

You have to remember that if you're going to spend two or three months with people in a studio it doesn't matter what they're like as musicians: what is important is how you're going to get along with them on a day-to-day basis. They could be God's gift, musically, but if you just don't like them, that's going to be the end of the relationship. Anyway, we were on the phone for a long time, maybe an hour or so, and he said several things which were very close to notions I'd been thinking about, and I was very surprised. For instance, I'd been thinking that I didn't care what kind of music I

worked on as long as I felt it had soul of some kind. I only wanted to be involved in things that I felt would engage several parts of my spirit at once, that would satisfy lots of different demands.

Mix: So it was basically Bono's motivation that drew you to the project?

Eno: Absolutely. It was what he explained about the way the band felt, about the kind of approach they wanted to take towards this record. One of the first things I said to him was "I don't know your music at all well, and it seems to be an area I'm not very interested in. So if I were to work with you, if I did make a significant contribution, it would probably change the direction of the music. If I did anything, it would be to bias the music in some way." Bono replied that that was exactly what they wanted.

Mix: Can you be more specific about what the band wanted from you?

Eno: I think it was that many of the records they looked up to as models were ones that I'd been involved with, so they saw me as a link between a lot of music that they had learned from. In a sense they wanted to tap the source, although of course I wouldn't claim to be a source — just an ingredient. They felt that the music of various people I'd been involved with — Bowie and Talking Heads, for example — had changed dir-

ection when I worked with them. But whether I was a cause or consequence of that change is, I suppose, debatable.

Mix: Did you take a dominant role as producer?

Eno: No, I didn't think I needed to, actually. There were some occasions when I felt I had to make a point strongly, and they had more to do with the selection of material than anything else. When we started there were about 17 or 18 pieces under consideration, so I came in to hear them in demo form. Some of them really stood out as being absolutely brilliant, and others didn't. But unbeknownst to me, some of the pieces that didn't stand out had been worked on for weeks, so the band had no wish to surrender them. It was a bit like a gambler who has lost \$2000 wanting to put up another \$2000 to get his money back! So I had to be fairly categorical about it. Besides, I knew that during the process of recording new pieces would be generated, and indeed that did happen — probably four songs on the album came up during studio time.

So I think that the only really dominant position I took was to say: "Look, we *cannot* work on this number any longer." One of the songs which didn't make it onto the record, and which I felt

from the first time I heard it wouldn't, took five or six days of time, recording it again and again. The band kept trying to play it better, but it wasn't the playing, it was something not happening in the composition itself. Apart from that, though, there was no need to take a dominant role, because U2 was the most intelligent group I've ever worked with, in the sense of a real, natural, intelligence. There's something very clear about the way they behave, and to me that's very admirable.

As far as I'm concerned, really great music is not going to come from a bunch of guys playing instruments, but from a particular group of people who get on with each other. As a matter of fact, I hadn't seen this for years until I saw it again in U2. For most of them it's their first band, and as Dan [Lanois] said, that's something you can't disregard. It is like a young couple who stay together for 50 years: no alternatives were considered. They set it up and were happy with it. I found it very touching that U2 still really like each other; there's no alliance against one particular member, which I've seen in almost every other band. They respect each other's good qualities and shortcomings.

Mix: *The Pearl*, your own new album, is another collaboration between you and

Harold Budd. How does that partnership work?

Eno: It works in rather a peculiar way. It's an unconventional relationship. Harold plays and records piano pieces in Los Angeles, where he lives, then I receive the tapes, listen to them, and edit them into a shape. In other words, I take a passage that I like, that has a beginning and end, and then build a structure with it.

Mix: Were these improvised piano pieces?

Eno: Yes, Harold would find a mode and play within it.

Mix: Would you say that your part in the collaboration was mainly technical?

Eno: My musical contribution exists in the context of the recording studio — the idea is that I try to make the treatment of sound a musical act rather than a technical one. You know how an engineer will usually put on echo in a studio in a very uncritical way? Well, I'm trying to make that a "musical" act. I ask myself questions like: "What can I do with this echo that really makes the sound resonate or ring, or will bring out some feature of the sound that might not otherwise be apparent?" So, for instance, on several of the pieces on *The Pearl* I divided the sound into four or five frequency bands, and put a different kind of echo on each one of them; consequently a high note will ring in a particular way, and may even sound like a different instrument. There is a short piece with very slow piano and with what sounds like a Bulgarian choir in the background, but in fact the "choir" is the result of treatments of that one piano performance.

Mix: Do you have your own studio?

Eno: I work with Dan Lanois in Canada, where he has a studio: I've worked there almost exclusively for the last five or six years.

When I was living in New York I had experience in a lot of studios which were entirely unsuited for this kind of work; they were much more suited to a finger-snapping type of product. This music is just not compatible with that environment — its like trying to paint a watercolor in an advertising agency. I wanted to work somewhere where the the engineer was sympathetic to the music, which was very hard to find in New York because they're attuned to power, high volume, and so on. Anyway, I definitely found what I wanted in Dan, and he's become much more than an engineer in these projects.

Mix: Do people like Harold Budd and Dan Lanois gravitate towards you? It might be unfair, but one only knows

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Eno with U2's Bono (left) and The Edge recording "The Unforgettable Fire" in Ireland's Slave Castle.

them through their association with you.
Eno: No, actually it's the other way around, because I was drawn to both of them. I heard a tape of some of Harold's music many years ago — in fact it was given to me by someone who made rather disparaging remarks about it. It was described as "a bit sweet," and in the context of the avant-garde that's dismissive! But I loved it, and I went on to produce a record of his music. It was a very painless record to make, and it was one that I loved, and continue to love. I kept in touch with Harold, and then gradually, very innocently, the idea occurred that we might do some work together. My first collaboration with Harold, *Plateaux of Mirror* was wonderful, because the project just fell together in a nice way, which was constantly surprising to us. Indeed, the record always stood as a kind of pinnacle to me, and I used to wonder if I'd ever make another one like it again. It was so simple to do, and so magical when it was finished. Months later I discovered it again, and it got to the point where I was in awe of the record. I couldn't understand how it had come about, and I just didn't know what it was that made the project happen, as it was done very unselfconsciously.

Mix: Was your work with Jon Hassell undertaken in the same spirit?
Eno: Yes. Jon is another musician I was extremely attracted to. Jon and Harold are alike in one respect — they exist on a number of fringes, like the intersection of several areas, and as a result they're not embraced by any of them. I find people who "straddle" very interesting because

they're making hybrids, they're putting things together in a different way.

Mix: Unlike, say, Steve Reich and Phil Glass?

Eno: Yes, they're definitely at the center of something. I'm more attracted to the opposite of purism — synthesisism, perhaps — and Harold and Jon are synthesisists. As such they tend to be ignored; they don't easily fit and they're not easily accessible in terms of one tradition. I don't say this to dismiss him, but it's very easy to see Steve Reich's place in contemporary music. You can trace his position in terms of a progression of ideas: you get to minimalism, La Monte Young, drones, repetition, and so on, and it's almost logical to expect a Steve Reich to emerge at the end of it; whereas someone like Jon, who is also of that school in one sense, is at a tangent to that direct progression.

Mix: You're a man of contrasts. Your sensibility seems to be able to encompass both the quiet introversion of your "ambient" music and the neurotic extroversion of your work with Talking Heads and David Byrne. You like found sounds, spontaneity, and letting things happen, yet at the same time you have a need for structure and control, for holding things together.

Eno: I often think that one does one thing as an alibi, so one can secretly do something else. I'm always theorizing, always coming up with schemes. These schemes may vary from essential matters such as one's approach to a particular work, to abstract mathematical notions. Alter-

natively, I might theorize about how to combine certain people and what kind of roles to suggest to them. But what usually happens is that once a system is in place and the work is going on, you realize that you'd really like to be doing something else. You have to have this alibi to silence some part of your mind. There's always a part of one's mind — mine, anyway — that's saying "Come on, let's stay in control of things, you can't just go in there and piddle around." And in fact I can't, because I don't achieve results if I do that. But it's almost as though the strict discipline allows you the freedom to do something else. I think that all artists have techniques that allow them to make fast, intuitive strokes. One of the most common of these is a long period of boring preparation. There's a proverb about that: "A fruit ripens slowly, but falls suddenly," or words to that effect.

Mix: These conjunctions of opposites, the approach you describe, sound quite oriental!

Eno: Yes! I remember reading a story about Japanese calligraphers who would spend most of the day grinding pigments, preparing brushes, and so on; a long procedure which, being Japanese, was rigidly applied, and then, just before dusk, they'd do a picture very quickly. It would be inconceivable to them to paint without that long preparation. There are two parts of me: one is the wide-eyed child, fascinated by combinations of sounds, little mixtures that have never been heard before, and then there is the other part, serious critic, which says "Come on, what's so interesting about *that*?" Sometimes the critic is useful after the event, but he's not useful during it. You've got to get him out the way for a little while.

Mix: Given the contrasting styles you've worked in, how do you decide what kind of music to make?

Eno: I've always made music on the basis of what I would like to hear. I'd ask myself "What is the music I most want to hear, but doesn't exist?" There is plenty of music I love but don't make — like gospel, which is just about my favorite listening music if I want something upfront. So people are always saying "Why don't you make a gospel record?" and my reply is "Why should I? There are so many people doing it anyway, and I don't think I would be anywhere near as good."

Mix: Your "ambient" music is sometimes described as "background" music, and I've read interviews in which you appear to accept that description. Why is that? Is it a clever ploy to disarm possible criticism?

Eno: I'll tell you about that. I listen to music quite a lot, but I've seldom found

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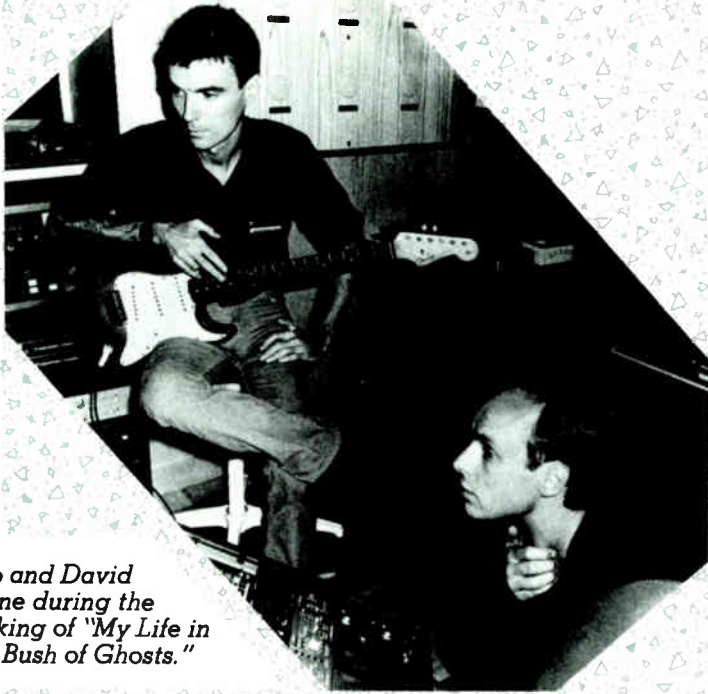
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Eno and David Byrne during the making of "My Life in the Bush of Ghosts."

the kind of music I've always wanted to hear. There have only been a handful of records that have occupied that category. *In a Silent Way* by Miles Davis is one of them, and there's a record called *Virtuoso Harp Music* which is another; there aren't really many more. Oh yes — I made a tape of the slow movements of the Haydn String Quartets, and that counts as another. What I wanted, and what I heard on those records, was a kind of music which didn't produce emotional surprises, which presented an emotional situation that held steady for quite a long time. In other words, a "steady-state" kind of music.

Mix: Could you also call it "contemplative?"

Eno: Yes, I think so, and maybe "melancholy" as well. What I liked about it was that it was even enough in temperament, you might say, for one to slide over, for one to go on with one's work or whatever one was doing, but also that it was rich enough to be gone into or investigated. That's a rare thing in music; you often hear great music that is very rich, but it's also very demanding — it doesn't want to be in the background. Most rock is like that, because it's designed to assault you. On the other hand, there is also music that is designed to remain in the background, and which cannot withstand close investigation. So I thought "Why not try to make music that can occupy all of these possibilities, where the listener can choose his position in relation to it?" Then, of course, this idea got translated as "Eno is making background music."

Mix: Does your music have a spiritual significance for you?

Eno: I suppose it's the center of whatever spiritual life I have, but it's an aspect of my music that is so unclear to me, so complex to explain, that I keep waiting for the day that I'll be able to say simple things about it, as you imagine wise people might do. It's as though there's a central point that I can't make: I can just provide signposts saying that if you go a particular way you might find it.

Mix: There's an old spiritual tradition of doing that.

Eno: Yes, I suppose so. But it depends on how far out your signposts are. I'm trying to get them closer all the time. My music and exhibitions provide a context in which I can explore the collision of certain kinds of ideas. For example, you can approach things in several different ways, as I was saying earlier. You can approach something logically, in a rational way; you can approach it pragmatically, the improvisation way; you can approach it in terms of strengths and weaknesses, in terms of what you have and don't have. There are many other ways as well. What I'm interested in is blending these approaches. At least that's the kind of mood I'm in now, so we'll see what kind of work that produces.

Mix: Do you consciously analyze everything you do? Do you take notes on your thoughts?

Eno: Oh yes, I've lots of notes [Takes a handful of small black notebooks from a

box on his desk, and opens one of them] These will give you an idea of them. I've been keeping these books for years and years — they contain diagrams for pieces and so on. The last five or six years are in here. I've got about 45 of them in all.

Mix: I'd bet that they're the result of your art school training. That reminds me — did you come across all the musicians you recorded on the "Obscure" series while you were at art school? And why did you decide to make the series?

Eno: There was an historical reason for that. You know how all the American avant-garde composers always had a terrible amount of attention — in recent years there has always been the sense, as in painting, actually, that America was the cauldron of creativity. Well, in England — and in other parts of the world — there have been music scenes that have had their own special and odd identity; they were different and not so highly financed. I thought it was really a shame that music of that sort was going to fade from view, so I recorded it.

Mix: You mean music that developed in places like Portsmouth School of Art?

Eno: Yes, exactly. It was the same impulse that led me to make a record called *No New York*, which included music by New York bands that I knew were not going to last for more than a few months. But for that little period of time they really said something about the mood of New York; they were like cultural insignia for that time. It was the first occasion I'd lived in New York, and that kind of music, which was almost psychotic, struck me very forcibly.

Mix: Was that what you had in mind when you formed Roxy Music? At first Roxy seemed like a flourish, a grand gesture, but then, unexpectedly, it extended itself.

Eno: Yes, it *was* like that. It was the extension that I didn't much like — I guess that was why I left. You can only extend things by echoing them.

Mix: It was almost as if the band had been leading an underground life before coming to the surface, and then appeared with its style fully developed. The first album or two were like the fruition of something that had been maturing for some time.

Eno: In a certain way it had been, although not just as a collective group. First of all we rehearsed for nearly a year and a half before we ever played publicly, and that's a very long time compared with what bands do now. And we had the notion that we were bringing together lots of ideas that we had separately explored. You see, I came from my fine arts/musical background; Bryan [Ferry]

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had come from a fine arts/soul music background, and Andy [MacKay] had come from an English literature/avant-garde music background — so while we all overlapped, we covered slightly different territory. The idea of binding all these things together was fascinating. It was a strange experience for me, because, to be honest, I never expected Roxy to be successful. I didn't think for a moment that we would be a big band, but I enjoyed doing it, and I had nothing else to do: I wasn't going to get a job or anything. I didn't think about what it was going to lead to. The idea that I might make a living as a musician didn't occur to me until I was about 24 or 25, which is fairly late by today's standards.

Mix: That was when you left Roxy Music?

Eno: Yes. It wasn't by any means self-evident before that.

Mix: Do you have any immediate plans for the future?

Eno: Some years are "doing" years, and others are "thinking" years. I'm just about ready for a "thinking" year, particularly as I've been drifting more and more towards the video work that I've been doing.

Mix: I gather you've just completed a

video for commercial release, called *Thursday Afternoon*?

Eno: Yes, although I hate using the word "video," because it immediately makes people think of pop videos! I call the things that I do "video paintings." [Goes to desk and finds stills from *Thursday Afternoon*] As you see, they're conceived and composed as paintings, but they move — very slowly. And I always use the monitor on its side, so the pictures are vertical. I shoot that way too. There are seven basic images in the video, all of one woman, and it becomes quite strange towards the end — almost morbid in a way.

Mix: Is the video about glamour?

Eno: No, not at all. It looks that way, doesn't it? But somehow that's not the feeling I get when I look at it. I wanted each sequence to belong to a different era, to belong to a different time. This one, for example, is very seventeenth century and it has a Rembrandt feel to it. In the video the color drifts continuously to one side during that sequence, as though the creature was being subjected to a soft, electronic wind. The wind just blows the color off her.

Mix: Have your videos been influenced by anybody?

Eno: No, hardly at all. I *hate* video! I

think that video has always been misunderstood as being a story-telling kind of medium, whereas I believe that the main concern of the video-maker should not be ideas or images, but an investigation of light. I felt the same when I first started playing with recording studios: I thought "Here is something that nobody has understood yet." I came to the conclusion that what are generally called gimmicks are really the nub of the matter.

Mix: I understand that at your recent exhibition in Tokyo you had a very sophisticated soundtrack to accompany the video paintings?

Eno: Yes, I used a 24 track system. It was something I never heard until the day it started, because I couldn't simulate it. But it really solved a problem that I had been thinking about for a long time, which was how to correlate continually changing ambient music with a particular environment. Oddly enough, as I hadn't been able to hear it beforehand, the music sounded amazingly "constructed." Sometimes there would be a lull and a silence, and then everything would come in at once. Twenty-four different sounds would start at the same moment, just as though someone had intended them to. In fact, people who went to the show would not believe it had been made this way — they were convinced that it must have been a carefully constructed piece.

Mix: So it had the same balance of serendipity and control that we talked about before?

Eno: Yes, that's right. The control lay in the choice of sounds that I thought would work well together. In the show I used many different kinds of loudspeakers. There were some very big ones, and there were some tiny little ones high up in the building, and others under the floor. They formed stereo pairs along strange diagonals.

Mix: Did you go to Japan with most of your ideas fully worked out?

Eno: No! I nearly cancelled the show about four days before the opening, because I was so nervous about it. We ran into a very big problem when we got there, as we found that they hadn't finished building the gallery! I had never worked with that much equipment before, and I couldn't get anything put up. In any other country it would have been impossible to have held it together, but the Japanese people were so well organized that it all fell into place. I was in absolute terror for days, and it wasn't until about half an hour before the show opened that I felt happy with it. But as it turned out, I think it was the best thing I've done, both in video and ambient music. ■

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SYNTHESIZERS AND PRODUCING IN THE ELECTRONIC AGE

by George Petersen

It's 1985 and for better or worse, there's no denying that synthesizers have had a profound effect on the approach to producing contemporary music today. As an example, background string parts are now used as routinely as reverb and equalization on most songs, due mainly to the proliferation of polyphonic synthesizers with decent sounding string patches. It would be safe to assume that fewer productions today would incorporate such extravagances if this low-cost technology were not available and a real string section were required.

At the same time, the computerization and MIDification of electronic music have brought infinite possibilities for both creativity when used properly and banality when misused. We talked to a number of producers selected from our producer listings in this issue about how synthesizers affect their work and the art of producing in the electronic age.

ARTHUR WRIGHT



Southern California-based producer Arthur Wright is a man of many talents: composer, arranger, engineer, and artist. He also owns NSP Studios, a 24 track facility in Lynwood, California. His credits include working with Thelma Houston, Billy Preston, Paul de Souza, The Pips, Diana Ross, Jose Feliciano, Syreeta, the *Thank God It's Friday* soundtrack, and many other artists over the years. He is currently working on his solo album, which combines fusion and traditional jazz styles.

Mix: Have synthesizers changed your approach to producing?

Wright: Before, I used to write arrangements with different players in mind. In the past few months I've been able to go into the studio alone or with one other musician; it's quite easy to do a number

of different things with different textures and layering those textures works well. Sometimes I can do the whole thing myself—all the synthesizers, rhythms, drum machines, bass and guitar.

On the horizon in the near future is a complete computerized set-up; we have an Apple II and we're just getting some music software programs now. The approach is quite different—it's creating ideas while sitting at the console with the machines and me; rather than sitting down to map out everything, doing all the music, handing it to a copyist, and getting together with the artist to work out melodies. It's an easy way to produce from a musician's standpoint, and it's even easier now with all the MIDI interface stuff. There's nothing like actually playing the parts, but it seems like programming and sequencing are really taking over.

Mix: When you write, do you start from a synth or drum machine and build from that?

Wright: I write with a pen. I don't necessarily have to be around an instrument to



write, but I usually start with a guitar and work out the various parts on that—the bass patterns, then the chords, progressions, syncopations and so forth. Sometimes the bass drum is integral and is there from the start, but usually I work out the drums last.

DANIEL VAN PATTEN



While perhaps best known for his work and longtime association with the techno-pop band Berlin, Daniel Van Patten is an exacting producer who has worked extensively in studios in Britain as well as in the U.S., for artists such as Big Country, Violent Femmes, Madness, and former Berlin member Chris Velasco. Like several of the other producers we talked to, Dan also owns a studio, his be-

ing the 24 track Advanced Media Systems in Orange, California. His most recent project is working with The Cold, a popular New Orleans group.

Mix: How have synthesizers affected your work?

Van Patten: I do a lot of work using the Roland MC-4 Microcomposer, basically to get a complete track worked out at home before using the studio. Obviously you can't use synthesizers on every type of music, but I find myself using the Kurzweil 250 a lot lately, because it has the samples of traditional acoustic instruments. Now in preproduction I find myself thinking how I can use various synthesizers to build a basic track.

When I write a song, I start with the MC-4 for the basic chord progression and bass line. That allows me to play different melodies over the top while I find one I like. When I find one I like, I load that into the MC-4 and I have the complete structure of a song. In some ways the synthesizer has dictated the way I'll produce things, and that technology can demand that you do things in a certain way. You sometimes have to fight against that to keep a new and different approach happening.

In many ways, the synthesizer has taken me back around and given me a greater appreciation for hearing real instruments. Just recently we were mixing a session that came into my studio that the London Symphony had recorded for a choral group doing a Christmas project. The difference between hearing the strings on that project and synthesized strings was like night and day. There's just no way the synthesizer has gotten to the point where it sounds exactly like a given instrument.

One of the things I've tended to do in the past year is to get away from using

PHOTO: GREGORY RUHE

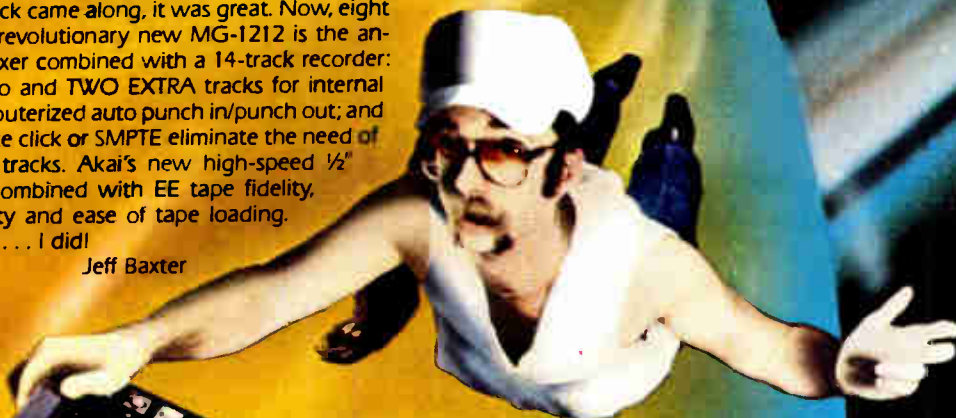


drum machines. I'll still use a drum machine to lay down a track for a drummer to play to, and sometimes I'll keep the bass drum from the drum machine, because that way it's perfectly locked in with the sequencer. There's no way you can make the cymbals sound correct on a drum machine, but music technology is constantly changing and in five years,

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it will probably be indistinguishable from real drums on a record.

Mix: What kinds of things do you see ahead in the future for music synthesis?
Van Patten: I think we're going into a distinct period of change right now. The approach to music is changing. In the future, there will be more people studying music *technology* rather than *musicianship*. There are a lot of kids growing up today whose parents have bought them computers, and I think we may be entering a really different era of music soon. This opens up the field of music to a lot of people who otherwise wouldn't have the dexterity to play an instrument, yet might be just as creative as the next person. We're in a new age of technology with digital recording taking off and new things happening in music technology every day.

PETER LINK

New York City based producer/composer Peter Link is one of a growing breed of artists who have welcomed synthesizer technology into their work. Besides being nominated for two Tony awards for his Broadway scores, he has also written and produced music for films, television, and record projects, including two cuts on *Beat Street*, industrial and commercial music for *House and Garden*, BMW, Clairol, Seagrams and others. At press time, he was busily

involved in remodeling his 16 track Westrax Recording Studio to accommodate his large array of synthesizers.

Mix: How have synthesizers affected your work?

Link: Tremendously. My output has probably tripled now because of synthesizers, but that's partially also due to the fact that I own my own studio; in fact in the next few days we are knocking out the back wall of the control room and moving it back eight feet, at an expense of about \$10,000, just to have more space for synthesizers and to leave them set up. What we were doing was taking one to two hours to set up for a session, and later take another hour to break down. Now we'll be able to walk in, throw a couple of switches, and start to record.

Mix: Have you also been using synthesizers for pre-production "sketching?"

Link: Sometimes I do, but I'm more into writing on synths now. The synthesizer has changed my whole approach to writing. I used to sit down at the piano or guitar and write a song, and then arrange it. Now I arrange the song first and by the time I finish that, the melody begins to grow and flourish.

In the next two months, we're going to tie the Apple II computer we have in the studio in with the synthesizers. There's some software for the (Yamaha)

DX7 with the Apple, where you can really see the parameters of your modifications. There's a lot of new software coming out which will probably make the DSX (Oberheim sequencer) obsolete, but I love the DSX. It's a great machine and I've not seen anything which can beat it—Oberheim keeps doing updates to keep it current, but I think the computers will beat it sooner or later.

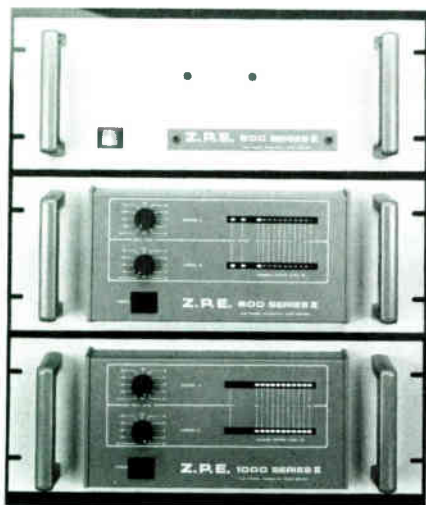
Mix: How have synthesizers affected production budgets?

Link: It's unbelievable. I am now producing master singles and it's costing me about \$150 per single, whereas the industry standard is about \$10,000. I own the studio, the synthesizers are there, and we work very heavily with the DSX. I usually only need to pay the background singers. Our output is higher, and our productions are better. Another thing is you can put a line down and go back and change it three days later. I have to admit that before, there were times when I felt "Well, the budget just won't let me do that."

ROBIN McBRIDE

Robin McBride has worked both sides of the desk, as a producer whose credits include the Ohio Players, Chuck Mangione, Buddy Miles, Chico Hamilton, Bohemia, and Heartsfield, as well as an A&R man who started with Columbia Records, later managed Folkways Rec-

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ords, and was A&R director for Mercury Records for a decade. He now offers independent production, artist management and music business consultation services from his Chicago office. His most recent project is working with Milwaukee artist David Ram.

Mix: Do you think that synthesizers have changed artists' approach to writing?

McBride: Sometimes, but I've noticed a counter-streak. I sense that a lot of writing today has a lot more melodic content than that of a few years ago. Also today there are many performers at the top of the charts who are not writing their own material, and ten years ago this was much more rare. Consequently there is a greater outlet for the pop music songwriter than there used to be. Songwriters creating material for performers used to be the exclusive province of country music and soul or R&B, but I see a resurgence of that.

Mix: So you think we're getting away from the mainly drum machine/sequenced synthesizer type of song?

McBride: I think so and I think the charts reflect that. If that was true and that was the easiest and best way to write a hit, then Huey Lewis would be sweeping up a diner now or something. We're in an era of pop songwriting again, and although I like to be a bit more radical, a bit more on the cutting edge, I also have a great love for things that reflect musical values, and I'm seeing a lot more of that.

Having been on both sides of the desk, as an A&R director for 15 years and as a full-time and part-time producer, I think a lot of the basic tenets still apply. There are many A&R guys that are guided by internal and external politics rather than the material and what an act has to offer. Generally there are more *accessible* A&R people than there used to be, but unfortunately I still see a lot of deals being made that truly aren't worth it, in the face of talent that is screaming for recognition.

THE FUTURE ROLE OF PRODUCERS

by Bruce Pilato

At the Fifth annual New Music Seminar, held last summer at the New York Hilton, many themes and ideas were bounced around in the 20-odd panel discussions that filled three solid days. But among the most talked about and hottest debated topics, was the role of record producers in the future and the ever-changing relationships between producers and their artists.

The seminar, attended by 4,000 music industry members, was considerably broader in scope than the previous new wave-oriented ones of the past. The music discussed this year was not limited to any particular category, other than "music for the future." That

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opened up attendance to people from all facets of the music business, including such mainstream artists and producers as Daryl Hall & John Oates, Peter Wolf, and Yes producer Trevor Horn.

It was pointed out at more than one panel discussion that the role of the

gineer anymore! I wanted a certain kind of input and ideas and ways to make things work, that went beyond the knowledge that I had of the board. I'm not going to read *Mix* magazine every month trying to keep up with it; I need someone to keep up with it.

RICHARD JAMES BURGESS

by Bruce C. Pilato

"Before I start any album, says Richard James Burgess leaning forward on the edge of his chair, "I sit down and write the objective of what I'm trying to achieve on that particular project. My objective with this record was to make something that was state-of-the-art, that didn't sound like it was state-of-the-art."

For Burgess, one of a new crop of hot, young British producers whose peers include Rupert Hine, Rusty Eagan and Trevor Horn, talking about *Richard James Burgess*, a six-

song EP released recently on Capitol Records, comes quite easily. He knew exactly what he wanted when he started the project over 18 months ago.

Like Hine, Burgess is a record producer who decided to become an artist. After years of making technopop records, both as a producer and as a member of the ahead-of-its-time electronic duo, Landscape, Burgess has made his own album, one that took him back to his roots musically ('60s American soul), but also kept him on pace with the ever-expanding state of studio technology.

Whether or not he sells rec-

—PAGE 83

"I think subjectivity is a good thing in an artist," Oates' partner, Daryl Hall told the audience. "That's why we started producing ourselves. I think there's little enough purity in music today and if an artist can create some through subjectivity, then that's a good thing."

Hall remarked that they had gone through several major producers in the business with marginal success until they took control themselves in 1980 with their *Voices* album, which yielded four hit singles.

"I've never had any success with someone who had a strong sense of style," said Hall. "I worked with Todd Rundgren and he's a perfect example of someone who has too much sense of style in his production and overshadows whatever he does. He's a great artist, but he's not a great producer."

In addition to Hall & Oates, this year's seminar hosted several other producers, who are recording artists themselves, among them, Nile Rodgers, Michael Jonzun, Richard James Burgess, George Clinton and Rupert Hine, who has been a recent mainstay on pop charts with his work with The Fixx, Howard Jones, Chris DeBuge, Tina Turner and others.

"As far as self-producing, I find it really difficult," said Hine, who has sandwiched a solo career between production gigs. "I've made nine albums between myself and a band I had in the '70s, and it's never been easy. When working with another artist, objectivity can come smoothly, if you know them well, but when you're producing yourself, you're sitting there trying to figure out how to get objective."

Richard James Burgess, whose production credits include Adam Ant, Wang Chung, and Spandau Ballet, says he needs his own career as an artist as an outlet for creative ideas he can't necessarily force upon the acts he produces.

"It's very complimentary to work as a producer and as an artist. There are two kinds of producers: the producers who make their own records and the producers who make records for an artist. When I make a record for an artist I try to bring the best out of the artist and make him something he is proud of. Obviously though, every good producer has a great deal of creativity, and needs an outlet for that. I find that outlet through my own records."

Michael Jonzun, currently high on the charts with Peter Wolf's *Lights Out* LP and a leading R&B artist himself, feels artists should produce themselves if they believe strongly in their own vision: "There's no fooling myself. I've had other producers produce my band and myself and they just didn't give me what I wanted to hear. I just feel I can do it better than anyone else. When I stop having hits then I'll stop producing myself."

producer in the record industry is once again on the rise. The self-produced artists of the late '60s and '70s have become rarer these days and we're now seeing the emergence of "the super producers," who include such notables as Quincy Jones, Phil Ramone, Trevor Horn, Arthur Baker and Nile Rodgers.

One reason for this trend is the fact that record companies are less likely to gamble these days. As the music business gets more sophisticated, it also becomes more calculated, and the self-indulgent, self-producing artist is increasingly seen as a potential risk so they are now often being replaced by studio whizzes with proven track records. In addition, rapid advancements in technology are requiring more qualified individuals behind the board.

"I've always wanted total control in the studio," Lou Reed told the seminar during the "artists" panel, "but the technology has moved so quickly that I couldn't keep up with it." Reed recently brought in recording engineer John Jansen to co-produce his *New Sensations* album. The result is Reed's first chart success since "Walk on the Wild Side" and one of his most critically popular records to date.

"What I wanted out of an engineer was more than most engineers were willing to give—and still get credit for just being an engineer. I talked to a lot of people before making the last record and they said, 'you're talking about co-production; you're not talking about an en-

"I'm in a hard position," Reed continued, "because I want someone to agree with me, but then again on the other hand, I want someone to point out if something is wrong without getting me upset!"

James Brown, unquestionably this year's most colorful celebrity (his address was interrupted when he stopped to perform the famous James Brown split), said that he, like Reed, has decided to turn over the reigns to someone more qualified, in attempt to make records more likely to compete in today's market.

"I used to produce a lot of records for myself," he said "and thank God I was successful. But the greatest thrill of my life was watching somebody else produce James Brown. You just have to cooperate and thank God you've got somebody who loves you. And with unity, it all comes through."

Other artists, however, disagreed. The role of the producer and the artist eventually boiled down to a discussion of objectivity vs. subjectivity, with no clear winner emerging.

"I understand what James Brown and Lou Reed have said," noted John Oates, "and their points are very valid. But for us, though, working with Daryl—he's producing me and I'm sort of producing him. We found that rather than look for the objective view of an outsider, we go for the subjectivity of having someone so close to what it is that we believe in, that we get more pure and coherent vision. For us, it's turned our whole careers around."

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Both artists and producers alike agreed that it is imperative for each to understand the other and their intentions. Strong personal relationships are needed just as much as strong working relationships. Quincy Jones and Michael Jackson, Phil Ramone and Billy Joel, and George Martin and The Beatles were among the examples discussed.

"Peter [Wolf] and I were working together and I got to know him real well," said Jonzun. "I like working on a personal relationship with the artist, therefore, I can feel more involved, myself. The more I know a person, the better I can work for him."

"I think it's essential to get to know the person well and feel like friends," said Rupert Hine, "otherwise, you're just putting a professional hat on."

Both Hine and Connie Plank, a West German producer who is best known for his work with Ultravox, said that a personal commitment by the producer to bring out the best in the artist must be made initially, or else the project will most likely be a failure. "First," said Plank, "I ask myself if I understand the intention of the artist, then I try to design a method of reaching that."

By the end of the seminar it was pretty much agreed by most that the trend of using established independent producers was going to be the wave of the future, because if for no other reason, that's the way record companies want it. And they, of course, control the purse strings. Gary Gersh, an A&R executive for EMI-America Records, confirmed that, however, he made it clear that the majors have no desire to contrive groupings. He claims they only want what's best for everyone involved.

"Finding a producer is a division of what A&R men do," he said. "It's with the help of those guys and with the help of the record company in putting a team together, that makes it happen. That's the only way it's going to happen. For artists, producers, record companies and everybody to be putting themselves at odds with each other is a major mistake. The only way we're all going to be successful is for us all to work together."

The role of producers in the industry has nearly reached a level where their names can often make or break a record's initial reception. Radio programmers even admitted they often go by producer's credits when deciding whether or not to check out a new record.

"There's probably the same amount of interest from the public in producers as there is for films and their directors," remarked Hine. "People attracted to a film want to know who's directing it. They must have an interest in film, but if they find out their favorite director directed it, they might go see it. Maybe that's the parallel now." ■



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—FROM PAGE 78, BURGESS

ords as an artist himself remains to be seen, yet Burgess feels certain he has achieved what he had set out to do. The EP, with its well crafted, R&B oriented pop songs, stands out not for its crystal clear production and use of electronics but, rather, for its warmth and humanistic feel — something that has become more of a rarity these days with each 12" dance mix that is released.

"I must admit," Burgess says apologetically, "I had been guilty in the past of being so infatuated with technology that technology took over. Sometimes that's not a bad thing — sometimes it's interesting to explore technology to its limits and certainly that taught me a lot — and although I try to use the latest stuff, you can't use it just for the sake of using it."

After five years of producing records by such artists as Adam Ant, Spandau Ballet, Nina Hagen, America and the now-popular R&B act, New Edition, the 35 year old Burgess felt he had musical ideas that needed to be released. Unlike many other producers, Burgess didn't want to channel his artistic visions through the record production of other musicians.

"Being an artist myself is quite useful in the sense that I don't have to impose my own will on another artist. You can carry a big stick, but that gets dangerous. When I'm working as a producer I try to be as transparent as possible. I try to act as a translator; an interpreter. I don't want it to be my record when I'm producing someone else's."

Burgess has been a studio-holic since the late '60s, working on both sides of the glass. While attending the Guildhall School of Music and Drama in London, he formed one of the earliest avant-garde electronic groups, Accord. He continued his education in New Zealand and then, eventually, at the Berklee School of Music in Boston, where he won the GLAA Young Jazz Musicians Award.

Soon after, he paired up with another young musician named John Walters and the two formed Landscape in the late 1970s. Much in the vein of Kraftwerk, Landscape signed with RCA and in Europe only had scored two international hits, "Einstein A Go Go" (a dance opus warning of the potential dangers of nuclear war) and "Norman Bates."

Although not a commercial breakthrough, Landscape did open the doors that groups like Thompson Twins and Eurythmics have since walked through. In retrospect, their sound and videos have been judged years ahead of their time, though there is an irony that Burgess hasn't escaped.

"Five years ago, if you made

an electronic album people thought you were weird. Now, if you don't put electronics on a record, people don't think it sounds modern enough!

While in Landscape, around the turn of this decade, Burgess became engulfed in studio work. Formally trained in drums and percussion, he did the lion's share of session work for many of the European disco hits and drummed for Trevor Horn's Buggles and Kate Bush.

It was also during this time that Burgess began working with technician Dave Simmons on what would become the first step in the future of percussion, The Simmons SDS electronic drumkit. Burgess worked with Simmons for over two years developing the instrument whose name has since become synonymous with electronic drums. Along with developing the drums themselves, it was Burgess who brought them, as well as the Linn-Drum Machine, to the forefront on the European and American studio scene. It was a movement he has since chosen to move away from for his debut solo record.

"You see, I've been working with electronic drums for 4 or 5 years and I've reached the point where I'm not so fascinated by that cleanliness anymore. So when I came to New York to start this record, the first thing I decided was that I was going to use real drums. That was something that I wanted to do. I decided to record the drums with a good deal of ambience; I thought that was more the character of that old drum sound.

Though Burgess has made a conscious attempt at making a "warmer" album than most of those coming out of the techno-pop league, he hasn't turned against using the newer technology. Much of the sounds on the record were made with Fairlights and similar sound sampling keyboards and acoustic drum tracks were subtly supplemented with electronic tracks.

Richard James Burgess is also a record that makes no bones about being a commercial effort. Although Burgess initially turned in a full album of ten "singles," Capitol cut it to an EP to keep the price down. What remains are six carefully constructed songs geared expressly to land on a DJ's turntable.

"That's something that comes from being a producer," Burgess remarks with a slight laugh. "At the end of the day, no matter how great you produce, if you don't produce at least two hits, you tend to go down as the one who didn't do a very good job, even though you've made this beautiful album. And sometimes, that's a shame." ■

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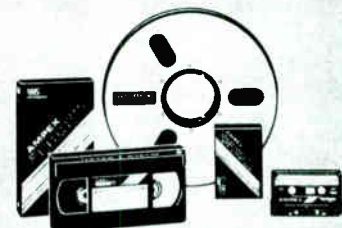
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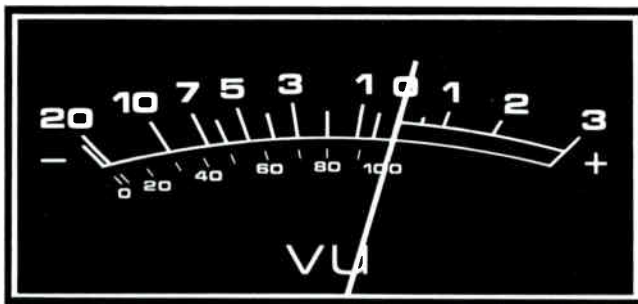
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Credits: Ricky Skaggs, Dolly Parton, Neil Young, John Hartford, New Grass Revival, Osborne Bros., John Starling, Shel Silverstein, Tracy Nelson, Natalie Cole, Sam Bush, Bela Fleck, Jerry Douglas, Telluride Festivals (2), Norman Blake.

Services Offered: Studio recording and mixing, (analog and digital), location recording for records, film and video System design & construction, over 16 years experience in all phases of studio work including design, construction, management, engineering and mixing. Based in Nashville, TN since 1975

GREGORY ALPER

Engineer & Producer
ALPER TRACK
77 Warren St., NYC, NY 10007
(212) 349-8095

Credits: Produced, arranged, composed, performed: Greg Alper Band/Aleph (Billboard Pic), Atlanta:Wave, J. Beck-Global, Lovelace-Lovelace, Chesno Strater-NewLeaf, InHeat-NewLeaf, Healing Gems-Gem, Movie, Video Soundtracks, Commercials

Services Offered: Producing, arranging, composing in all styles dance, rock, pop, jazz Sizzling saxophone solos (a la Jr. Walker, Mike Brecker). 8 track studios soon to go 24 large room, soundcraft 24 channel board, seq. circuits, Oberheim, Baldwin, Lexicon, dbx, UREI, EV, AKG, digital drums, digital mixdown, cucaracha

FRANK ARN

Engineer & Producer
BANTAM SOUND SERVICES
1492B½ Moor Park, Sherman Oaks, CA 91403
(818) 907-5181

Credits: Tours with Rare Earth Band, George Benson, Tommy Bolin, Keith Carradine, Parliament/Funkadelic and more. Gold record "In Flight" with George Benson, platinum record "Night Moves" with Bob Seger. Prior education includes A.A. in Electrical Engineering, Certificate in Recording Engineering from University of Sound Arts.

Services Offered: I am available for full service production for new bands, including buying or renting complete pro P.A. systems, stage production, discounts on instruments, booking/ engineering recording dates in various major L.A. studios. I am currently working with bands in the Midwest area and can connect bands with the best in Midwest agents for tours. Sending band promos and tapes are a must. I can help get you out of the top 40 circuit and into the studio. Also available for consultations, live showcases in San Francisco or L.A. area, independent recording engineering and live sound engineering, and live sound engineering for major tours

CLIFF AYERS

Producer
CLIFF AYERS PRODUCTIONS
62 Music Sq. W., P.O. Box 17126, Nashville, TN 37203
(615) 327-4538; 361-7902

Credits: Started producing records for his own label Emerald Records in New York in 1951. Through the years he has had productions released on Decca, Columbia, MGM, Discover, MCA and many other labels. Presently owns American Sound Records and produces some 20 artists.

Services Offered: Recording and video productions under American Sound Records and Emerald Records owned by Ayers Music Town Distributors & Promotions Co. distributes independent

Following is a list of independent producers and engineers who responded to our recent survey. The information was supplied by those listed, and thus Mix is not responsible for its accuracy. We urge other independent producers and engineers to get in touch with us in order to be included on our next update.

labels and The Music City Entertainer Newspaper in its 13th year of publication. It promotes artists and has its own record charts called "HotPops." Cliff Ayers Productions also leases masters for its Emerald Record label.

JOHN BACCIGALUPPI

Engineer & Producer
ENHARMONIK PRODUCTIONS
1660 12th Ave., Sacramento, CA 95818
(916) 447-8257 or (916) 446-3088

Credits: Winterhawk, Mojo, The Clique, The Numonx, Rhythm School, The Convertibles, Fareditch, Bumps Blackwell, KROI FM, KENZ AM, KSAC FM, KAOS FM live recording and reinforcement; Mose Allison, Nat Adderly, and Linda Waterfall Sound reinforcement Systems Engineer, Club Minimal, Dream Syndicate, Laaz Rockit, Dead Kennedys, Bangles, Agent Orange, Toy Dolls, Circle Jerks, Game Theory, and True West

Services Offered: Record and demo engineering/ production Preferential rates at a George Augspurger/John Edwards designed 24 track MCI and Quad-Eight studio. Lexicon digital reverb and delay. Wide mike selection including vintage tube mikes. Own computer controlled digital synthesis equipment. Computer and synthesizer programming and performance. Digital mixdown available. Direction towards new music and rock'n'roll. Have done jazz and classical. Friendly, personable and easy to work with. Solid musical background, technical experience, and ears to go with it. Reasonable rates, and I am willing to work on spec if the project is right. Willing to travel. Resume, references and portfolio on request.

JOHN B. BAKER, JR.

Engineer & Producer
BPR PRODUCTIONS
Old Village Road, Shelburne Falls, MA 01370
(413) 625-6164

Credits: We have done radio and television jingles throughout New England for a number of advertising agencies, banks, oil companies and the United States government

Services Offered: We will develop radio jingles from beginning to end, working in conjunction with the client with our expert staff until the job is complete. We also offer young musicians an opportunity to make a state of the art demo recording and studio experience for a very reasonable price.

WILLIAM C. BERENDS

Engineer & Producer
VOYAGER ONE PRODUCTIONS
P.O. Box 1259, Browns Mills, NJ 08015
(609) 893-5132

Credits: Blackfoot, Ted Nugent, Chuck Berry, Cheech & Chong, The National Lampoon Show, Jack Bruce, David Johansen, Robert Gordon, Spider, The Stranglers, The Cramps, The Dead Boys, Crack the Sky, John Cale, John Mayall, Budgie, Challowack, Roy Buchanan, Baby Grand, Iron Butterfly, Lenny White, Voyager One, and many others

Services Offered: Concert & studio engineering (10 years exp.), 4 track demo production & remote recording, production assistance — writing & arranging, very good with effects & synthesizers. Studied analog & digital synthesis at Princeton University. Extensive musical background—guitar, bass, keyboards, vocals (18 years exp.) Available as musical or audio consultant. No project is too big or too small, give me a call. Further information available upon request.

GLENN E. BERKOVITZ

Engineer
11929 Windward Ave., Los Angeles, CA 90066
(213) 313-2776

Credits: Television/film credits include "Max Maven" (Universal), "Choices" (PBS), "Rituals" (Metromedia), "Eat It" by "Weird Al" Yankovic, "Automatic Man" by Michael Sembello, and many, many others. Music credits include Cris Williamson, Michael Sembello, Emulator Corporation, Body Music, and more.

Services Offered: Specializing in audio — production and post-production — for film and television, I bring to my work a thorough knowledge of all systems in use today. As a post-production mixer (sweetener), I have made a point of learning and developing methods to combine different formats — multitrack, video, film, mag film, etcetera, along with various SMPTE and sync signals. The result is a more versatile and flexible attitude, and set of abilities, to achieve the best end product available for your project, large or small. Production audio services are also available.

JOHN BERRY

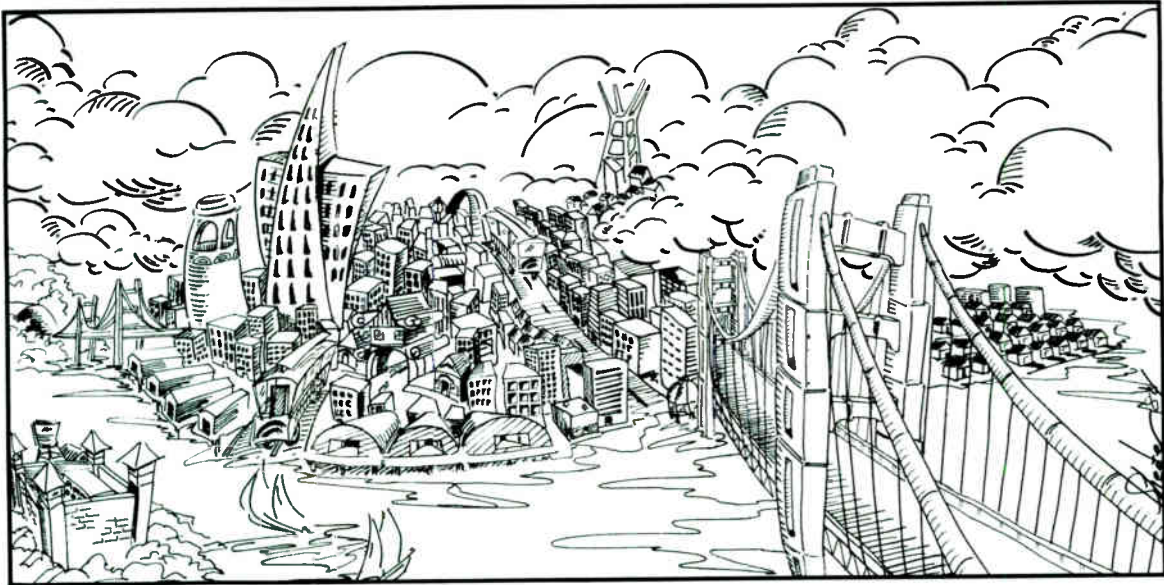
Engineer & Producer
JOHN BERRY, COMPOSER/ARRANGER/PRODUCER
4540 S. Rural Rd. (FB), Tempe, AZ 85282
(602) 839-5898

Credits: Composer/arranger of 100 nationally published works for jazz ensemble, orchestrator/producer/writer of musicals, producer of jazz ensemble albums, creator/producer of numerous jingles

Services Offered: Specialist in creating synthesized musical product of almost any nature: jingles, film music, sound effects, demos (from vocal single to fully orchestrated musicals). Private production studio allows maximum quality and complete cost effectiveness.

—LISTING CONTINUED ON PAGE 86

Where the hell is San Francisco?



(15 minutes south of TresVirgos)

All work and no play makes dull records!

There's no more playful place to record than San Francisco,
and no easier studio to play in than TresVirgos.

Easy because our revolutionary Chips Davis LEDE Design control room
takes the guesswork out of recording.

For the hours between sessions our out-of-town guests like the clean air,
the City, the Coastline and the accommodations we arrange to make your
playtime playtime.

Find out for yourself why so many clients who've come here last
wish they'd come here first.

Ask anyone who's played here.

We're in it for the music.

TresVirgos
Studios 

(415) 456-7666 San Rafael, California 94901

Circle #060 on Reader Service Card





JOHN BERRY
Tempe, AZ

ED BIERLING

Engineer & Producer
DER HEAD PRODUCTIONS
3820 136th Ave., Hamilton, MI 49419
(616) 751-5340

Credits: Top ten graduate of Recording Workshop Collective Chic, Engineer; producer/staker, Holland MI F.I.D.I. Engineer for WIC 1260 AM, Holland, MI. Worked for Blue Suede Showstar Bar, Stage crew for Yes show Ft. Wyonung, Grand Rapids MI.

Services Offered: Will use any of skills indicated above anytime anywhere 'til

MICHAEL BISHOP

Engineer & Producer
BRIANNA RAE PRODUCTIONS
13678 Butternut Rd., Burton, OH 44021
(216) 834-1350

Credits: Engineered (records) Fleetwood Mac "Live" Highway Cruise, Chicago Symphony, Cincinnati Pops Orchestra, Cleveland Orchestra, Peter Onu, Michael Stanley, O.Jays, D.Wo, Kazu Matsui, Robben Ford, Wild Cherry, James Gang, Axx Bevan (Jinxies), United Van Lines, Seaworld, Republic Steel, Milwaukee Brewers, Cypress Gardens, (produced) Wendy Warren, Nonames Biz, ros, Unit 5, Pat Bailey

Services Offered: Recording engineer, producer, mixer, disk mastering engineer and photographer offering services in all phases of studio recording digital and analog including audio for video, film, a-v, records and demos. Over 15 years of professional experience means alot less headaches and lower costs for the client.

RON BLACKWOOD

Engineer & Producer
BLACKWOOD MUSIC GROUP
Box 17272, Memphis, TN 38187-0272
(901) 365-6900

Credits: Produced, coproduced or associated with Willie Nelson, Jerry Wallace, the Blackwood Singers and Al Green.

Services Offered: Full scale record production, national radio promotion, music publishing.

CARSTEN BOHN

Producer
LINGO MUSIC
314 W. 53rd St., New York, NY 10019
(212) 582-8800

Credits: C.B.s BANDSTAND: LPs - Humor, Humor/Wintercord, "Mother Goose Shoes" Inter-cord, C.B. Radio/Inter-cord, C.B. and DJ Hollywood, 12 inch "I feel great"/Polygram US plus several productions for children/Adventure records (ca. 35 albums).

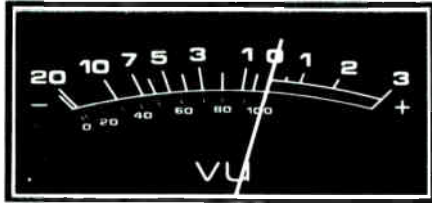
Services Offered: Every aspect from the original idea to the final master in deal composition, arrangement, performance, production, and publishing. I'm a musician at heart, playing drums and keyboards, and I sing too.

TERRY R. BOWER

Engineer & Producer
MOMBOW PRODUCTIONS (Div. of San Andreas Sound)
Studio 4, 1810 Cliff Dr., Santa Barbara, CA 93109
(805) 962-8621

Credits: "Linda" Littlepage, Norman Allan Bank, Dick Peters, Iron Curtain, ICR 3 ICH 6, Hitbound 101, JK-Energy, Don Lance, Am bush, Holywood, Fats Blue, Band, Famous People, Paul Hefu

INDEPENDENTS



Neal Holt, Molly Day, The Rave, Fourplay, The Shiras, Giant Eden, Swain, Hurricane Deck, Double Entente, Randy Cobb, Lee Ritenour, and others.

Services Offered: Ears, eyes, nose, throat & brains. The experience of 20 years combined with the mad genius of youth. The ability to translate all types of music into vinyl reality. An up and coming engineer/producer to "lose touch" with today's musicians while maintaining a solid foundation in the past.

JIM BOYER

Engineer & Producer
JAMES BOYER COMPANY
P.O. Box 303, South Salem, NY 10590
(212) 873-6375

Credits: Producer, Rupert Holmes, Peter Cetera (CBS), multi-artists, Sophie Sato, Daks, Engineers: Billy Joel, Chicago, George Benson, Heatwave, Kenny Loggins, Linda Ronstadt, Paul Simon, Karen Carpenter, Phoebe Snow, Roland Vazquez. Feature films: "Places of the Heart," "Arthur," "Silkwood," "Yentl," "Easy Money." Have also recorded and engineered music for multiple television and video shows.

PAUL BRANNOCK

Engineer & Producer
38725 Lexington #353, Fremont, CA 94536
(415) 797-9626

Credits: 10 years experience. Owned and operated pro quality studios. Various radio spots, demo tapes for local bands, instructional tapes.

Services Offered: Instructional audio tapes for industrial applications. Radio spots. Location recordings, 2 or 4 channel live performances and/or rehearsals. Also independent engineer & producer specializing in low budget demo tapes. Access to video production facility.

JAMIE BRIDGES

Engineer
240 Mariposa, Briarbane (S.F. area), CA 94005
(415) 468-1622

Credits: Country Joe McDonald, Wm. Howard III, Rhythm Riot, Lelwane, Back Alive, Jimmy McCrackin, Edwin Hawkins, Midway Inner City, Assisted Journey, Huey Lewis and the News, Tom Celer, Marty Bain, Sammy Hagar, Sonny Rollins, Steve Douglas, Pete Escovedo, S.V.I. Mutants, Tony Rice, Kate Wolf, Roy Thomas Baker, Andy Johns and Dr. Richie Moore.

Services Offered: I can engineer and help you produce without getting in the way of your music or work with your producer. Also I work at most of the San Francisco Bay Area studios, so give me a call and I can help you pick the studio or studios best suited for your music and budget.

MICHAEL BROVSKY

Producer
FREE FLOW PRODUCTIONS
1209 Baylor, Austin, TX 78703
(512) 474-6926

Credits: Christopher Cross, Carole King, Firefall, Jerry Jeff Walker, Joe Ely, Guy Clark.

Services Offered: Full development and production and production services for records, film and video.

PHIL BROWN

Engineer
548 N. Michigan Ave. #2, Pasadena, CA 91106
(818) 440-0553

Credits: I have engineered for such people as Hiroshima, Al McKay, Ernie Watts, The Motor City Crew, Pete Robinson, Harvey Mason, Catch Rick Dees, various commercials and TV specials, and dozens of unknown stars.

Services Offered: I offer all services needed in recording and mixing records and commercials. I'm familiar with electronic editing for digital mixes. I'm also familiar with analog and some digital synthesizer programming. My rates are reasonable, so give me a call.

RANDY D. BRYANT

Engineer & Producer
BRANDY/SWANN PRODUCTIONS
4005 Brookhaze Club Dr., Suite 113, Dallas, TX 75234
(214) 620-8685

Credits: Have recorded and/or mixed: 4:00, 5:00, 6:00, 7:00, 8:00 jazz lab bands - North Texas State University, Chris Buzzelli Quartet, Vicki Lynn and The Country Gentlemen, Brittany.

Services Offered: Willing to work with solo and/or group acts all the way through to the final product. Willing to consult in any style of project, big or small. Can put together written estimate of total recording package. Can get price breaks in certain areas of recording project. Have ears, will travel.

BILL BURCH

Engineer & Producer
BILL BURCH PRODUCTION SERVICES
777 Marion Ave., Palo Alto, CA 94303
(415) 323-1633

Credits: Music production and soundtrack design for corporate/industrial clients such as Apple Computer, Hewlett-Packard, ROLM Corp., PG & E, Pacific Bell, Syntex, Ultratech Stepper, and United Way. Former music coordinator for the NBC-TV series "Fame."

Services Offered: My experience in professional music production and sound design both in the Bay Area and Los Angeles enables me to offer a comprehensive production service to the corporate client. Utilizing my own complete multi-track facility, I am able to compose and produce original music, audition talent, produce narrations, and search for and edit library music for video, A/V, and commercial productions. I feel I understand the needs of the corporate client and have been successful in providing my services in a prompt, professional manner.

DAVID 'db' BUTLER

Engineer & Producer
O.T.L. PRODUCTIONS
121 Concord Rd., Sudbury, MA 01776
(617) 897-8459 (24 hours)

Credits: Engineering: Maurice Starr, "Blazing Starr," RCA; Michael Jonzun, "The Jonzun Crew," Boston, "Boston II," Epic; Chip Harding, "Where Is the Woman," RSO. Produced and engineered: The Blend, "The Blend," MCA; Ictus, "Future Wind." Singles from Midtime Traveler, Someone and the Somebodies, Limbo Race and Tragus.

Services Offered: All production from arranging and contracting to pressing and dubbing. Specialist in heavy dance mix, fusion jazz and heavy metal rock. All progressive pop and rock considered. New York sounds at New England prices.

PETER M. CARLSON

Engineer & Producer
HAVE EARS WILL TRAVEL
407 El Salto, Capitola, CA 95010
(408) 475-1232

Credits: Manfred Mann's Budapest Live Album, Lacy J. Dalton, Bob Brozman, Patrick Simmons, etc.

Services Offered: Production engineering, live sound, audio consulting, etc.

LOU CARTO

Engineer & Producer
RMS RECORDING STUDIOS
4620 W. Blue Diamond Rd., Las Vegas, NV 89118
(702) 361-1559

Credits: Paul Anka, Dionne Warwick, Shirley McCane, Tony Orlando etc. plus artists under Atlantic and CBS records.

Services Offered: Full 24 track and 16 track recording studios. Composing, arranging and producing. For more information please call or write.

BILL CASHMAN

Engineer & Producer
ART ATTACK RECORDS, INC.
P.O. Box 31475, Fort Lowell Station, Tucson, AZ 85751
(602) 881-1212

Credits: Produced and Engineered over 30 albums including Street Pajama's second album "No Gold in Jersey" on Art Attack Records. The Saddle City Band LP "Bareback" released in 1983 on Carte Blanche Records. Compilation albums of Arizona groups for radio stations KRFM in 1980 and KLPX in 1982. Produced the single "Screwed Again" by Street Pajama as well as their first album "I Get Peculiar".

Services Offered: We offer complete production services from product conception to the retail marketplace. Services include musical arrangements, studio scheduling, finding and controlling the right studio musicians for each particular project, budget control, creative engineering, record pressing and cassette duplication, and record production. We operate our own in-house publishing company and have good relations with several other publishers to provide the artist with material if needed. We also have our own independently distributed record label to distribute finished product and will consider joint ventures with the artist in marketing product through our distribution network.

FRED CATERO
 Engineer & Producer
FRED CATERO PRODUCTIONS
 1301 Chestnut St., San Carlos, CA 94070
 (415) 592-2072

Credits: Santana, Striesand, H. Hancock, J. Joplin, Brubeck, Simon & Garfunkel, Chicago, L. Ronstadt, The Tubes, Tower of Power, Blood Sweat & Tears, Richie Cole, Pointer Sisters, L. Nyro, Sly Stone, A. Franklin, Bob Dylan, Count Base Band, Peter Paul & Mary, Edwin Hawkins Singers, Beautiful Day; dozens more
 Services Offered: Freelance engineering and co-production. Rate \$50 per hour for engineering/production rate negotiable

JOE CHICCARELLI
 Engineer & Producer
 1835 Sunset Plaza Dr., Hollywood, CA 90069
 (213) 654-2064

Credits: Frank Zappa, Poco, Oingo Boingo, Van Stephenson, Romeo Void, The Bangles, Ray Manzarek, Red Rider, George Thorogood, Glenn Frey, Juice Newton, Lone Justice, Stan Ridgeway, Hugh Cornwell and Robert Williams.

PAUL CHITEN
 Producer
HOT SPOONS PRODUCTIONS
 1226 Harper Ave. #4, Los Angeles, CA 90046
 (213) 656-3775

Credits: Records for Arista, CBS, Warner Brothers, MCA, Motown
 MTV videos: "Drum Fantasy," Man on the Street. Music for film: "Witness," LA Olympics special. Focus of a national TV special — "Makin Music," which won an emmy award.
 Services Offered: Producing, arranging, mondo keyboards

NOLAN C. CHURCH, JR.
 Producer
CATHEDRAL SOUND PRODUCTIONS
 7569 Murray Hill Rd., #222, Columbia, MD 21046
 (301) 953-0198

Credits: Soundtrack to "Wheelchair Workout" an exercise program for disabled persons.
 Services Offered: Music composition, talent, recording, production under one roof. Quick turnaround for AV (industrial, educational, etc.) productions.

ALEX CIMA
 Engineer & Producer
 P.O. Box 1594, Hollywood, CA 90078-1594
 (714) 680-4959

Credits: Some labels GNP Crescendo, Polydor International/Deutsche Grammophon Chromosome All TV networks, Select TV, films, trailers, radio/TV commercials and special projects for major entertainment companies
 Services Offered: Audio recording production, analog and digital music synthesis, project troubleshooting, instruction original and library music

MICHEL CLEMENT
 Engineer
CELECTRONICS
 4251 S. Higuera St. #701, San Luis Obispo, CA 93401
 (805) 544-6505

Credits: 15 years experience in the maintenance design and manufacture of professional sound equipment Designer and manufacturer of Tanner Series mixing consoles and interface equipment used by Up With People
 Services Offered: Maintenance design, consultation on design, and wiring of studios and sound reinforcement systems. Manufacture of custom interface equipment and mixing consoles

MICHAEL COLLINS
 Engineer & Producer
DMC SOUND & RECORDING
 12504 Killian Lane, Bowie, MD 20715
 (301) 262-3295

Credits: Mission's "The River Session" EP, Mission's "The Last Detail" LP, Majesty's "Mystical Teaser" EP, demo tapes for The New Standard, Crocstine Majesty, The Defectors, Genesis Divinity Southbound Express, Hawkins & Holsten, Fat Fingers and 1066
 Services Offered: Freelance engineering and production, live sound reinforcement, radio and off camera TV commercial production. Sound reinforcement consultation. Demo tape available upon request

JOHN CUNIBERTI
 Engineer & Producer
JOHNNY DUB
 c/o Hyde St. Studios, San Francisco, CA 94102
 (415) 547-5749

Credits: Rock Chrome, Doug Clifford, Dead Kennedys, Flipper, Klaus, June Millington, The Orlis, Red 7, Squares, SVT, Two Tones, Tronic Mulatto, Reggae Whispering Lion, Tony Chin, Max Edwards, Isa Wah, I World Jack Miller, Soul Syndicate, Titans, Earl Zero Live sound Crystal Gayle, Greg Kihn, Eddy Money, John Stewart Squares, Stevie Wonder, Full Moon Tan
 Services Offered: Multitrack studio or location recording, live sound engineering, available to instruct small classes in studio engineering or live sound technique, am willing to produce record project if the feelings are right, able to design and install sound systems for night clubs and home studios

DAVID DACHINGER
 Engineer
RECORDING & SOUND SERVICES
 200 W 15th St., New York, NY 10011
 (212) 807-7946

Credits: Mume, Third World Arnold Schwarzenegger Total Body Workout, Robin Clark Sarah Dash Alphonso Fubero, Canon Cameras, WPLJ FM, Alejandro Lerner
 Services Offered: Recording and mixing of L.P.'s, 12" singles, film music and video sweetening

MIKE DANIEL
 Engineer & Producer
MIKE DANIEL PRODUCTIONS
 100 Eldorado Ct., Hendersonville, TN 37075
 (615) 822-3451

Credits: Mar Davis, Jamie Fricke, Bandanna, The Wright Brothers, Tammy Wynette, George Jones, Conway Twitty, Kathy Twitty, Joni Twitty, Mike Twitty, Carter Family, Dobie Gray, Ronan, Prophet, Bill Haley, Merilee Rush, Wayne Massey
 Services Offered: Full production publishing engineering and studio services. Staff rhythm section singers engineers and production team. Specializing in custom sessions upgraded to majors. Very high placement rate, MANY HITS! For further information contact Mike Daniel 615 822 4451 or Asst. Benny Knight 615 824 8453 for publishing co. write to The Harp Publishing, P.O. Box 2285 Hendersonville, TN 37077 2285

OLIVER DICICCO
 Producer
MOBIUS MUSIC RECORDING
 —LISTING CONTINUED ON NEXT PAGE

FOUR 300-WATT MOSFET AMPLIFIERS @ 4 OHMS, IN 3 RACK SPACES—\$947.

The PCR800X2 utilizes two completely independent power supplies, dual power transformers, 2-speed cooling fans, and even dual A.C. power switches.

This newest model to incorporate our highly advanced Phase-Control-Regulation® technology, the PCR800X2 actually consists of two PCR800s and a PC-X2 front panel. The 19" rack mount panel converts the combination into a single stereo amplifier, when used with any Soundcraftsmen DX Series Preamp, or with any source plus our AB-1 Stereo Bridging Adapter.*

Used as FOUR—300 WATT BASIC AMPS, it is ideal for many other audio uses, such as bi-amping, multi-channel systems, etc.

Each channel, when operating in bridged mono mode, produces 555 watts at 8 ohms with no more than .05% distortion from 20Hz to 20KHz, and employs the latest in Power MOSFET output circuitry.

CURRENT-LIMITING IS COMPLETELY ELIMINATED in the design. Total weight is under 40 lbs. for the complete 555-watt per channel stereo amplifier.

The PC-X2 Front Panel is supplied separately. It requires only the 8 front panel mounting bolts to be removed and reinstalled through the PC-X2 mounting holes.

*A Stereo Bridging Adapter, Soundcraftsmen Model AB-1, is available at \$89.00.



PCR 800 @ \$449. + PCR 800 @ \$449. + PC-X2 @ \$49. =



= 555 WATTS PER CHANNEL STEREO! PCR 800X2—\$947.00*



2200 So. Ritchey, Santa Ana, California 92705, U.S.A./Telephone (714) 556-6191/U.S. Telex/TWX 910-595-2524 • International Telex: 910-595-2524/Answer-back Code SNDCRFTSMN SNA

GT-4 NOISE GATE

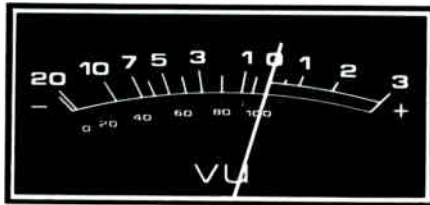
Low price and high performance is an unbeatable combination. At \$425.00, the GT-4 is one of the lowest priced, per channel, gates available. Discover what thousands already know. The GT-4 works better than any gate at any price.

For complete details, call or write:



Preston Wakeland
OMNI CRAFT, INC.
Rt 4 Box 40/Lockport IL 60441
(815) 838-1285

INDEPENDENTS



—FROM PAGE 87

1583 Sanchez, San Francisco, CA 94131
(415) 285-7888

Credits: Andy Narell, Zasu Pitts Mem. Orch., Mike Marshall, Darol Anger, Windham Hill Records, Henry Kaiser, Fred Frith, Esmerelda, Eno, Dead Kennedys, Ron Thompson, Steve Seskin, Cornelius Bumpus.

Services Offered: With ten years experience working out of our own 24 track studio, we offer a full range of services, including musician contracting, production, arranging and engineering. We have access to the best studio musicians in the area. Our goal is to bring out the best in your music.

RICHARD DONALDSON

Engineer & Producer
WESTLAKE AUDIO

1545 N. Bronson Ave., Suite 319, Hollywood, CA 90028
(213) 466-4852

Credits: Major artist experience from initial recording through mastering. Very attractive rates packages with one of the world's finest studios. Extensive contacts for projects shopping. Serious inquires only.

CRAIG DORY

Engineer & Producer

443 River Road, Fair Haven, NJ 07701
(201) 747-5784

Credits: Engineering and/or production for: Richard Nanes, The Cathedral Concert Orchestra, Andrew Carl Wilk, Brad Kemach, The Metropolitan Chamber Orchestra, The New Brunswick Chamber Orchestra, Delores Bruch, Gilman Collier, The New Jersey State Orchestra, Westminster Choir College, George Walker, Edward Tatnall Canby, The New Jersey Youth Symphony, et al.

Services Offered: Specializing in "punch," on-location recording of serious (chamber and orchestral) music and jazz, we offer the full spectrum of recording/production services for commercial-release, archival or broadcast endeavors from preproduction consultation and A&R to mastering, editing and assembly through contracting for artwork, tape duplication, LP-record pressing or CD production. Our master recordings feature minimalist, true-stereo mixing techniques through custom, all-discrete electronics direct to CPDM or PCM digital.

DUKE DUCZER

Engineer & Producer

AL JOLSON ENTERPRISES, INC.

31 Music Square West, Nashville, TN 37203
(615) 242-1580

Credits: The finest 8 track facility in town — honest! \$25.00 per hour. Also featuring real time and high speed duplication using Otari and Denon cassette machines.

Services Offered: 8 track recording facility featuring an 8 track Otari MX 50-50; one Studer B-67, and one Studer A-80 quarter inch 2 track or half inch 4 track, and one Nagra IV. Machines are fed from a British split-console design 16 in. 8 out board. Out-board gear includes: limiter/compressor/gate/ducker and expander by Symetrix, and a Lexicon 200 Digital Reverberator, Yamaha Analog delay, etc. Monitors by Westlake and Yamaha, amps are Studer and Yamaha; mikes Neumann 84 & 87 and AKG 452, Shure, Sennheiser, etc. We also feature remote audio and visual facilities.

STEVE DYER

Producer

ROCKY MOUNTAIN HEARTLAND PRODUCTIONS

P.O. Box 6904, Denver, CO 80206
(303) 690-6904

Credits: Rocky Mountain Heartland Productions is a full service production company. Executive producer and studio producer is Steve Dyer. Studio Production: Access to some of the finest studios in the Rocky Mountain empire. Midwest, Nashville, and L.A. Music: Arranged and originally scored for studio orchestra, big band, synthesizer, or other combinations. L.P. Albums and Cassettes: Master tracks are produced, mastered and pressed. Complete jacket art and photography creatively produced in fresh and stimulating ways. Advertising: Scripts, lyrics, and compositions for radio, TV and print media. Film and Slide Presentation: Production for business promotion projects and presentations

for seminars, sales meetings, etc Financing: Artist sponsorship, promotion, and project financing is possible upon approval of qualified artists and groups.

PHIL EDWARDS

Engineer

PHIL EDWARDS RECORDING

1186 Tieggen Dr., Hayward, CA 94544
(415) 538-0469

Credits: Concord Jazz, Walter Hawkins, Edwin Hawkins, Dave Brubeck, Cal Tjader, Louis Bellson, Carmen McCrae.
Services Offered: Live and studio work, film mixing, spot production, will arrange studio booking, remote booking.

DALE EVERINGHAM

Engineer & Producer

10620 Mark St., Oakland, CA 94605
(415) 632-8499

Credits: Chief engineer at Live Oak Productions, Berkeley, CA. Live Oak Studio is a fully equipped facility, offering state of the art equipment, and very accurate acoustic design. Formerly staff engineer at Different Fur, SF, CA. I have worked with many national and local artists and media interests.

Services Offered: All aspects of studio engineering, and live audio recording. Production services: music writing for albums, demos, and media services. Start to finish project organization, to make your project come in on budget without compromise. Dates available upon request.

MICHAEL FAY

Engineer & Producer

MICHAEL FAY PRODUCTIONS

4377 Lerida Dr., San Diego, CA 92115
(619) 582-6948

Credits: First engineer on: The International Film and T.V. Association of New York "bronze" award for best overall production, done for the KDVR-KPDV-KTXL T.V. group, the new Shamu's Celebration and Beach Blanket Ski Party shows for Sea World; custom T.V. and radio promotion packages and commercial jingles for '84 include: KVAL, KULR, KEYC, WTXL, KODE, KVIA, KWCH, WX-MI, WCPX, WOAD, Browning Olds, Cernatos Dodge, Bi-Mart, Walker Scott, LaneTransit District, Orange County Registrar, Valley River Center, Bose, Shelly Mazda, Foodlander, Lazy Boy, Paty's, Tremaine Dance Experience Vol. 1 and 2.

Services Offered: As an independent engineer and producer I provide the following services for my clients: Studio bookings and rates, talent contracting, record company and publishing contacts, record mastering and pressings and cassette duplication. I own and operate the Yamaha DX-7, Sequential Circuits Drumtrax, and Roland MSQ 700. I also offer a consulting service on most aspects of music production and studio operation.

BRIAN W. FERGUSON

Engineer

4213 Eastern Ave. #3, Mt. Rainier, MD 20712
(301) 699-0936

Credits: Recording engineer, just starting. Young and excited, willing to work at any studio location. (East or West coast)

Services Offered: Recording engineering is a special type of career that requires a lot of devotion, dedication and hard work. It also takes a special type of person to handle the pressures (good and bad) of recording engineering. I believe I meet these standards because I've been involved in music all of my life, from singing in church to engineering local bands in the D.C. area. Music has always been an important part of my life, and at the age of 18, I decided to make music a career goal. I would put forth my greatest efforts to become a successful recording engineer because I would feel that something is missing unless I am involved in the music industry in some kind of way. I realize I don't have a lot of experience, but I am willing to listen, learn, sacrifice and work as hard as I can to achieve the goals of others as well as mine.

CLARK FERGUSON

Engineer & Producer

BEARSWAMP STUDIOS

1611 Cherry Lane, Macungie, PA 18062
(215) 398-1492

Credits: Original music for audio-visuals: fund-raising film for Moravian College, Bethlehem, PA., 9-projector presentation for employee recruitment for Western Electric Corporation, Centennial Film for Dorney Park, including digital synthesis of live carousel band organ, Allentown, PA, and music tracks for industrial video, slide and film presentations.

Services Offered: Original music from 8-track multi-keyboard studio, tuned, tailored and written to exact requirements for a non-library sound. Specializing in a non-electric sound from a hybrid of three RMI digital synthesizers, 6' Yamaha, ARP 2600 & 2701, and Clavinet. Concentration on musical phrasing and orchestral "part playing." Hammond and Rhodes for traditional electric sound. Will work from your script, detailed instructions and/or VHS cassette.

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Circle #063 on Reader Service Card

ING. JORGE FERNANDEZ G.

Engineer

INGENIERIA ELECTROACUSTICA DEL CENTRO

Capitan Caldera #408, San Luis Potosi, Mexico 78250
91-481-03-50

Credits: We have done a wide variety of location recording in the last 20 years of artists as: Paul Badura Skoda, Georg Demus, Paul Mauriat and several symphonic orchestras, more than 700 albums in our recording studio works for: San Luis Potosi University radio station, Cultural Television of Aguascalientes, acoustic shell for Tangamanga outdoor theatre, state government.

Services Offered: Acoustical consulting and design in the video and audio fields: studios, control rooms, theaters Sound and lighting systems, recording studio: records, tapes, equipment for rent, sound reinforcement. Professional audio installations and service for broadcast and production studios. More than twenty two years experience.

BERNIE FROMM

Engineer

1822 Hearst #A, Berkeley, CA 94703
(415) 540-6306

Credits: Weather Report. "Procession" USA tour, "Domino Theory" album and world tour. 1984 project unnamed, Manhattan Transfer collaboration, 1982 Playboy Jazz Festival L.P., Donna Summer. "Hard for the Money" USA tour; and video 17 years experience with live sound production and staging from club dates to major outdoor events.

Services Offered: Studio engineering and live production services, tracking to mastering including Neom experience, live house mixing, monitor mixing, stage and production management, trouble shooting and system design of stage and production equipment. Years of experience with artistic personalities and many varied styles of music. Good reproduction of studio sounds in concert. Willing to work with a group to develop their "sound" through all phases of production

JAMES GALLAGHER

Engineer & Producer

6740 Hazeltine Ave., Van Nuys, CA 91405
(818) 904-0578

Credits: 10 years experience, RIAA gold and platinum LPs and singles; Worked with: Michael Sembello, Phil Ramone, Steve Wonder, Gamble & Huff, Thom Bell, Baker/Harms/Young Dexter Wansel, George Thorogood, McFadden & Whitehead, The O'Jays, The Spinners, Dionne Warwick, Lou Rawls, Michael Henderson, Teddy Pendergrass, Jerry Butler, Johnny Matus, plus many others. 1983 Grammy nomination for best engineered recording.

Services Offered: Successful and diversified experience in audio producing and engineering with state-of-the-art production methods & recording techniques; knowledge of TV/Film direction and studio functions; responsible for program development & implementation, customer/client relations and performer/producer relations, Association w/major Los Angeles, Philadelphia and New York studios; capable of training and instruction, planning, coordination and problem solving, with flexibility and versatility; creative & innovative; member of NARAS.

TERRY GARTHWAITE

Producer

Box 14, San Geronimo, CA 94963
(415) 488-4778

Credits: Produced: Ferron; Robin Flower; Nicholas, Glover & Wray; Garthwaite, Hawkins, Sorrels, my own album as singer, writer, guitarist (co-produced in part with Leslie Ann Jones), recorded many albums as artist (began with Joy of Cooking)

Services Offered: Record Production, with energy in pre-production phase: material selection, instrumentation, vocal integrity, rehearsals.

LARRY GATES, LARRY HOCHMAN

Producer & Engineer

NEWFOUND MUSIC PRODUCTIONS, INC.
10 Karshner Pl., Fairlawn, NJ 07410
201-796-9175

Credits: Jungles produced by NMP. Kodak Film and Disc; Nestles; Toys R Us; Sports Illustrated, Clatrol (MTV); Chewels (Network and MTV); Original Film Scores: Thorne/EMI's "Not For Publication"; "Friends and Feelings" (CBS); "The Watchman", Artists: Mitch Foreman; Desmond Child; Bob Crewe; Tommy James; Bob James; Michael Brecker.

Services Offered: In a relaxed country setting, fifteen minutes from the GW bridge, Newfound Music offers 24 track state of the art recording facilities. Services include all phases of recording for film and disc with a full range of digital services available. Complete production services include original music and orchestrations for film, jungles, industrials, records, and demos. Equipment: Customized '84 Amek Console; computer automation; digital and plate reverb; full range of microphones, DDLs and other outboard gear; Instruments: Kawai Baby Grand; DX7; LinnDrum, Fender Rhodes.



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FOSTEX RP TECHNOLOGY



RM765



RM780

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Pro Sound Division

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15431 Blackburn Avenue, Norwalk, CA 90650 (213) 921-1112

Circle #064 on Reader Service Card

YVES GAUTSCHI*Engineer & Producer*1838 Fell St., San Francisco, CA 94117
(415) 386-8320

Credits: Tommy Tutone, Bill Summers, Voice Farm, The Punks, Pony Poindexter, Michael White, Eddie Henderson, Chris Hayes, Flipper, Freddie Stone, Ed Bogas, Harvey Scates, Peewee Ellis, James Levy, Jessica Williams, Dick Bright, Ed Kelly, Central Heat, Alain Chamfort, Jim Carroll Band, Chris Solberg, R.G. Spectrum, Robert Winters (Budha), Nicky Hopkins, etc.

Services Offered: Internationally experienced engineer/producer who listens.

TIM GEELAN*Engineer***TIM GEELAN AUDIO RECORDING**123 Woodcliff Ave., Woodcliff Lake, NJ 07675
(201) 391-7527

Credits: Paul McCartney, Wynton Marsalis, Music for ABC-TV 1984 Olympics Coverage, Ted Nugent, Blood Sweat and Tears, Max Roach, Mel Torme, Laura Nyro, Minnesota Symphony, Sesame Street, Mahavishnu Orchestra.

Services Offered: Freelance recording engineer and consultant. Experienced in recording all types of music for records, film scores, radio and TV commercials, industrials and multi-media presentations. Will also aid in selection of studio or remote location.

PAUL GERRY*Engineer & Producer***TEL-E-VUE PRODUCTIONS**Box 217, Ferndale, NY 12734
(914) 292-5965

Credits: Revonah Records, "No Doubt About It," "The Fiddler & His Lady," "Back Home In Madison County," "Before The Fire Comes Down," Tel-E-Vue Productions, Damian, Larry Chance Independent, Chaser Records, Shure Hit Records, United States Publishing, Tulip Records, Daybreak Enterprises, Lloyd Street Studio.

Services Offered: Engineering, producing, record production, including the following: album and jacket design, custom disc mastering, metal plating, pressings, creative packaging, and our newest addition — video tape demos.

DAVID GLASSER*Engineer***AIR SHOW, INC.**5727 25th Road North, Arlington, VA 22207
(703) 237-8312

Credits: Sisterfire Festival 1984 (technical planning, album recording and mixdown), New Music America 1983 and 84 (technical coordination, crew supervision), New Music Distribution Service, John Cage, Henry Threadgill, Nana Vasconcelos, others, New American Orchestra, Modern Jazz Quartet, NPR American Jazz Radio Festival, Jazz Alive! (Peabody Award), Boston Symphony Orchestra, Skyelabs.

Services Offered: Technical coordination for remote recording and broadcast projects. Telco, PL and IFB comm systems design and implementation. Direct to stereo and multitrack mixing with emphasis on Jazz, Classical and New Music. Sony PCM recording system rental. Production mixing for music, documentary and news broadcasts. Telco and common carrier satellite interfacing and testing. We have the experience and track record to record and broadcast large scale music festivals, including detailed pre-production planning using our computer based "Gig Management System."

RYSZARD GLOGER*Engineer & Producer*Polish Radio Station-Poznan, Poznan, Poland 60-711
630-51

Credits: All kinds of music recorded. Special interest in rock music. Working with top Polish artists and co-produced Marek and Vacek duo album for Intercord, Kurczewski Choir for Utopia. Voted sound engineer of the 1974 year in Poland.

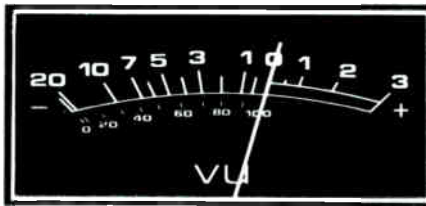
Services Offered: Recording or producing music for records, film and video on multi track recorders.

GREG GOODWIN*Engineer & Producer***OASIS PRODUCTIONS**395 Sussex St., San Francisco, CA 94131
(415) 587-3565

Credits: As owner of Oasis Recording Studio for the past five years (a musician and part of the industry for over 15 years) I have been involved in producing and/or engineering numerous albums, single and demo projects of all shapes and sizes, types and untypes.

Services Offered: Producing/engineering artist-oriented, maximizing time, energy and dollars. And hopefully adding some inspiration to any project.

INDEPENDENTS

**THOMAS J. HALL***Engineer & Producer***TRIAD STUDIOS**4572-150th Ave. N.E., Redmond, WA 98052
(206) 881-9322

Credits: Queensryche, Serviceman, Jim Stpech, Artisan, Uncle Bonsai, A.M. Productions, Rick Vale, Chris Lobdiell, Pizza Haven, Dan Foster, Brenda Kutz, Mark Lindsay, Kenny Mattel, Neil Rush, D.C. Lacrocy, Ipsnick, Hair Apparent, Helms Deep, Rick Stone, Paul Speer, Danny Deardorff, USLUVI Productions, Steve Webb, Wickline, U of I Jazz Band, Boeing, and many others!

Services Offered: All facets of demo and record production including pre-production, engineering, producing, watchdog supervision of record mastering and pressing. I am sensitive to the artist's creative needs and strive for the best recorded performance possible in a comfortable, low pressure atmosphere.

MACOLM H. HARPER, JR.*Engineer***REELSOUND RECORDING CO.**P.O. Box 280, Manchaca, TX 78652
(512) 282-0713; 472-3325

Credits: Live concert recording engineer: Robert Plant, Billy Squire, Journey, Ted Nugent, Red Rockers, Michael Bolton, Judas Priest, Willie Nelson, George Jones, John Anderson, Dottie West, DeGarmo & Key, Zebra, Christopher Cross, Charlie Daniels, Todd Rundgren, Gap Band, Frankie Beverly & Maze, Bill Gaither Trio.

Services Offered: Remote 46 track recording, mixing, overdub work.

RIC HARRIS*Engineer***FULL LOGIC SOUNDS AND VIDEO**6811 Riggs Rd., Hyattsville, MD 20783
(303) 422-4748

Services Offered: Over seven years of experienced home recording facilities. Expanding to video in late '85.

LEE C. HAYNES*Engineer & Producer***LCH PRODUCTIONS**P.O. Box 905, Bastrop, LA 71220
(318) 283-1672

Credits: Local Southern Gospel Groups & Light Contemporary Group, also local country artists.

Services Offered: Full custom packages on LPs, 45's and also demo recordings for aspiring singers and songwriters.

ROLF HENNEMANN*Engineer & Producer***ROOSTER PRODUCTIONS, LTD.**1234 W. 6th Ave., Vancouver, B.C., Canada V6H1A5
(604) 734-1212; 687-5205

Credits: Heart, Chilliwack, Clocks, Toronto, Prism, Doucette, Nantucket, Randy Meisner, Al Stewart, Terry Jacks, Valdy, various movie scores and sound tracks.

Services Offered: Engineering and/or producing for established as well as new artists anywhere in the world. Have connections to major record labels in US and Canada. Have worked in major studios throughout North America.

MICHAEL HOFFMAN*Engineer & Producer***FLORIDA VIDCOM, INC.**3685 N. Federal Highway, Pompano Beach, FL 33064
(305) 943-5590; 943-5592

Credits: Emmy award winning production facility.

Services Offered: Full 16 & 8 track audio production facility plus full video production facility. Jingles, filmscores, post scores, albums, writing, composing. Comprehensive audio and television production and post production capabilities under one roof.

WESLEY S. HOMNER*Engineer & Producer***ROSEWOOD AUDIO/VIDEO**

Box 364, New Castle, PA 16103

(412) 654-3023

Credits: Engineer and producer for James Paul Band. Writer of "Pennsylvania" and "Amazing Love." Also, producer of "New River Train" and "Shipperly Rock Town Meeting" bluegrass albums. Owner of Rosewood Studio, New Castle, PA.

Services Offered: Recording, writing, and arrangement services offered. Demo tapes offered to aspiring lyricists.

JAMIE HOOVER*Engineer & Producer***OVO PRODUCTIONS, LTD.**410 Greystone Rd., Charlotte, NC 28209
(704) 523-1117

Credits: Albums by the Spongtones, SugarCreek, The Killer Whales, Robert McClure, The Nickel Bank, Awareness Art Ensemble, Helpless Dancer, and more, all produced by Jamie Hoover and engineered by Mark Williams for OVO Productions, Ltd. Plus, freelance engineering at Reflection Sound Studios, Arthur Smith (HMC) Studios, Lamson Studios, etc.

Services Offered: Freelance engineering for records, jingles, soundtracks, demos, live productions, and TV. Experienced as engineer on MCI, Trident, Soundworkshop, Tangent and other line boards, and as a session player on guitar/bass, vocals, and just about anything that makes a noise.

PAUL HORNSBY*Engineer & Producer***MUSCADINE STUDIOS**3078 Vineville Ave., Macon, GA 31204
(912) 745-2401

Credits: Producer of albums by The Marshall Tucker Band, Charlie Daniels and many others. Have many major label contacts.

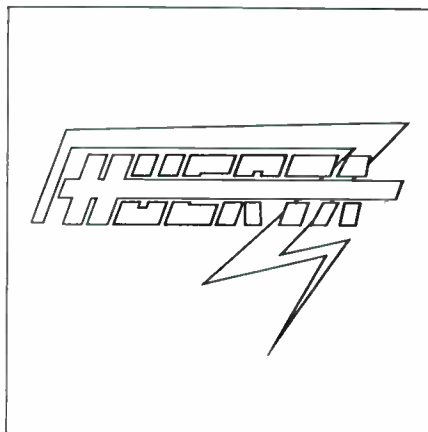
Services Offered: Complete 16 track and 8 track recording studio.

MICHAEL J. HOWARD*Engineer & Producer***GUYNUR PRODUCTIONS**

4607 Dalaville St., Roanoke, VA 24012

Credits: 24-track live album: co-produced and engineered; 24-track, 2-45 rpm: Engineered; 8-track EP: Engineered; presently engineer at TV station, NBC affiliate.

Services Offered: ¾ inch video taping and processing, 2 inch video taping and editing; multi-track recording. Can do remotes on all the above except 2 inch video taping. Call for details.

**LARRY HUERTA**
Chicago, IL**LARRY HUERTA***Engineer & Producer***HUERTA RECORDING SERVICES**4118-B North Kedvale Ave., Chicago, IL 60641
(312) 794-0125

Credits: A&M, Arista, Capitol, Columbia, Delite, Elektra, EMI, Epic, Flying Fish, Mercury, Motown, Warner Brothers, Coffee, Linda Lifford, Kurtis Blow, Heaven & Earth, Lettermen, John Campbell, Bonnie Koloc, Chereve, Erwin Helfer, Sheba, Pawnz, Chicago Pops... McDonalds, Taster's Choice, Zenith, RCA, United Air Lines, NBC News, Sears, Kellogg's Doublemint, Coors.

Services Offered: Available for: artists, record companies, advertising agencies, jingle companies and audio-visual companies. Over twelve years experience recording demos, records, commercials, slide presentations, trade shows, locations, and feature films. Can contract professional studio musicians, and have access to studios ranging from mono to 72 tracks, analog or digital. Professional follow through including "quality control" inspection of dubs and record pressings. Rates vary to meet your budget.

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BOTH TAPE MACHINES FEATURE: + 4dbm IN/OUT • 15/30ips • Full-function 9 cue position remote-autolocator • Stand • 50% range vari-speed •



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ACES ML24: I/O console, 32 in x 24 buss, Integrated part-wired patch bay. **\$17,025.**

ACES SM16: Split console, 32 in x 16 buss **\$15,665.**

BOTH CONSOLES FEATURE: Fully modular • + 4dbm IN/OUT • AudioFad long-throw conductive plastic faders • 5 Aux sends • 5 band switchable EQ • Input LED PPM'S • Stand • + 48v phantom power • LED display (optional) • Two year parts warranty • Other frame sizes available • Many options available

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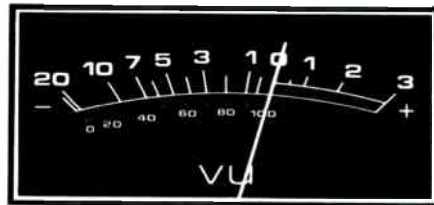
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Lancaster, PA 17603

Circle #067 on Reader Service Card

INDEPENDENTS



DAVE HUMRICK

Engineer & Producer
AUDIOGRAPHIC PRODUCTIONS
3018 Rockett Dr., Fremont, CA 94538
(415) 657-8716

Credits: Sandra Crouch (84 Grammy winner), Edward Albert, Sly Stone, David Vega & Hershel Kennedy (Graham Central Station), Eddie McGee (Tower of Power), Back Up and Push, Black Angel, Crosswinds, Peter Anastoff (Paul Butterfield Band), Hereafter, Network, Spectre, Tyranny, Prophecy, Prisoner, Henry Vestine (Canned Heat), and many others

Services Offered: Production: consultation, pre-production recordings and project planning, studio selection, session organization and supervision, engineering, selection and supervision of record mastering facilities. Engineering: over 9 years exp. including 4 years as Lead Engineer (currently). As an independent my goals are to: select the best studio for my client; protect and maintain the studio's equipment; achieve the highest quality product; and eliminate wasted studio time.

CLAY HUTCHINSON

Engineer & Producer
HUTCHINSON PRODUCTIONS INC.
56-44 142nd St., Flushing, NY 11355
(718) 762-2295

Credits: Clay has engineered the following albums: Blue Oyster Cult "Fire of Unknown Origin," Spys "Behind Enemy Lines," Eddie Jobson "The Green Album," Zebra "Zebra," and Aldo Nova "Subject."

Services Offered: As an engineer/producer Clay offers both musically and technically a creative hand to the artist in the recording studio situation. Clay has been both owner and chief engineer of Kingdom Sound Studios for the past 7 years. Hutchinson Productions offers a wealth of experience in music computer programming and is also equipped with all the necessary equipment.

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(916) 455-5278

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Sacramento, CA

ISRAFEL PRODUCTIONS and RECORDING SERVICES

Producers
FRANK LIZARRAGA/PEDRO V. REYNOSO, JR.
5772 Broadway, Sacramento, CA 95820
(916) 455-5278

Credits: Israfel has produced one LP and two 45's in Spanish and two 45's in English for Luna Records of Los Angeles. Under its own label, Israfel produced one LP and three 45's and is currently producing two EP albums in Spanish and English.

Services Offered: Israfel is the first studio and productions company in the Sacramento area to specialize in Spanish music and has a bilingual staff. Israfel also houses two publishing companies; Pancho's Music Co., which is affiliated with BMI and Nonesuch Publishing Co., and affiliate with ASCAP. Also, Bi-Jingles Music Co. which specializes in Spanish or English jingles.

MICHAEL JAMES/JOE CONNER
Engineer & Producer
MICHAEL JAMES PRODUCTIONS
22030 De La Osa St., Woodland Hills, CA 91364
(818) 700-0296

Credits: Michael James is a well known L.A. area keyboardist-synthiest who worked live as well as in the studio. He is now producing full time. He has worked with many prominent producers and appeared on many albums.

Services Offered: Michael James Productions is an independent A&R company that searches out unknown talent. Artists can have their tapes reviewed and then taken to record producers and companies. There is no fee unless the artist is signed and then it is between 5% and 7% percent. We also offer a list of artist-oriented services from copyrighting music, words and band names to publicity kits, photos, a roadie service and tee shirts at very reasonable prices. Call us for additional information.

ROBIN JENNEY
Engineer & Producer
R.J. PRODUCTIONS
5554 Altos Ct., Columbus, OH 43229
(614) 895-7976

Credits: Midnight Star, Zapp, Roger, Bootsy Collins, George Clinton, Sly Stone, Ohio Players, Heatwave, Dayton, The Deele, New Horizons, Spittin Image, Mimi Rousseau, Alex Kahill, Boogie Bob Baldon, Lee Moore, Wes Boatman, A.P.B., Danger Brothers, Fusion.
Services Offered: Engineering and/or producing for established as well as new artists at studios such as 5th Floor, Bison Q.C.A., Arnesound, and Lansing Sound. Engineering jingles for such companies as Proctor & Gamble, Colke, Pepsi, WGN-TV, Kroger, Fisher-Price, and Wedeman Beer. Live radio and TV audio mixing. Also available as instructor for recording engineering courses such as Full Sail and The Recording Workshop.

GREGORY JONES
Producer
ANDERSON JONES MUSIC PRODUCTION
3018 22nd St., San Francisco, CA 94110
(415) 550-1695

Credits: Norman Salant "Sax Talk" LP and dance 12" remix, videoscapes to Max Almy's "Perfect Leader" and "Leaving the 20th Century," filmmakers "Off Night" (Grendle Pictures, LA) and "California Zones" (video band, SF), 8 MTV station IDs, (Colossal Pictures, SF), corporate ad clients Levis, Clorox, Wesson, and others.

Services Offered: Anderson Jones is a music production service operated by Gregory Jones. We specialize in original music scoring for film and video, including dead-synch and click track scores. All instruments. SAG/AFTRA players and singers contracted as required. Full recording facilities for both music and narration. Record project production for selected clients.



JEFF JONES
New York, NY

JEFF JONES
Engineer & Producer
CINA-TONE INC.
218 East 82nd St. Suite 4FW, New York, NY 10028
(212) 570-2765

Credits: Recorded for: Virgin, Tommy Boy, Streetwise, CBS, Warner Bros, Capitol, Electra, Atlantic, Cheeatah, Sony, NBC TV, CH 13. Recorded with: Planet Patrol, Larry Coryell, Talking Heads, Gang of Four, Plasmatics, Neil Sedaka, Miroslav Vitous, Vikie Sue Robinson, Angela Clemmons, Fonda Ray, Parliament, Brecker Bros., Dave Sanborn, John Hammond Sr., Teo Macero, Don Elliot, Arthur Baker, Ted Currier, Terua Nakamura.

Services Offered: Complete 24 track and 32 track digital recording, production services, album, single, EP & CD masters produced. A specialist in location recording, studio recording, mixing, and editing, live P.A. mixing, mastering, broadcast and video sound.

LESLIE ANN JONES
Engineer & Producer
3844 Whittle Ave., Oakland, CA 94602
(415) 530-1402

Credits: Co-producer and engineer: Tret Fure "Terminal Hold," Holly Near "Speed of Light," Margie Adam "Here is a Love Song," Jane Fonda "Caribbean Workout" video music. Engineer: Maze, Angela Bofill, Cris Williamson, Bobby McFerrin, Whispers, Narada Michael Walden, Herbie Hancock, Carlos Santana, Ferron, and many others.

TRACY H. JORGENSEN
Engineer
AUDIO ARTS
1511 Emigration Cyn, Salt Lake City, UT 84108
(801) 581-1400

Credits: 25 year veteran — director of audio for the "Donny & Marie Show" (3 seasons); free-lance engineer, music recording and mixing specialty, live recording specialty, 24 track experience (Neve, Studer, MCI, Harrison). Production music for: CBS Radio, Japanese TV Network, 50 international ad clients; have recorded nearly 300 major recording/TV/theatrical stars
Services Offered: Free-lance engineer; owner of Audio Arts which consists of myself as an independent (which I've been for 12 years), Audio Recording Arts Academy (a school of recording - 8 years old), Musicians Survival Seminars (a lecture series) and Listen Publications (I am starting to write audio articles for the trades and have just finished editing a book on audio, 600 pages, which I hope to have published this next year. It will be different from any book out for it deals almost totally on the "Art")

KAREN KANE
Engineer & Producer
25 Irving St., Watertown, MA 02172
(617) 923-9366

Credits: To date, I have produced and/or recorded over 40 albums and have had many local single and demo "hits" on the radio. Have been in the biz for 15 years.

Services Offered: I was one of the first successful freelance recording engineers in New England. I offer unbiased advice about recording in Boston and a no-charge pre-production meeting. Recording drums is a specialty of mine as is acoustic music. I am extremely efficient, dedicated and easy to work with. I really listen to my clients and give them what they want to hear.

DANNY KAPILAN
Engineer & Producer
G.P.O. Box 802, New York, NY 10116
(212) 243-0807 (service: 724-7400)

Credits: The Apollo Theatre, NYC; house mixer, production consultant—1983 to present; Steve Forbert: tour manager—1984 to present; SIR/Kaufman Astoria Film Studios, NYC: manager—1984 to present; New Music Seminar, NYC: concert director—1983/84; Tour sound: Jim Carroll-1982, Fatback Band-1983; New School, NYC: taught accredited rock history and technology course—1984/85.

Services Offered: Full range concert production/coordination for performers, bands, clubs, theaters, arenas, outdoor festivals, conventions and private events. Live sound mixing for concert reinforcement, remote broadcast and/or recording; tour management; stage and studio management; concert promotion; independent consulting for creative concert production; sound reinforcement installations; referrals for musicians and technical personnel, studio recording, rehearsing, video production, musical instrument and pro audio rentals, stage lighting, personal management and booking

DAVID L. KEALEY
Engineer & Producer
INERGI PRODUCTIONS
15825 Memorial Dr., Houston, TX 77079
(713) 493-1533

Credits: All music for "Lone Star Bar & Grill" (ShowTime), Lite Beer from Miller, Julliard String Quartet, Little River Band, Sonny Bono, Mary K. Miller, Z-ROCKS, Johnny Nash, Gary Smith, Dean Scott, Truckshop, Nancy Ames, Ikey Sweat, Alan Haynes, The Nerve, KRBE Radio, KLOL Radio, KUHT-TV, Connie Mims.

Services Offered: Full Production 24 track recording with Dolby noise reduction MCI automated console and recorders, 1/2 inch 2 track mastering. Lexicon digital reverb and EMT 240. Aphex Aural Exciter, Scamp rack, parametric EQ, ADR, UREI, Vocal Stressors, UREI and dbx limiters. Full line of microphones. Digital recording by request; video services also available. Turn-key jingle production by Inergi Admusc.

MARCUS KEARNS
Engineer & Producer
PERFECT PITCH
Rt. 8 Box 433-A, Statesville, NC 28677
(704) 872-2360 / 328-2489

Credits: Paradox - Power of Passion.
Services Offered: Album production, composition/arranging, Fairlight and LinnDrum programming.

PETER R. KELSEY
Engineer & Producer
2038 Holt Ave. #, Los Angeles, CA 90034
(213) 837-7939

Credits: 12 years experience, including 6 years at Trident Studios, London with producers: Ken Scott, Roy Thomas Baker, Rupert Hine, Peter Asher, Dennis MacKay, Robert "Mutt" Lange; and artists: Elton John, Jean-Luc Ponty, Graham Parker, The Fixx, Camel, Cafe Jacques, "Weird" Al Yankovic, Randy VanWarmer, City Boy, Linda Ronstadt, Charlie, Michael Stanley Band.

Services Offered: Engineering and mixing for any project, co-production with artist and/or producer, full production with or without engineering. I will do everything I can do to make your music the best it can be. Please call to discuss your next project. Resume on request.

NORMAN KERNER
Engineer & Producer
BRILLIANT PRODUCTIONS
617 South 13th St., Richmond, CA 94804
(415) 236-2281

Credits: Engineered and/or produced albums by Mike Molendas Passion Dance, Terry Haggerty, Jonathan Richman, Rhythm & Noise, Dan Kobiakka, FCC, Freaky Executives, many more.

Services Offered: From punk to funk to classical. No projects too big or small if its happening!

BERNIE KIRSH
Engineer & Producer
c/o Mad Hatter Studios
2635 Griffith Park Blvd., Los Angeles, CA 90039
(213) 664-5766

Credits: Chick Corea, Stanley Clarke, Herbie Hancock, Chaka Kahn, Janis Ian, John Klemmer, Patte Smith, Gary Burton, Lenny White, FreeFlight, Robin Williamson, John Cale, Return To Forever.

Services Offered: Pre-production and production consultation and producing; engineering.

DAVID A. KNIGHT
Engineer & Producer
6036 1/2 Barton Ave., Hollywood, CA 90038
(213) 461-5812

Credits: Concert Promotions: Chicago, Lionel Richie, James Taylor, Pointer Sisters, Huey Lewis and the News, Elton John and Randy Newman. Voice-overs: Rick Dees, Gary Owens, Johnny Olsen, Big Ron O'Brian, Eva Gabor, Dick Wittinghill, and many others. Studio experience: Pointer Sisters, Santana, Neil Diamond, Barbara Streisand, Val Garay, Richard Perry, and others.

Services Offered: Hot engineering and production for your audio needs. I'm young, but have fresh ears and have spent more than half my life in music and recording. My specialty is audio for radio, including syndicated programs, jingle packages, and voice overs, with concert promotions being my forte'. I am also active in music recording/mixing, concert/PA, and audio for video. I am currently production engineer of the most listened to radio station in America (KISS-fm). I enjoy traveling, am easy to work with, and love the challenge of doing it right (the first time). Let's go!

DON KOLDON
Engineer & Producer
P.O. Box 1376, Studio City, CA 91604
(818) 506-8313

Credits: Former staff engineer at A&M Records. Work for most major labels. Specializing in rock, R&B pop and jazz.

Services Offered: Recording, mixing and editing. Custom made recording equipment available: mike pre-amps, direct boxes, modified equalizers, etc. Exceptionally musical engineering (graduate of Berklee College of Music, Boston, MA). Expert production and co-production. Excellent studio access at all budget levels.

LARRY KRONEN
Engineer & Producer
KRONEN AUDIO
P.O. Box 35997, Albuquerque, NM 87110
(505) 888-0379

Credits: Mark Isham, Ronnie Montrose, Paul Horn, Steven Halpern, Beau Brummels, Taj Mahal, Toxic Reasons, Pharoah Sanders, David Cohen, The Tubes, Chris Lockheem, Greg Kihn, Rodney Crowell, David Johanson, Jimmy McCraclin, Graham Nash, Bonnie Raitt, Marge Adam.

Services Offered: We offer assistance in all aspects of recording; choice of material (yours, or from our catalog our songs) arrangements, provide musicians and facilitate the recording of your project, be it album, demo EP, single, slide show or spoken word. We will follow through with post production including: mastering, pressing, artwork and tape duplication. We will also produce video projects starting from development to the finished product.

ROBERT KRUSEN
Engineer & Producer
'88 PRODUCTIONS
2216 White Ave., Nashville, TN 37204

—LISTING CONTINUED ON PAGE 94

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INDEPENDENTS



—FROM PAGE 93

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RON LAGERLOF

Engineer

DBA RECORDING SYSTEMS, LTD.

5803 Velasco, Dallas, TX 75206

(214) 826-5418

Credits: Recording and/or mixing: Randy Meisner (Eagles), Hank Williams, Jr. (gold), Wayne Newton, Roy Orbison, Mac McAnally, John Prine, Chuck Rainey, Recoil. Currently chief engineer, Studio Centre, Dallas. Studio installations: Dallas Sound Lab (3 studios), Studio Centre, TM Productions (2 studios), Omega Audio, Sunrise Studio and Sierra Recording of Ft. Worth. (all 24 track).

Services Offered: Studio installation and engineering/mixing. Specializing in consultation and project coordination from conception to completion, as well as studio equipment installation and/or purchases, studio design and service recommendation. Recording systems cue system and installation products. Digital recording/rental of Sony PCM-10 digital audio processor. Affiliation: NARAS, Nashville Chapter, Dallas Communications Council (DCC); Professional Audio Recording Association of Dallas/Ft. Worth (PARA). Direction: dedicated to achievement of excellence in audio reproduction and aural perception.

JACK LANCASTER

Producer

6610 1/2 Padre Terrace, Hollywood, CA 90068

(213) 851-2084

Credits: Produced various artists in top London studios including: Rod Argent, Stephane Grappelli, Gary Moore, Brian Eno, Clive Bunker, Phil Collins, Ella Jordan, Manfred Mann, Cosy Powell, Zeitgeist, Krisma, The Permutations, several film and TV scores, etc. Has had hit singles in Europe and USA.

Services Offered: Production, arrangements, compositions, plays all saxes, flutes, clarinet, Lyncorns. Can supply engineer for productions. Has produced many styles of music including rock, new wave, pop, fusion, etc.

MICHAEL R. LANE

Engineer & Producer

LANE AUDIO & RECORDS

Box 29171, Los Angeles, CA 90029

(213) 469-8007

Services Offered: Specialists in noise reduction and sonic restoration/rebalancing, using highly specialized equipment such as the Packburn Noise Suppressor, Orban Parametric Equalizer, etc., in a unique audio restoration system. Our work is oriented toward re-establishing the naturalness and clarity of the original performance, with special attention given to maintaining phase coherence. Our many years of experience and developmental work in the art and science of sonic restoration apply equally well to 78's, transcriptions, LP's and tapes, both mono and stereo. A reprint of our article, "Sonic Restoration of Historical Recordings," will be sent free upon request.

JAY A. LEIBOVITZ

Producer

318 Cardinal Court, Mill Valley, CA 94941

(415) 388-8107

Credits: Producer/artist: "Dulcimer Fair" (Traditional Records, Cosby, TN); "Pigtown Fling" (Green Linnnet, New Cannan, CT). Early 1985 releases: "For the Child In Us All" and "We're Goin' to the Zoo Tomorrow: Songs & Stories of Animals Real & Imagined." (Theeds Unlimited, Mill Valley, CA).

Services Offered: Especially oriented to acoustic recordings: folk, children's music, spoken word, jazz. Have network of musicians (instrumental and vocal), storytellers, engineers, studios, and co-producers who enjoy and have experience with acoustic projects. Know network of live performance venues. Developing my own full-production label (Theeds Unlimited) and distribution company; will consider recordings for production and/or distribution. Will co-produce with artist or other. Work in a co-creative fashion, using "win/win" business principles.

BRADSHAW LEIGH

Engineer

LEIGH AUDIO ENGINEERING

600 W. 58th St. Suite 9113, New York, NY 10019

(212) 661-9295

Credits: Albums: Julian Lennon "Valotte," Malcolm McLaren "Fans," Joe Jackson "Mike's Murder," Billy Joel "An Innocent Man," Billy Joel "Nylon Curtain," Stephanie Mills "Merciless," soundtrack "Tootsie" and others. Film scores: "Reds," "D.C. Cab," "Mike's Murder." Video: HBO, Simon & Garfunkel, HBO Paul Simon. Show soundtracks: N.Y.C.'s Little Shop of Horrors.

Services Offered: Extensive experience with video, SMPTE Interlock, and film, studio and remote recording.

ROBERT E. LEVESQUE

Engineer & Producer

REL SOUND MUSIC STUDIO

144 Fenner Street, Fall River, MA 02724

(617) 672-6695

Credits: Owner/Engineer/Producer—Robert E. Levesque; Assistant Engineer—John Mailloux; Assistant Engineer—Ray Gordon.

Services Offered: 4 track recording facility (Yamaha). We do songs, jingles as well as some live remote recording. Recording time (in studio) \$15/hour; mixing time \$10/hour. Live recording costs more depending on location. Discount rates and specials offered.

PETER LINK

Producer

400 West 43rd St. Apt. 38-D, New York, NY 10036

(212) 239-0282

Credits: Wrote and produced three songs for "Beatstreet" soundtrack, produced "If You Let Me Make Love to You, Then Why Can't I Touch You," for Jenny Burton's 2nd album on Atlantic (also wrote it), have produced major industrial scores for House and Garden, BMW, Clairol, Seagrams among many others. Also produced cast albums as well as being award winning Broadway composer.

Services Offered: Owns Westrax Recording Studios in NYC where he writes, produces and arranges with state of the art equipment such as Linn Drum, OBXa with Oberheim Expander and DSX, Yamaha DX-7 and Korg Poly-800. Heads a full staff of top quality engineers and musicians as well as a top stable of vocalists for all purposes. Also owns Westrax Publishing, LTD an ASCAP music publishing firm. Also directs and produces many major live acts in NYC.

BARRY L. LITTLE

Engineer & Producer

NOMAD PRODUCTIONS, INC.

P.O. Box 6868, Mobile, AL 36660

(205) 479-2769

Credits: Current list of clients consists mainly of classical music projects. Engineer and producer of "Second Saturday Series," a poetry, prose and jazz broadcast; "Music in Mobile" a classical broadcast; and the "Alabama Tale-telling Festival" in Selma, Alabama for broadcast on Alabama Public Radio. Main client is WHIL-FM in Mobile, Alabama.

Services Offered: Location recording, sound reinforcement, broadcast and studio maintenance, tape duplication, fund raising, long winded metaphysical discussions from a purely personal point of view (P?), south Alabama/NW Florida canoe trip outfitler. Also make great biscuits while out in woods.

LEE LUSTED

Engineer & Producer

214 West Baltimore Ave., Larkspur, CA 94939

(415) 924-6124 or 381-4230

Credits: 11 years experience in audio and video production. Audio production for video, film, radio and multi-image. Video production for cable and broadcast T.V., and industrial/corporate clients. Currently production manager for Mann Video Visions, Mill Valley, CA. **Services Offered:** Location video production. Sound track production. On and off line editing. 3/4" and 1/2" edit suites. Production management. Technical coordination.

JACK MALKEN

Engineer & Producer

SECRET SOUND STUDIOS

147 W. 24th, New York, NY 11023

(212) 691-7674

Credits: Ya Mama, Wuf Ticket: Prelude Records; Cosal You, Up-town: Silver Screen Records; Can't Stop Til I Reach the Top: Silver Screen Records; Can't Stop Til I Reach the Top: Silver Screen Records; Hustlin' Tim: Silver Screen Records; Ratmaster Roonie Record: Vide Silver Screen; Blast Atlanta Records.

Services Offered: Engineer, producer, remix, live, remotes, video, Dancer Records, Rock'n'roll, etc.

PATRICK MALONEY

Engineer & Producer

61 Elsie St., San Francisco, CA 94110

(415) 285-6071

Credits: Engineered 20 Direct-to-Disc Albums for Crystal Clear

Records, Co-engineered & produced Blondie 'Atomic' EP (European Release). Fifteen years live concert mixing for Herb Alpert, Liza Minnelli, Burt Bacharach, Monterey Jazz Festival, Blondie, etc.
Services Offered: Specialize in projects requiring speed and efficiency based on many years of live "one take" engineering & producing. Also specialize in media production recording.

Los Angeles Guitar Quartet which received favorable reviews in Stereo Review, Fanfare, Guitarra, and The Soundboard.

Services Offered: Audiophile classical recording with the finest equipment: Analog—Nagra T-Audio, IV-S; Digital—dbx 700, Audio & Design modified Sony 701 ES, VHS and Beta; Mics — Schoeps MK 41, MK 5, MK 8 Audiophile cassette duplication featuring the finest in mid-speed duplicating: Infonics 200 A.

ROBERT A. McBRIDE

Engineer & Producer
DECIBELS UNLIMITED PRODUCTIONS
 3342 T.C.U. Blvd., Orlando, FL 32817
 (305) 657-6481

Credits: Produced and engineered for Unemployed Royalty heavy metal band Mere Threat, American Opera Professional business includes Directors of Mary Kay Cosmetics, American Business Women Association, and other business, and political organizations
Services Offered: Engineering and mixing for any project, co-production with artist and/or producer, full production with or without engineering. I will take your project, book the studio, book the musicians, assist in arranging and restructuring your material if needed, work with you at rehearsal — everything it takes to make your music the best it can be. Call me and let's discuss your next project.

ROBIN McBRIDE

Producer
BIRD PRODUCTIONS
 1946 North Hudson Ave., Chicago, IL 60614
 (312) 787-6060

Credits: A&R director, producer, label director for over 15 years. Production credits include Ohio Players, Chuck Manion, Buddy Miles, Heartfield, Chico Hamilton, Boiboma and Emarcy Jazz re-issue series.

Services Offered: Independent production, artist management, and music business consultation (selected clients accepted). No unsolicited material reviewed.

DAVID MERRILL

Engineer & Producer
CASTLE CORPS INC.
 79 Oxford Rd., New Rochelle, NY 10804
 (914) 235-1040

Credits: Produced, written, performed and engineered music for "Break Dancin'" LP on Atlantic Records. Arranged, written and produced music for various independent labels and theatre companies in New York such as La Ma Ma and Theatre for the New City. Engineer for two years at Master Sound Productions on Long Island.
Services Offered: Production, engineering, arranging and writing. Have well facilitated 8 track studio but will work at studio of your choice.

GEORGE (JORGE) MARTIN

Producer
STREET LEVEL PRODUCTIONS
 5741 Carlton Way #305, Hollywood, CA 90028
 (213) 466-8916

Credits: Diverse musical activities: Sheila E., Richie Morales (Spyro Gyra); Jim Fielder (Blood, Sweat & Tears); Fred Allen (Fresh); Clayton Richardson (SummersHeat); Pheroan Ak Laff (Gramavision label); Henry Davis (Jeffrey Osborne); Blue Standard Music Publishers; Aphex Systems, Ltd. (West); BASF Systems; American Dance Guild; RPC label; Michigan State Council for the Arts.

Services Offered: Multi-percussionist combines high-tech proficiency, creative percussive ingenuity and aural sophistication into a crystalline production. Direction dictated by the necessities of the project and the possibilities they provide. Receptive to the influences of a broad range of musical forms and styles (imaginative synthesis keeps it vigorous). Capture the flair and the flavor with the aid of indigenous percussives. Coordinate all facets of production, exercises quality control and put together the best combination of resources for the optimum product. Reliable, intelligent and ethical business practices. Street Level Productions — "We're out on Streets."

MARK L. MAYER

Engineer
MLM RECORDING/SOUND
 610 Hache Street, Houma, LA 70364
 (504) 872-1800 or 868-5493

Credits: Demo work and 45s with many local artists. Peter Turk demos and tour. Johnny Trigger, Rod Roddy, Tony Hazzelton.

Services Offered: Freelance studio and sound reinforcement engineering. Independent engineering with several local studios. Studio construction, wiring and acoustical work. Location recording.

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 Long Beach, CA

JONATHAN MARCUS

Engineer & Producer
ORPHARION RECORDINGS
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 (213) 438-4271

Credits: Many solo, chamber music and orchestral concerts. Artists include John Perry, pianist, The Los Angeles Modern String Orchestra, The Long Beach Bach Festival, and The Southeast Symphony. Producer, engineer for Orpharion Recordings' release of The

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Engineer & Producer
GOPHER BAROQUE PRODUCTIONS
 7560 Garden Grove Blvd., Westminster, CA 92683
 (714) 893-3457

Credits: Berlin, Otha Young/luce Newton Band, Meadowlark Lemon, Knotts Berry Farm, 1st place winners, American Song Festival for past 3 years (inc. Michael David - grand prize) "Christmas Needs Love" performed by Andy Williams (Bob Hope Christmas Special)

Services Offered: Owner of Gopher Baroque Productions, a full service facility which includes a recording studio, publishing company & fully synthesizer lab (bed in w/2 record labels) Looking for pop/new music bands, singer/songwriter, strong performers seeking material.

ROBERT L. MISSBACH
Engineer & Producer
REAL LIVE MUSIC
 P.O. Box 684, Mill Valley, CA 94942
 (415) 383-8919

Credits: Journey, Van Morrison, John Waite, Con Funk Shun, Tom Browne, Angela Bohil, Terry Haggerty, Dallas Smith, Windham Hill Records, Megatone Records, Rising Sun Records, Musical training, S.F. Conservatory of Music.

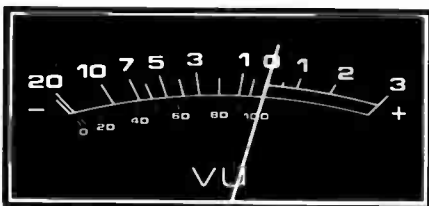
Services Offered: Complete audio production and engineering, live mixes to multitrack recording, audio for film/video, commercials, demos, records, soundtracks

DOUGLAS S. MITCHELL
Engineer & Producer
UNIVERSITY OF WISCONSIN-MILWAUKEE
 Dept. of Mass Communication, P.O. Box 413,
 Milwaukee, Wisconsin 53201
 (414) 963-5794

Credits: Instructor of audio production methods — University of Wisconsin-Milwaukee Assistant engineer — WUWM-FM90, Milwaukee. Freelance engineering, design and construction — Milwaukee Sound Studios Member, Audio Engineering Society, Member, Society of Broadcast Engineers

Services Offered: Commercial, music, jingle, and industrial audio engineering and production Acoustics and design consulting, Equipment repair and alignment Electronic music composition

INDEPENDENTS



CARLTON MOODY DAVID MOODY
Engineer & Producer
LAMON SOUND STUDIOS
 6870A Newell-Hickory Grove Rd., Charlotte, NC 28212
 (704) 537-0133

Credits: Billboard single picks include artist Billy Scott, Oscar Burr, Mirrors Band, Ray Roberts, Georgia Phophets, Carlton Moody and the Moody Bros Over 100 album and single projects Nominated record producer of the year 1983 (BMA Awards) Involved with production of demos, radio shows, jingles and soundtracks

Services Offered: Production services include mono to multitrack production, voice to musical styles including country, bluegrass, beach, dance and gospel. Services offered through CDT Productions Our clients are our best advertisement Send for a free CDT Productions Brochure

TOBY MOUNTAIN
Engineer & Producer
NORTHEASTERN DIGITAL RECORDING
 12 Sadler Ave., Shrewsbury, MA 01545
 (617) 753-1192

Credits: Extensive musical training MA, PhD University of California, Berkeley, additional work in digital signal processing at CORMA (Stanford University) and Experimental Music Lab (MIT), over 8 years recording and production experience in San Francisco, Europe, and East Coast

Services Offered: 2 track digital recording, editing, and master

ing using the Sony PCM-1610 system with Sony DAE-1100 Digital Editor. All kinds of production work multi-track mixdowns, on-location recording, digital audio for video, and mastering for LP, cassette, or compact disc.

AUDIE MURPHY/JOHN BOGERT
Engineer & Producer
A.W.M. PRODUCTIONS
 1006 S. Pope, Independence, MO 64050
 (816) 252-0530

Credits: A.W.M. Productions has over two decades of production experience both on stage and in the studio Qualified personnel strive to make your performance the very best, whether it's local, regional, or national. These include the '84 K.C. Chiefs pre-game entertainment and the regional semi-finals for the Wrangler Country Showdown '84.

Services Offered: A.W.M. Productions offers the absolute widest range of production services in the midwest. We're centrally located outside Kansas City, MO, the heart of the Midwest. We'll be there for the performance, be it local, regional or national. Some of our services include sound reinforcement and lighting designs, sales and rentals, full-service productions, management consultations, multi-track recording, permanent installations, tour jackets and promotional items, plus more. Just call (816) 252-0530. So when you're in need of production professionals we're here to help solve the problem. Remember A.W.M. Productions is ready and able to help. (816) 252-0530 — Kansas City's only full-service production company — Audie Murphy, owner

DAVID W. NELSON
Producer
 3470 19th St., San Francisco, CA 94110
 (415) 864-1967

Credits: Staff producer for Different Fur Recording (SF). Part owner of DDB Records, an independent jazz label. Album production for several West Coast independent labels, eight track demo work for rock and jazz. Extensive graphics background and advertising experience (Ogilvy & Mather and others)

Services Offered: Complete record and demo production services. As much or as little help as your project needs. pre-production planning, studio booking and session work, mastering, manufacturing, and marketing consultation. Top engineers and session musicians available. My experience, hard work and attention to detail will enhance the aesthetics of your project while being sensitive to your creative concerns, as well as your budget. Supporting materials for effective self-promotion planned and produced separately or as part of your record production. Access to Fairlight and Emulator II. Cassette duplication services

JOHN NEVIN
Engineer & Producer
 265 Auburn, Winnetka, IL 60093
 (312) 446-2285

Credits: Chicago Deutschmeister Kadelle, John Davis Quintet, Z Factor, SIN Band, Camarade Factor VIII, Tough Love, Changes

Services Offered: Record production and session engineering done right.

IAN M. NEWMAN
Engineer & Producer
GIMPER RECORDING SERVICES
 107B Broadmeadow Rd., Apt. #11, Marlboro, MA 01752
 (617) 481-0408

Credits: Hijackers, Atwaterkent, Selections, Citadel Country Echoes, Thunderhead, Ground Zero, Modern Morais, Mark Hanes & the Remains

Services Offered: Mobile multi-track recording for demo tapes. Rock videos. Electronic and digital consultant. Producer of new talent. Teaching recording engineering

LARRY NILSEN
Engineer
 635 Fitzwater St., Philadelphia, PA 19147
 (215) 238-8948

Credits: Production highlights — Commercials: The Nashville Network, National Liberty Mutual, Silo, The Sands Hotel and Casino, and Fidelity Bank. Corporate Video's AT&T, IBM, DuPont. Music Videos: 38 Special's "Back Where You Belong"

Services Offered: Location and post production sound for video and film. Also available for Chyron operation, video camera, and video tape operation. Sound studio services comprise the production of radio spots, TV and AV soundtracks

DAVE NODIFF
Engineer & Producer
STUDIO N PRODUCTIONS
 706 Waverly St., Framingham, MA 01701
 (617) 872-6843

Credits: Produced and/or engineered albums for: The Team Ministry, Douglas Ecker (2), Paul Krueger, others. video soundtrack: Levi Strauss

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For further information write:
The Aspen Audio Recording Institute
The Aspen Music Festival
1860 Broadway Suite 401
New York, New York 10023

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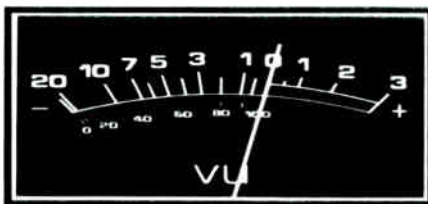
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INDEPENDENTS



& Co., platinum recording experience, credits since 1976 on both coasts. Contact for complete track record.
Services Offered: Recording/overdubs/mixdown in all formats, audio for video, music customization/editing, SFX, transfers, C-64 MIDI system, custom LP pressing. Call for info/rates.

DAVID NORMAN
Engineer & Producer
HIDDEN MEANING RECORDING STUDIOS/
HIS HEAD IS WEDGED PRODUCTIONS
1134 Watson Blvd., Warner Robins, GA 31093
(912) 923-5507

Credits: Engineer: Tony T. (single), Dee Dee Stephenson (single), Gilbert Lyons (single), Phoenix (single), Rayze (EP), Cotton Brothers (album), Elijah Rock (2 singles), EC the MC (single), Spooky (single), Evering Star Gospel Singers (album), The Circle Band (single), King Juan (single). **Producer:** AC Black and the Mean Kats, Spooky, Master Lisa McIntosh, Radio Silence, K.I.T.T.E.N.

Services Offered: 16-track recording studio, drum and keyboard work, radio airplay, remote recording, equipment rental, live sound reinforcement, stage lighting, jingles.

JOHN PALERMO & ED PALERMO
Producer
229 West 26th Street, New York, NY 10001
(212) 989-9341

JULIE ANNA PEREZ
Engineer
150 Joralemon St., Brooklyn Heights, NY 11201
(212) 237-1767

Credits: Audio engineer at National Broadcasting Company Inc. Have engineered for Nightly News, Meet the Press (in NYC) and others. Formerly freelance engineer in Miami for Audio Production and Sound Reinforcement Companies.

Services Offered: Television Production — studio and remote productions; Film Production — on-location engineer, film scoring engineer, Recording studio production — recording and mixing engineer with access to studios in New York City area, Sound Reinforcement — live concerts and recitals — also recording live performances to 2-track or multitrack tape machines.

JOHN A. PERGAMO
Engineer & Producer
J.P. PRODUCTIONS
414 Vanderbilt Ave., Brooklyn, NY 11238
(718) 622-7524

Credits: Film: Derek, "Long Live Rock" Videos: Derek, "Learn Breakdancing", NuClear Energy, "Rock Me" NuClear Energy's album and single "Singles Superdude", "Face the Music", NuClear Energy, "Money/Seaside Baby", Derek, "Big Boy/Long Live Rock", ClearCloud, "NY City's So Busy/Talking to Yourself" Album: Nuclear Energy, "Ground Zero."

Services Offered: 8 track state-of-the-art recording studio. Tascam 38x32 recorders, Tascam M 50 mixing console, dbx noise reduction, Biamp reverb unit, Delta Lab Echotron, Delta Lab digital delay & flanger, Seven piece Simmons drums, Memory Moog synthesizer, Roland GR300 guitar, Marshall & pre CBS Fender amps. Musicians and arrangers available. Will also produce outside my own studio. Rates negotiable.

GENE PERLA
Engineer & Producer
20 Martha St., Woodcliff Lake, NJ 07675
(201) 391-2486

Credits: Engineered and/or recorded: John Abercrombie, Ed Bickert, Chick Corea, Jan Hammer, Richie Havens, Elvin Jones, Masabumi Kikuchi, Mel Lewis, David Liebman, Charlie Mariano, Hermeto Pascoal, Lou Rawls, Nina Simone, Sadao Watanabe. Recorded with: Miles Davis, Woody Herman, Chuck Mangione, Jon Mitchell, Sarah Vaughan. Other projects with: Felix Cavaliere, Hall & Oats.

Services Offered: Independent audio engineering, producing, consultation. Video production, directing, editing, consultation. Assistance in audio and video disc and tape manufacturing, promotion and distribution via owned record labels: P.M. and PLUG Records. Educator of audio, video, music and music business on college level, currently teaching at the Center for the Media Arts in New York City. Professional musician.

acoustic and electric basses and keyboards. Composer and lyricist of all types of music.

SCOTT PETERS
Engineer
PLATINUM COAST SOUND
349 Harwood Ave., Satellite Beach, FL 32937
(305) 773-8741

Credits: Robin Chase, Bad Boys, Legacy, Special Forces, Locals Only, The No. 1xxx, Blind Rage, Satellite H.S. Chorus, '84 Indianapolis Art Festival, The Point After/WDIZ battle of bands, July 4th '84 Melbourne Jaycees battle of bands, '83 Cape Canaveral Surf Contest, member A & S.

Services Offered: Independent engineer for live and recorded sound. Consulting for home and commercial audio installations.

MICHAEL PETRUZZI
Engineer & Producer
3335 19th St. North, St. Petersburg, FL 33713
(813) 821-3160

Credits: 1969 West Palm Beach Pop Festival, 1970 Atlanta Pop, 1971 Celebration of Life Festival, 1972 Ten Years After Florida tour, Carlo Sound, '73/75 Allman Brothers, P.G.E., Johnny Winter, Lynard Skynard, Eagles, Bob Seger, Ted Nugent, Neil Young, '75-78 St. Peters J.C. music major '79-81, four European tours with Tasco Sound, 81 Beach Boys, ARS, Rossington-Collins, Wembly Country Festival, Claire Brothers, Showco, MSLI, Turbosound. **Services Offered:** All phases of live concert reinforcement (house, monitors, lighting, stage management), 15 years experience in live, recorded design and installation of audio electronics. Equipment: live 1/3 oct RTA, Apple IIe, IOS FFT analyzer, other test gear, B&K audio distortion, LofTech signal generator, Fluke multimeter.

FRANK R. PIERCE
Producer
148 Winthrop Road, Columbus, OH 43214
(614) 262-4518

Credits: CBS recording artist 1978. Songwriter/arranger for 12 years. Drummer and keyboard player. Producer of jingles for Amersound jingles. Most recent album production — "Snapshot" (featuring Julie Ivory) written, arranged and produced on Amersound records.

Services Offered: Producer of all kinds of music jingles, film scores, etc. Arranger of songs including horn charts, string charts, drum and sequencer programming and vocal arranging. Player with 10 years studio experience playing drums, keyboards, and singing.

KEN PINE
Producer
KENNY PINE PRODUCTIONS
4 Horizon Rd., Suite G21 Fort Lee, NJ 07024
(201) 224-0043

Credits: Produced top pop Billboard pick, Jake and the Family Jewels "Maybe". Produced Billboard top album pick, Jim Lord, "Inside Out". Currently producing and writing original music for new play by director of "Runaways". Produced TV commercials, demos for album artists etc. All above productions include arranging and playing.

Services Offered: Producing and arranging all types of music; singing, synth, guitar and LinnDrum playing and programming (MIDI also).

Matching studios to artist's budget needs. I use finest musicians in NY area including synthesizer specialist and programmers. Can book finest players nationally if artist desires. Have own pre-production facilities. Limited budgets present no problem.

CHARLIE POSITERRY
Engineer & Producer
GATOR TRACKS RECORDING STUDIO
104 E. Main St., Houma, LA 70360
(504) 851-4602 or 594-2085

Credits: Rod Hoxby, Tony Haseldon, Jim Odum (Louisiana LeRoux), Carol Bezaz, Vann Bruce, L.J. Foret, Halilax, Blue Max, Visitor, and other statewide talent.

Services Offered: Complete 16-8 4 track studio which consists of albums, singles, demo's and jingle projects, tape duplication system. We also have sound reinforcement system for local shows. We also can provide live remote recordings.

GARY POWELL
Producer
POWELL STUDIO PRODUCTIONS/URGENT RECORDS
303 W. 12th St., Austin, TX 78701
(512) 499-8888

Credits: Producer and director of A&R for Urgent Records, Canoga Park, California — manufactured and distributed by Sparrow Records. Producer for the following artists: Philip Sandifer, contemporary Christian music: Megan Mieserbach, classical flutist; Joe Scruggs, children's music: in house producer for Wink Tyler's Austin Recording Studio. **Services Offered:** Full in house arranging and orchestrating. Masters only, recorded and fully produced in Austin.



URGENT RECORDS

GARY POWELL
Austin, TX

PROCTER AND WARD Engineer & Producer

DeLUXE HOUSE
928 Carpinteria St., Santa Barbara, CA 93103
(805) 963-3509

Credits: We have produced funny radio spots for the U.S. Army, MGM Studios, Nexos Shampoo and Jonny Cat. Our radio comedy programs have aired all over California. We can take your product or service and create a campaign that generates recognition, excitement and goodwill. Services Offered: Procter and Ward can assist you in all phases of audio production. From brilliant copywriting to casting and voicing DeLuxe House offers sound quality at a reasonable price. We have a small but high class recording studio designed for voice production. We can produce outstanding radio programs and commercials at the drop of a hat...and we'll even drop the hat!



DJ RADKO
Dearborn Heights, MI

DJ RADKO

Engineer & Producer
PLUM RECORDING & PRODUCTIONS
9988 Silvery Ln., Dearborn Heights, MI 48127
(313) 277-0082

Credits: Sexy, June, Tabo, Vic Lainwyn & the Myth, Pelister, Ram-bus, Veda Grom, Space Rock, C.T.R.
Services Offered: 24 track recording, mixing, remixing, production, duplications, 45's & 12" discs, covers & sleeves, sound sheets.

MICHAEL RASKOVSKY

Engineer & Producer
RASKOVSKY PRODUCTIONS
11 Pleasant Ln., San Rafael, CA 94901
(415) 459-3781

Credits: Tommy Tutone, James Brown, Avalon Blvd., Patrick Divietri (digital LP), Uptones, Impulse F, Walt Disney Productions, KRON-TV.

Services Offered: 13 years experience in recording and broadcast; studio drummer with classic sound drums; digital recording; drum machine programming; editing a specialty; extensive experience in varied styles of music, including acoustic, classical, ethnic, square dance.

JEFF RAY

Producer
TAMARIN PRODUCTIONS
838 Meadowsweet Dr., Corte Madera, CA 94925
(415) 924-6559 also (415) 456-9300

Credits: 15 years songwriting experience with many bands and solo projects. 15 years song arrangement experience on solo and band projects. 10 years producer experience with various writers from pop-jazz to rock. 6 years producer experience in radio and television advertising for local, regional and national accounts.

Services Offered: I am a producer/composer. Being a songwriter enhances the approach to producing a writer's song. Retaining the writer's concept and then expanding on that idea, to achieve the most creative and fulfilled composition of a song, is my primary concern. My services also include being a multi-keyboardist and a lead/back-up vocalist and are available at your request.

GARY REMAL

Producer
REMAL MUSIC DESIGN
975 North Point, San Francisco, CA 94109
or 12830 Sunset Blvd., Los Angeles, CA 90049
(415) 885-4651 (213) 826-3181

Credits: Features such as "Breakin'," "Maria's Lovers," "Dark Circle," "Wild Rose," Norma Kamali fashion videos; some commercial clients include: Bank of America, Soloflex, Safeway, Chevron, Avon, Hunt Wesson. Two time Emmy award winner.

Services Offered: Original music designed, composed, arranged, and produced for feature film, television, radio I.D. packages, commercials, fashion videos, and multi-media/industrial projects. Extensive private library available for lower budgets. In house demo studio provides on-the-spot ideas for creative meetings. Known for extreme versatility, Remal Music Design specializes in turning imagination into sound. Offices in Los Angeles and San Francisco.

STEVEN REMOTE

Engineer & Producer
REMOTE MEN MUSIC/ AURA SONIC MOBILE AUDIO
140-02 Poplar Ave., Flushing, NY 11355
(718) 886-6500

Credits: TV/Audio: Frank Zappa, James Brown, Lena Lovich, Paddy Noonan, Soca Festival, Steve Forbert, NY String Orchestra, Johnny Thunders, Yello. FM live broadcasts: Howard Jones, Icicle Works, Dwight Twilley, The Police, XTC, The Members, Jerry Lee Lewis, Sam and Dave,

Joan Armatrading, Magazine, Buzzcocks, Gary U.S. Bonds, Polyrock. Records: Elvin Jones Live, Stevie Wonder, Simple Minds Live, Chris Rush Live, David Sanborn, Marcus Miller, Dorothy Norwood. Plus live audio work too many to mention.

Services Offered: 24 track mobile audio/video for pre and post production, audio mixing, engineering and producing. Digital recording available upon request. Also available: 24 track in house studio and live sound reinforcement.

MARK J. ROMERO

Engineer & Producer
150 E. 7th St., Apt. D-5, New York, NY 10009
(212) 674-6809

Credits: Eight years doing live sound and live recording, working with most every major jazz artist in the world. Two years on the road with Art Blakey and the Jazz Messengers doing sound and road management. One record date as producer. Still studying, always trying to learn more.

Services Offered: Live sound and recording engineering, studio recording, jazz recording date, producer. Road management, short or long term. Roadie, guitar and drum specialist. Concert promotion and booking. Record date organizing and consultation. Driver, up to twelve hours straight. Tour organization and booking. And last but not least, putting you in contact with someone you might need to know.

DON ROSS

Engineer & Producer
3097 Floral Hill Drive, Eugene, OR 97403
(503) 343-2692

Credits: Studio: Dan Siegel; Inner City, Don Latanski; Pausa, Jim West; MCA, Sterling Whipple; Elektra, Sneakers; City Lights, Don Norris; Pheasant, Tommy Smith, Mason Williams, Johnny and the Distractions, Gregg Tripp, Graphics, Helt, Rob McIntosh and Laurie Brown. Live: Oregon, Trapezoid, Holly Near, Hot Rise, Akiyoshi/Tabackin, George Shearing, Betty Carter.

Services Offered: For the past 6 years I have been engineering and producing demos, albums and singles for up and coming and established musicians alike. Combining many years as a musician with the necessary technical skills that comprise recording technology as it exists today, my goal is to offer new and established acts an accessible means to the public through the media of recording. Like many of the other engineer/producers, I have my own bag of tricks for creating national product, but in addition take great pride in my ability to relate to the musicians and their individual needs and goals.

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2727 Croddy Way, Suite G • Santa Ana, CA 92704
(714) 540-0063

Circle #073 on Reader Service Card

BEN RYAN

Producer

TRILOGY MUSICS

P.O. Box 1048, Siloam Springs, AR 76721
(501) 524-8034

Credits: Regional jingles for Luv that Yogurt, A.G. Edwards, Dr. Ben Israel-optomtrist, Pontiac Dealerships, Call letters for radio station KLRC, original music for John Brown University's slide show; music revues arranged for various university groups

Services Offered: Trilogy Musics is involved in the composition, arrangement, and production of jingles, slide show sound tracks, call letters, and music beds for retail businesses and the broadcast media. We can produce the highest quality custom albums, arrange live music for music revues or industrial shows, and also provide instrumental or vocal talent for your needs. Most studio work is produced in the Dallas, Texas area below average Dallas production prices. Quick turn around time on all contract work.

NICK RYAN

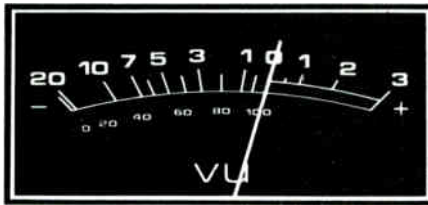
Engineer & Producer

NICK RYAN LIMITED

76 Bradbourne Road, Seven Oaks, Kent, England TN13 3QA
0732-459-185

Credits: Remix engineer on Trevor Horn's Frankie Goes to

INDEPENDENTS



Hollywood track "War", recording/mixdown engineer for all Sheena Easton product including her third album, remix engineer on Yes 12 "Leave It"; remix engineer for Gerry Rafferty's album "Sleepwalking", recording/remix engineer on Robert Fripp's King Crimson album "Larks Tongues in Aspic."

JOHN SANDERS

Engineer & Producer

JOHN SANDERS PRODUCTIONS

P.O. Box 816, N. Arlington, NJ 07032
(201) 368-1912

Credits: We have produced sessions as announcer/narrator and/or producer for Saratoga, Phoneguard, JCPWI, Gonzer Graphics, J.P. Roberts, Inc., Spectrum Studios, The Idea Farm, The Slide Center, Genovese Drugs, Nice Stuff Stores, The Greatest Banking Story Ever Told, and too many more to list

Services Offered: Local and mail order production services. This unique company will produce audio visual soundtracks, and radio and television commercials. Send us your script, and our staff of actors and actresses will narrate it to perfection. Quick complete service. We also offer original music. Big selection of sound effects and stock music always on hand. Come to us or we can come to you! We are as close as your mailbox.

RICHARD SANDERS

Engineer & Producer

SALT PRODUCTIONS

P.O. Box 21021, Denver, CO 80221
(303) 469-5151

Credits: We have written and produced soundtracks for many industrial films & multi media soundtracks. Also we write, arrange and produce for many Christian groups, both nationally and locally. **Services Offered:** We do producing, engineering, writing and arranging of almost any type of music. We are able to provide whatever is necessary for any audio production, including musicians, synthesizer programming, and studio or live recording dates. We specialize in music production, arrangements & original scores for soundtracks, albums & tapes. Quality at reasonable prices.

RICK SANDIDGE

Producer

SANDCASTLE RECORDING STUDIO

Wade Hampton Mall, Suite 109, Greenville, SC 29609
(803) 235-1111

Credits: Rick Sandidge has produced the following: Sonny Turner, Pilots Panic, Rob Cassels, The Killer Whales, J.D. Wilson, Harvey Willis, Bill Barnes, Joe AmLee, Don DeGrate, Susan Atkins, Country Gold, Ramblin Band

Services Offered: Producing, engineering, video producing, sound reinforcing

MICHEL SAUVAGE

Engineer & Producer

345 West 85th St., New York, NY 10024
(212) 724-5153

Credits: PRODUCER Roy Buchanan Ernie & the Imports, Rivendell, ENGINEER Tom Dickie & the Desires, Minglewood, Fallen Angel, Rolling Stones, Kid Creole & the Coconuts, Lloyd Cole, plus contributions to Hall & Oates "Big Bam Boom," Foreigner "4," The Clash "Combat Rock," and Carly Simon, Jeffrey Osborne, Peter Tosh, Grandmaster Flash

Services Offered: Strongest asset is ability to inspire musicians and singers to reach new heights in the studio. Also helps create atmosphere of highest quality work, resulting in top performance from everyone associated with the project. "Vibe" oriented producer, believing that if players feel positive and excited the feeling will transfer to tape, making it as full possible at any time. Musician (guitar and keyboards), composer, arranger. Also big on technical excellence and audio art, having worked with Robert John Lange, Bob Clearmountain, David Tickle, Neil Keron, Ric Ocasek. Loves teamwork, and serious but fun approach to recording.

RICK SCHNEIDER

Producer

FINE TUNING INC.

322 Spring St., New York, NY 10013
(212) 431-4788

Credits: Video production for the Rolling Stones, Kool and the Gang, Shannon, Willie Nelson, Starpoint, Ellen Foley. Audio production recordings by the Rattlers, Zambomba, Greg Alper, the Flint Brothers, Graham Moses. Film soundtracks for Exxon. CBS

Services Offered: Full production of videos, from concept to completion and of master audio tapes. Presently Fine Tuning has two record labels: 'Rado Records' for rock and 'Trantor' for jazz and new music.

GLENN & KEN SCOTT

Engineer & Producer

4354 Monteith Dr., Los Angeles, CA 90043
(213) 294-1892

Service Offered: Are you looking for help with your demo or project and find these producer/engineer listings in Mix a little intimidating? We specialize in producing demos. We'll give you as much (or as little) assistance as you need to get your project on tape — with an added bonus we'll even record it for you in our fully equipped 8 track recording studio. We welcome songwriters, musicians, and yes, even bands. Our rates are competitive, and our quality is excellent. Write or call us and we'll show you what we have to offer.



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Barry Thornton
AB Systems



AB System Design, Inc.
11480 Sunrise Gold Circle
Rancho Cordova, CA 95670
(916) 635-0890

Circle #074 on Reader Service Card

CARYL SHERMAN

Producer
MONTAGE MUSIC
 Box 154, San Geronimo, CA 94963
 (415) 479-6062

Credits: I grew up in a music industry family/eight years recording experience/live completed and marketed albums/over two dozen demo projects/multi-track back up vocals on a popular national 1984 radio jingle/live concert hall and recording production credits/dedicated, articulate, and easy to work with.
Services Offered: Production and production assistance for San Francisco Bay Area multi-track recording projects/demos and albums/public relations and clerical support/vocal and instrumental arrangements/open to TV, film, and radio career expansion/creative, highly organized, with a love for music, and dedicated to the sounds of current recording industry standards.

MICHAEL SMALL

Engineer & Producer
PHANTOM POWER PRODUCTIONS
 Box 176, Trivoli, IL 61569
 (309) 565-4890

Credits: Been producing and mixing bands for live performances for over 8 years. Acts include: U.S. Steal, The Cause, Bad Habit, Scanner, Intruder. Produced seven bands for Wheelchair Power Benefit annual battle of the bands. Graduated from the Recording Workshop in Ohio. Engineering now for Wooden Nickel Studio.
Services Offered: By using an acoustic room analyzer and pink noise generator for equalizer applications, and 8 years of live sound mixing, I can provide any customer with quality work in live performances. At Wooden Nickel Sound Studio, free services will include preparing the customer(s) before they enter the studio on how to adjust to studio techniques. Help to unload and load equipment is available. One hour free set-up time is provided. Outside engineers are welcome.

JIM SMITH

Engineer
ROBERT BERNING PRODUCTIONS
 710 Papworth Ave., New Orleans, LA 70005
 (504) 834-8811

Credits: Clients include: NBC Sports, NFL Films, NCAA Productions, International Harvester, IBM (southern region), Getty Oil, Union Carbide, Emerson Electric, Litton Industries, Weaner Corporation, State of Louisiana, State of Mississippi, Bowen-McLaughlin-York and more.
Services Offered: Turn key audio production for radio, television, and film. Otari equipped recording studio for mixing, narration recording looping, etc. Full-coat transfers and pre-mixes. Flat bed editing, sound effects, original and licensed music. Analog and digital location recording, playback sync capabilities. Support services. Contact: Jim Smith.

BOB STEBBING/JOHN DEVRIES

Engineer & Producer
NEW CREATION RECORDING STUDIO
 P.O. Box 262, Glendora, CA 91740
 (818) 335-3989 or 963-2138

Credits: Custom album for Donna Kaye & Company, Soundtrack for Christian musical "Miracles."
Services Offered: We now have in addition to the main studio, a drum isolation booth, auxiliary vocal booth, and 13'x7' control room. The Yamaha studio piano, Hammond organ and all our out-board equipment (including compressor/limiters, expanders, gates, duckers, digital delay, digital reverb and dbx noise reduction) is included at no extra cost. We also have a professional arranger on staff and free musician referral service. Whether you want to record a demo, back-up tape for vocalist, voice-over for multi-media project, or a custom album or tape, call any time and we will set up an appointment to discuss your project and get started!

BOB STOHL & KAT EPPLE

Engineer & Producer
BOB KAT MUSIC PRODUCTIONS
 P.O. Box 5503, Berkeley, CA 94705
 (415) 548-9766

Credits: Music for films for Pepsi, Apple Computers, NASA, NY Metropolitan Museum of Art, Jet Propulsion Laboratories, Smithsonian Institute, documentaries, PBS, Emmy Award for music — 1980. Addy Awards for music 1979 through 1983. Cine Eagle Award. Music for ads for Miami Airline, Aetna Insurance, Falmalare Shoes. Theme music for TV news. Music for Planetariums.
Services Offered: Full production of originals music for films, video, dance, radio and television commercials. Excellent multitrack facilities — up to 24 tracks. All instrumentation and styles of music. Specializing in synthesizers and digital orchestrations. State-of-the-art digital synthesizers and outboard gear. Custom sound effects. Library of music and sound effects available. Computer generated video special effects. (NTSC) also available. Recording facilities in San Francisco Bay Area, Dallas, and NY area. Quality music to fit your needs at very reasonable rates.

SHARON STONE

Producer
O-TONE PRODUCTIONS INC.

224 W. 49th St., Suite 315, New York, NY 10019
 (212) 757-3861

Credits: CBS Sports, HBO, "Groove Girls."
Services Offered: Complete in-house full production 8 track studio with staff musicians. All aspects and phases of artist and media production. Sensitive and budget conscious. Also Fairlight CMI programming composition and songwriting.

DOUG STEWART/RICK WURPEL

Engineer & Producer
 T.T.S., INC.
 2177 S. Cherry St., Denver, CO 80222
 (303) 758-8082

Credits: "U2 Live at Red Rocks" video and soundtrack. "The Fixx at the Rainbow" video and soundtrack, ZZ Top Schlitz spot video and soundtrack, "The Gibson Jazz Concert" video and soundtrack, "Nashville Network Denver Premiere" video and soundtrack, "Savoy Brown Live" video and soundtrack.
Services Offered: Location video and audio production, location coordination, location video and audio recording, production financing, staging, lighting, location audio reinforcement, video reinforcement, production management, video and audio post-production, program marketing and distribution, corporate sponsorship. All forms of live satellite uplinking and teleconferencing.

RON STREICHER

Engineer & Producer
PACIFIC AUDIO-VISUAL ENTERPRISES
 545 Cloverleaf Way, Monrovia, CA 91016
 (818) 359-8012

Credits: Audio engineer for Mann Music Center/Philadelphia Orchestra; radio broadcasts for the Los Angeles Philharmonic Orchestra; live "direct-to-stereo" broadcasts and recordings for National Public Radio, Radio Music California Network, KPFF, et. al.; recordings for Angel, CMS Desto, Discovery, CRI, SAZ, and AEA record labels; first digital recording in Pakistan; author of several technical papers on mixing and recording techniques for the Audio Engineering Society.

Services Offered: Pacific Audio-Visual Enterprises provides cost-effective, quality-oriented services by specializing in basic, time-proven production techniques — without unnecessary fuss or gimmickry. The result: a successful job...on time, and within budget. Complete facilities are maintained ready to travel for on-location audio projects across town or around the world: analog or digital recording, editing, and post-production; record and/or cassette duplication; broadcast production; live mixing for concert sound reinforcement; music and performance coordination; audio systems design and consultation; lectures and seminars on recording techniques. With my lifelong involvement in music presentation, I can also serve as a music producer, as well as a recording engineer.

CHUCK THOMAS

Producer
MASTERSOURCE MUSIC
 704 N. Wells, Chicago, IL 60610
 (312) 922-0375

Credits: National and regional credits. We are also producers of the Midwest Music Exchange, a regional music conference on the current trends of the biz. Years of experience in top-40 and contemporary Christian formats.
Services Offered: Long term artist relationships mandatory. Material and stylistic development is our strength. National contacts and networks.

SHAUN TRONE

Engineer & Producer
 104-53 142nd St., New York, NY 11435
 (718) 658-3475
Credits: Producing the band Oasis II.

JOHN TYLER/LOU SIMMONS

Engineer
RM STUDIOS
 2528 Chamblee-Tucker Rd., Atlanta, GA 30341
 (404) 458-6000

Credits: Heart Fixers, "Live from the Moon Shadow"; Glenn Phillips Band, "Spies of Life"; Stone Mountain Band etc.
Services Offered: 16 track in house and remote recording. We have a 26 foot I.H. truck.

LEANNE UNGAR

Engineer
 49 Park Ave., Apt. 1D, New York, NY 10016
 (212) 685-0823

Credits: Laurie Anderson, David Van Tieghem, Leonard Cohen, Paul Winter, Lost Tropics, Gary Portnoy, Cat Stevens, Leata Galloway, Janus Ian, Peter Criss, Carole Laure, Lewis Furey, Randy Bishop, and others.
Services Offered: I like to be involved from rehearsals through test pressings. I like to travel. I have 12 years of studio experience in albums and film scores. I also do location sound.

DANIEL R. VAN PATTEN

Engineer & Producer
 833 W. Collin Ave., Orange, CA 92667
 (714) 771-1410

Credits: Geffen, Phonogram Int. & U.K., Enigma Records, Island Records, Duraco Records, Rak Records, Teldec-Telefunken-Decca, Chinn-E-Chap, Cocteau Records (U.K.), LPs and singles for Berlin, Pleasure Victim Metro singles, also Big Country, Madness, Chris Ruiz-Velasco.
Services Offered: Independent producer/engineer specializing in synthesizers. Staff producer M.A.O. Records. Complete synthesizer system including Prophet 5, Moog Modular, Roland Modular Systems 700 & 100, Roland Microcomposer, Roland CSQ600, TR808, Vocorder and Roland Juno 60.

JOE VAN WITSEN

Engineer
SPEED OF LIGHT
 2430 Jones St., San Francisco, CA 94133
 (415) 441-7806

Credits: Broadcast radio and TV production of commercials for CBS, Warners, Capitol Records, RCA Records.
Services Offered: In studio and on-location sound recording. Mixing and special effects. Special emphasis on music video production.

BRIAN A. VESSA

Engineer & Producer
BV PRODUCTIONS
 P.O. Box 3272, Santa Monica, CA 90403
 (213) 453-3636

Credits: 4 gold albums and assorted recordings for Ariola and Melody Records; LAX "Dancin' at the Disco"; CSUN Jazz Band; several HBO programs; numerous commercials including: Disney, Tomy Toys, Aqua Vend, Del Monte, etc.; many records and demos for L.A. artists; Chief Engineer and audio designer for Salty Dog Recording.
Services Offered: Multi-track recording and production, preproduction planning and demos, live sound, remote recording, audio consulting, modifications and maintenance for studio electronics. Each project undertaken receives my full attention to detail, regardless of the type of music or budget. With 20 years experience as a musician and 10 years in the professional audio and engineering field, I can comfortably provide the link between the artist and the studio. My interest is in the creative process and the realization of musical ideas.

NARADA MICHAEL WALDEN

Producer
PERFECTION LIGHT PRODUCTIONS
 c/o Gregory DiGiovine,
 827 Folsom St., San Francisco, CA 94107
 (415) 626-0655

Credits: Sister Sledge, Stacy Lattisaw, Angela Bofill, Phylis Hyman, Aretha Franklin, Carl Carlton, Herbie Hancock, Pattie Austin.
Services Offered: Complete production or executive production with his assistant producers.

MATTHEW WALLACE

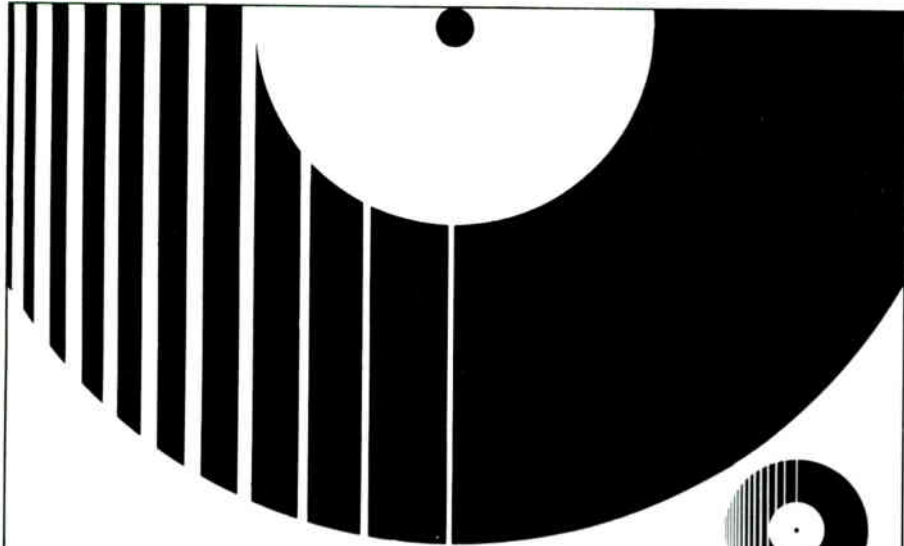
Engineer & Producer
DANGEROUS RHYTHM
 3700-B East 12th St., Oakland, CA 94601
 (415) 261-9150

Credits: Yo, Monkey Rhythm, Virgin Release, Fade To Black, Faith No More, Necropolis of Love, Panah, Big Race, B-Team, David Crosby, IfThenWhy, Jet Boy, Wild Game, Fountains of Use, Love Circus, Den 55, Dub Oven, Danny McGinnley, Man Machine, Love Overdose, Mustapha Mondy, Castle Blak, Rory McNameera, Aquaveets.
Services Offered: Everything from pre-production to record pressing to radio airplay. Will work with any equipment from TEAC four track machines to two Studer 24 track tape machines Q-locked together. I have worked in many of the Bay Area sixteen and twenty four track studios and I am at home with most of the current equipment — digital reverbs, SMPTE, automated mixing, etc. To conclude I would like to say: "Hey, you're beautiful, awesome, intense and vehicular — let's do sushi sometime you love epidemic you."

JEFFREY WEBER

Producer
EN POINTE PRODUCTIONS
 P.O. Box 1451, Beverly Hills, CA 90213
 (805) 497-1584

Credits: Tom Scott, Toni Tennille, Stanley Clarke, Lenny White, Chuck Corea, Maynard Ferguson, Lalo Schifrin, Freddie Hubbard, Free Flight, Steve Lukather, Kenny Berrill, Tim Weisberg, Roger Kellaway, Louie Bellson, Nancy Wilson, Richard Page, Maria Muldaur, Lee Ving (Fear), Night Plane, Patrice Rushen, Russ Kunkel, Michel Petrucciani, Paul Smith, Barney Kessel.
Services Offered: Our firm specializes in digital, direct to disc and live recording with special emphasis on live two track recording. En Pointe is the only independent audiophile production company



FUTURE DISC SYSTEMS

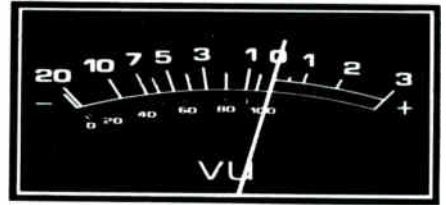
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GREGG X. WINTER

Producer

EXTRATERRESTRIAL SOUND

40 Hitching Post Lane, Glen Cove, NY 11542
(516) 759-9396

Credits: Debut album for The Nails (entitled "Mood Swing") on RCA Records Worldwide, 12" dance mix of After The Fire's "Der Kommisar" on Epic Records, Army of One on WEA Records International, as well as numerous independent label productions.

Services Offered: Being a songwriter and musician (I wrote and sang background vocals on 'Eyes on Fire' for Blue Oyster Cult's recent "The Revolution by Night" album) is extremely helpful to my work as a producer. Helping bands get the most out of their songs and then tweaking the arrangements is priority one. From that crucial starting point the right performance and the right sounds can naturally flow

ARTHUR G. WRIGHT

Engineer & Producer

NONSTOP PRODUCTIONS, INC.

3320 E. Century Blvd., Lynwood, CA 90262
(213) 636-2573

Credits: Gold and platinum awards. Produced and arranged: Billy Preston, Syreeta, Mary Wilson, Raul de Souza, Jose Feliciano, Thelma Houston, Diana Ross, Smokey Robinson, Donna Summer/Paul Jabara, Wright Brothers Flying Machine, Thank God It's Friday (movie and soundtrack), Jackson 5, Jermaine Jackson, Vikki Carr (live/Las Vegas Hilton), others.

Services Offered: Producer/arranger/musician. Complete record production services including guitar, bass, composing, engineering. Any type of music. Can handle entire project from concept to mastering. Expertise gained from over 20 years experience in recording and live entertainment fields. Also audio consultant, equipment design and construction. Designed and operated NSP Studios (Hollywood). Design and build recording consoles, NSP 84B, NSP 128A; Quadgate, power amplifiers D104 Series. Design/sound/engineering consultant for several studios in Southern California. Other credits and resume available on request.

DANIEL G. YEANEY

Engineer & Producer

FIRST TAKE PRODUCTIONS

11140 Westheimer, Suite 181, Houston, TX 77042
(713) 981-9519

Credits: ZZ Top, Rancho BeBop, Z-Rocks, Tokyo, The Road, Grey Haven, Walkee Talkee, A-Pace, The Judy's, The Big Boys, The Offenders, M.D.C. Stains, Charms, Blue Blazes.

Services Offered: First Take is a full service company specializing in music production. Live and studio engineering, A.V. engineering, audio for video, and all phases of music production, arranging and consultation are offered.

BRYAN H. YOSHIDA

Engineer & Producer

FARALLONES PRODUCTION INC.

P.O. Box 156, Saratoga, CA 95071
(408) 253-8043

Credits: Dirk Hamilton, Mike Bloomfield, Barbara McNair, Mickey McNeil (Three Dog Night), Doug McClure, Jerry Miller, The Wheel, Tom Scott Band, Terry and Monalisa Young, Maria Muldaur, Luxury, Rick Lux Band, Scott Skinner Group, Flux, The Donuts, Cornell Hurd Band, Diane Martinez, The Blonds, Al Jarreau, Old Forest, The Chamber Jazz Ensemble.

Services Offered: Producer, engineer, musician, composer-arranger, photographer, accountant, business manager, sales representative, travel arranger and optimist/visionist. Specializing in start to finish production of high class, premium quality recording projects including numerous radio and video commercials. "Just step onto the shore — Of silver sands and magical love lust — We'll meet again tonight, life by the bay!"

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Circle #075 on Reader Service Card



KLIPSCH KSM-1* PICTURED ABOVE

KLIPSCH® Presents A Whole New Slant On Stage Monitoring

No longer will a musician have to strain to hear his performance over the sound of the P.A. stack.

At least not when he's using the new KLIPSCH KSM® or its big brother, the KLIPSCH KSM-1.®

Both these slant monitors have exceptionally hot midrange sensitivity and a response curve that allows them to cut-through any P.A. stack and to virtually eliminate bass masking – that annoying loss of detail that occurs in music mixes with heavy bass information.

Both have a multiangle cabinet configuration that gives you tremendous versatility in placement for shallow or deep stage.

Simply stated, these new KLIPSCH monitors let you hear yourself perform. Clearly.



Introducing the new KLIPSCH KSM (left) and KSM-1 slant monitors.

Which Is For You?

The real difference between these new monitors is in the bottom end. The KSM-1 has a larger (15") woofer and gives you a little deeper bandwidth making it ideal for monitoring kick drums, keyboards, and other instruments requiring extended bass response. In most applications, however, the low-end of the KSM is more than adequate

Hear For Yourself

For a hot demonstration of the new KLIPSCH KSM and KSM-1 slant monitors, look in the Yellow Pages for your nearest KLIPSCH Professional Products dealer. He'll have the products and the pamphlets to help you make the best decision.

Compare these new monitors to any others of any price and you'll see what

a great value KLIPSCH offers.

Get with the new slant on monitors. With KLIPSCH.

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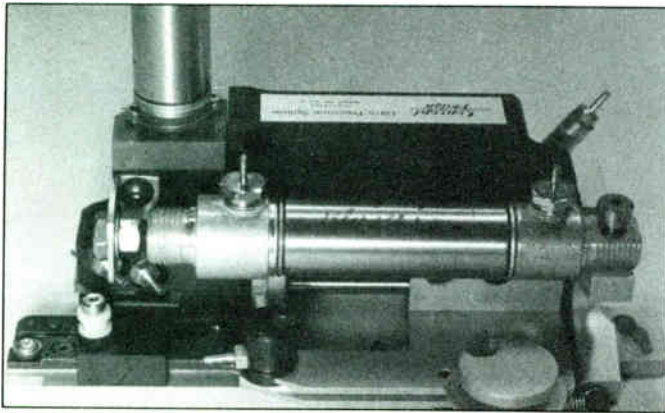
PREVIEW

Bryston 1B-Pro Phono Preamp

Brystonvermont, of Montpelier, VT, has introduced the 1B-Pro phonograph cartridge preamplifier designed for broadcast facilities, recording studios and cutting rooms. The new unit, housed in a 1.75-inch rack mount package, features internal switches for setting cartridge capacitance requirements, and two front panel controls for gain adjustments.

The 1B-Pro is available with XLR-type electronically balanced outputs; both balanced and unbalanced models may be loaded for 600 ohms. The preamp's gain and headroom are sufficient for both +8 dBm and +4 dBm operation. Price: to be announced.

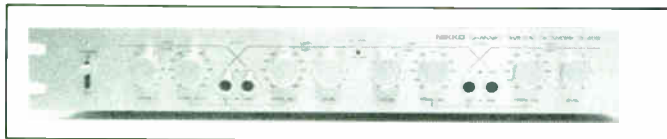
Circle #077 on Reader Service Card



Ultra Precision Cassette Splicing System

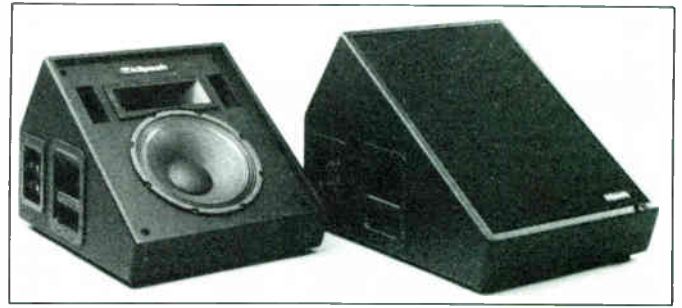
Electro Sound (Sunnyvale, CA) and Concept Design of Burlington, NC, have entered into a joint agreement to make available the newly-patented retrofittable Ultra Precision Splicing System for the King 700 Series cassette loaders. This pneumatic operated splicing system includes a number of innovative features: no tools are necessary to change splicing tape rolls; the unit uses inexpensive, disposable injector-type razor blades; and the splicer's roller bearing design eliminates the need for constant lubrication and maintenance.

Circle #078 on Reader Service Card



Active Crossover from Nikko Pro Audio

The D-403 dividing network from Labo, Nikko Audio's pro sound division, is a two-way stereo/three-way mono active crossover featuring: 22 crossover points (11 selectable frequencies from 125 to 1250 Hz, with safety-recessed 10x multipliers), four independent level controls, and 12/18 dB per octave slope switches for both LF and HF bands. The unit is packaged in a 2 1/4-inch high rack mount cabinet, has built-in circuit breakers and accessory AC outlets, and is available with either silver or black faced front panels. Circle #079 on Reader Service Card



Klipsch Slant Monitors

Klipsch and Associates of Hope, Arkansas, have introduced two new slant monitors for stage and PA applications. Each of these is a two-way vented box system with a 1.5-inch horn loaded compression driver for the high end. The frequency response of the KSM model (with a 12-inch woofer) is given at 85-15k Hz \pm 5dB; midband sensitivity is 104 dB, 1w/1m; with a maximum continuous output of 126 dB at one meter. The KSM-1 with a 15-inch woofer has a response of 50 to 15k Hz \pm 5dB; a midband sensitivity of 102 dB at 1w/1m and a maximum continuous output of 125 dB.

Both monitors feature a multiangle cabinet configuration; 3/4-inch void-free plywood construction; a textured black lacquer finish; and recessed carrying handles placed at balance points for easy transport by one person.

Circle #080 on Reader Service Card

Low Cost Time Code Reader Program

Editing Services Company, of Plymouth, Michigan, have unveiled their full-featured play-speed time code reader program designed for the Apple II family of computers and compatibles (16k minimum). The program, which costs \$40 and is supplied on an unprotected DOS 3.3 format disk, reads and decodes both SMPTE and EBU versions of the frame address code at \pm 15 percent play speed at levels from -20 to +15 dBm. No hardware or modifications are needed: a single audio cable links the VTR or audio deck to the computer, which displays time, user bits, and drop-frame status. A "hold" mode feature freezes the display for note taking. ESC also offers a companion code generator (priced at \$45) for off-line use.

Circle #081 on Reader Service Card



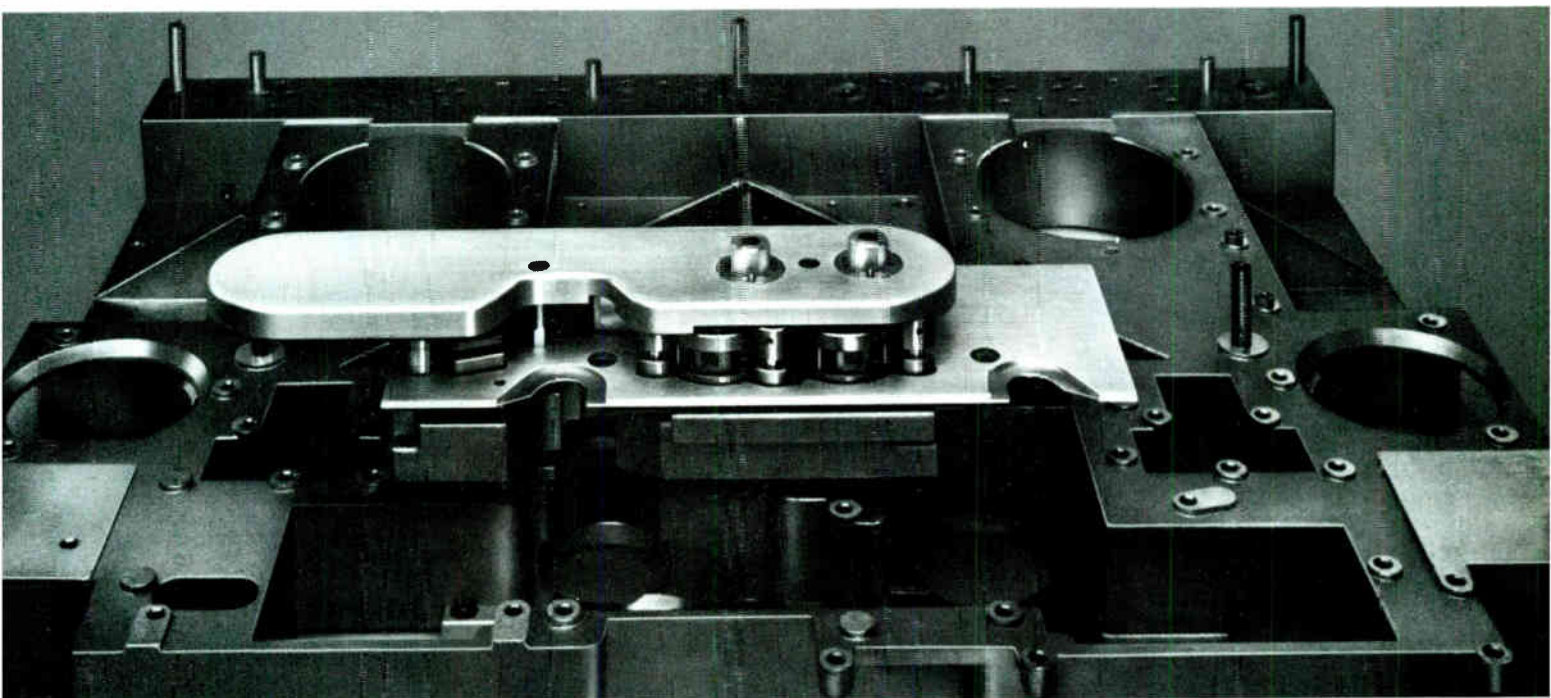
Ursa Major Stereo Synthesizer

The MSP-126 Multi-Tap Stereo Processor from Ursa Major performs a variety of stereo synthesis functions, including stereo from monaural sources, precise sonic image manipulations, ambience simulation, individual and cluster repeats and more. The unit utilizes PCM digital technology and offers eight modes, each of which can be further adjusted by two 16-position controls. The MSP-126 has wide-ranging applications in music recording, film/video soundtrack production, electronic music synthesis, and especially to stereo AM and TV broadcasters and producers with the need to create high-quality stereo source material. Full mono sum (left + right) compatibility is assured for end listeners with mono playback equipment.

The front panel features a 16 character alphanumeric readout of modes and control parameters for easy repeatability. Since the MSP-126 is totally software driven, new programs and updates are possible. The processor is priced at \$2,500.

Circle #082 on Reader Service Card

Studer A80MR MKII and A80QC MKII



A solid foundation for high quality cassette duplication.

Stability and precision are essential at both ends of your cassette duplication chain: mastering and quality control. Your cassette product is only as good as your master, and your quality control is only as good as the machine performing it. That's why leading duplication facilities - including Capitol, CBS, MCA, and RCA - rely on mastering and QC recorders from Studer.

The Master Class The Studer A80MR MKII mastering recorder is available in 1/2" and 1" formats with 2, 4 or 8 channels. The new MKII version now offers transformerless inputs and outputs, a new headblock design with unequalled high frequency phase stability at low speeds, and a new record driver with higher record headroom. A special narrow-gap reproduce head delivers frequency response up to 20 kHz, even at 3 3/4 ips. The A80MR MKII is compatible with chrome tape formulations, and Dolby HX Pro* is available as an option.

And the solid, Swiss-made transport guarantees this exceptional performance. Hour after hour, run after run, for years to come.

The Heavyweight Champion of Quality Control At about 220 pounds, the A80QC MKII reigns as the world's heaviest "cassette" recorder. Its massive, die-cast chassis provides a stable platform for performing measurements with exacting precision. In addition to inspecting raw tape packs and checking prerecorded tapes, the A80QC MKII may be used to make consistently reliable cassette calibration tapes.

The new MKII version of the A80QC now offers a die-cast steel headblock chassis with calibrated azimuth control and new guides to minimize scrape flutter. A new repro head gives better S/N performance, while a new ferrite record head is compatible with all three IEC tape formulations.

Built to survive the cassette explosion. The pre-recorded cassette business is booming, and the best business goes to facilities offering the highest quality. Quality that begins with Studer and is assured by Studer. Call or write today for

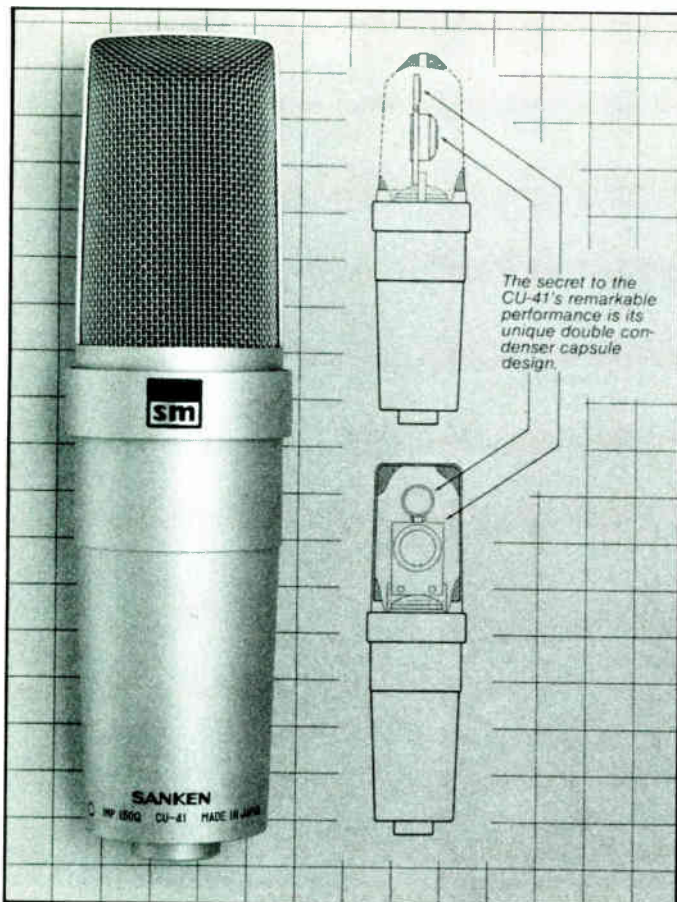
more information on Studer recorders for tape duplication applications.

Studer Revox America, 1425 Elm Hill Pike, Nashville, TN 37210, (615) 254-5651.

*Dolby HX Pro is a trademark of Dolby Laboratories, Inc.

STUDER REVOX





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and its related accessories in the U.S. The CU-41 is one of the first microphones in the world that can unlock the full potential of digital audio recording. The U.S. dealers for the CU-41 are:

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Nashville: Studio Supply Company, Inc.
1717 Elm Hill Pike, Suite B-9, Nashville, Tenn. 37210
TEL (615) 366-1890

Hollywood: Audio Industries Corporation
1419 N. La Brea Ave., Hollywood, Calif. 90028
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Circle #088 on Reader Service Card



Uher Portable Stereo Cassette Deck

Uher of America, (North Hollywood, CA) has introduced the Model 160 portable stereo cassette recorder. The 160 features both Dolby B and C noise reduction, three built-in speakers for on-site monitoring, switchable automatic level control with two time constants and twin peak-reading meters with dB scales.

The Uher 160 has a front loading cassette compartment; three-way tape selector (Fe, FeCr and Cr tape); line, mike, radio and phono inputs as well as line, radio, monitor, headphone and speaker outputs. The unit can be powered by six dry cells, nickel-cadmium rechargeable batteries, 12 volt car batteries or 110/220/240 VAC 50-60Hz current. Optional accessories available for the Uher 160 include facilities for film dubbing, sync sound (Uher 160AV) and remote control operation. The recorder is priced at \$905.

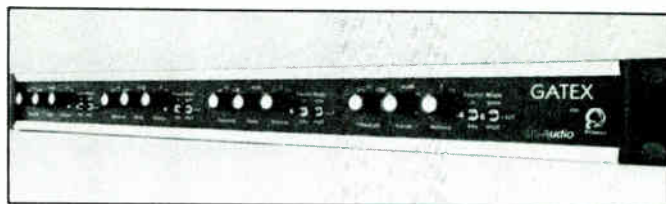
Circle #085 on Reader Service Card

Infinity RS11 Mini Reference Monitor

The Infinity Systems RS11, a compact high fidelity loudspeaker, also has applications as a mini reference monitor in recording and broadcast studios. The RS11 is acoustically designed for accurate, clear sound reproduction, and its ultra small (12" x 5 3/4" x 7 1/2") dimensions allow placement where space may be limited.

The monitors' two-way design features a 4-inch polypropylene woofer and a 1 1/2-inch polycarbonate tweeter. Priced at \$112/pair, the speakers are rated at 50 watts maximum with a frequency response of 75 to 23k Hz, ± 3 dB.

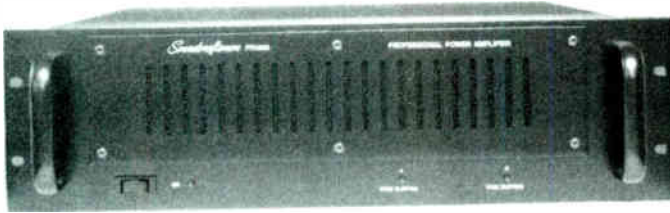
Circle #086 on Reader Service Card



Gatex Four Channel Expander/Gate

Gatex, from USAudio, Nashville, TN, is a rack mount unit with four independent expander/gates built into a 1 3/4-inch high package. Each channel has controls for: threshold (-40 to +20 dB); attenuation range (up to -80 dB); release, from .05 to 5 seconds; and a three step mode switch offering expansion slopes of 1:10 (gate), 1:2 (exp 1) and 2:3 (exp 2). Three LED status indicators are also provided for each channel. The units are based on the new Valley People TA-104 voltage controlled amplifier, yielding low distortion and wide dynamic range. Back panel connectors for signal input, key input, and output are three-conductor, 1/4-inch type. Gatex is priced at \$399.

Circle #087 on Reader Service Card



Soundcraftsmen MOSFET Amplifier

The Soundcraftsmen PRI800, is a new MOSFET power amplifier rated at 600 watts per channel at 4 ohms from 20Hz to 20kHz FTC with less than 0.05 percent THD. The amplifier, designed specifically for low impedance loads with high continuous power output, is also rated at 750 watts per channel at 2 ohms, 375 watts per channel at 8 ohms. Construction is plug-in modular, for field serviceability. The left and right channel driver and output boards are interchangeable. Speaker protection is provided by in-circuit DC blocking as well as output relays; two two-speed, thermostatically-controlled fans cool the amp.

Inputs may be balanced or unbalanced, with connections made via XLR connectors, barrier strip or 1/4-inch phone jacks. Outputs are 5-way binding posts. The rear panel also features stepped level controls, mono bridging switch (1500 watts at 4 ohms bridged mono), and an input compressor selector switch. The Clip-Sensing-Compressor (CSC) circuit enables substantially increased average power output, up to 15 dB potential gain advantage, before clipping. The True-Clip indicators for each channel are designed to detect waveform distortion, thus providing an accurate indication of actual clipping. The PRI800 is priced at \$1199.

Circle #089 on Reader Service Card

Milab Variable Pattern Microphone

The Milab VIP-50 is a variable internal pattern transformerless condenser microphone with on-board controls for the selection of polar patterns, a -12 dB attenuation pad, and .line/mike level outputs. Each membrane on the dual-diaphragm capsule has its own active balanced preamp with dual FET stages. The selection of polar patterns is accomplished via the mixing of the signals from the two preamps rather than any physical movement of the capsules. The microphone is powered by an external 48 volt source and an LED lights when the unit is "on." Manufacturer specifications state a frequency response of 20 to 20k Hz with a maximum SPL of 143 dB (155 dB with the -12 dB pad in place). The VIP-50 is distributed in the United States by Camera Mart of New York City and a stereo version of the mike should be available later this year.



Circle #090 on Reader Service Card



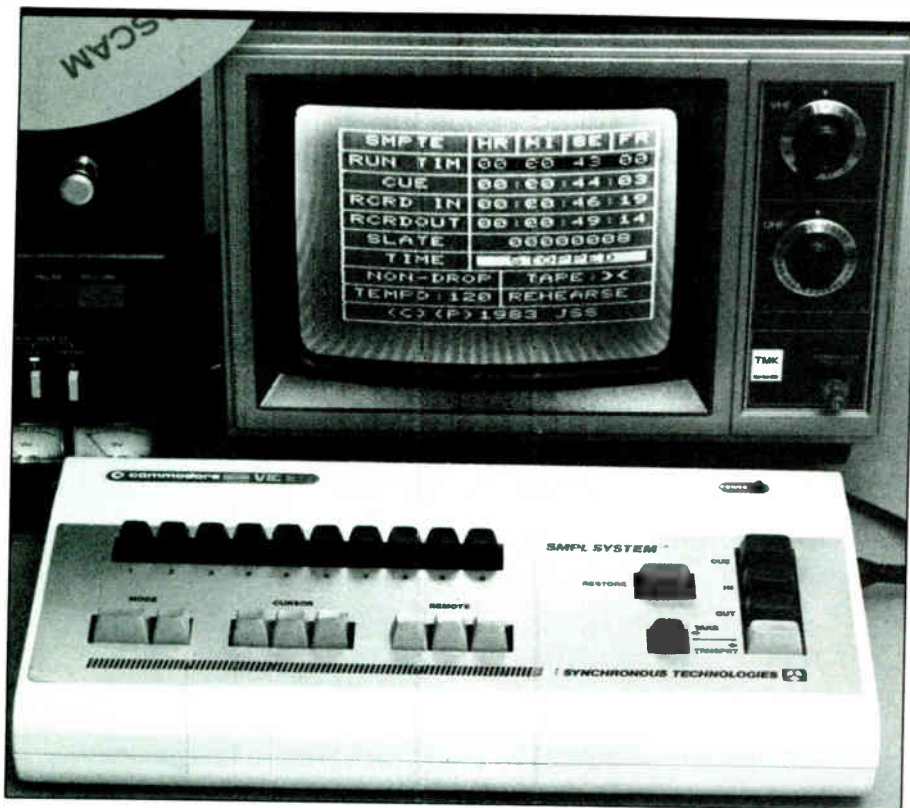
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We thought about hiring an expensive superstar to extoll the virtues of the famous Orban 622B Parametric EQ. After all, there are 622B's backing up superstars worldwide in recording studios, arena shows, broadcast facilities... you name it! But we decided not to. Because ultimately, the Orban 622B speaks for itself—it's the most widely used, popular professional Parametric in the world.

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San Francisco, CA 94107 (415) 957-1067
TLX: 17-1480



learns his part, just enter the tape mode and SMPL will control the machine's record functions. When the tape enters record, a red stripe appears behind "record in" on the TV and a metronome click plays over the TV speaker.

The entry page shows the same monitor display as rehearse, but in this mode, record in/out and cue can be typed in with the recorder stopped. This can be extremely handy for fine tuning punch points once they are established in the rehearse mode (especially if your recorder is slow on punches and you know the time lag). Tempo can also be programmed in this page from 47 to 255 beats per minute.

The event page displays a table in which eight event location numbers can be transferred to record in/out and cue locations on the other pages to speed up the overdub process. Scheduled for March '85 is an 8 channel event rack (priced about \$250). In mixdown this can be linked to SMPL to control channel mutes, fader level, EQ in/out, etc. (any patched in switching function), at the designated event locations. The write page displays only an eight digit slate number for identifying songs, and is presumably factory update space.

SMPL does everything it claims to do and does it well. The computer will indicate if it has problems reading the recorded SMPTE code insuring proper recorded levels. It will generate a 24, 48, or 96 pulse per quarter note sync pulse in square wave or 0.5 ms pulse wave form which is initiated upon passing the cue location. This is essential for working with rhythm machines or sequencers. All operations are handled by well-labeled buttons, and SMPL operation can be learned in one sitting. The only annoying thing found was that the cursor travels only down and right making entry movements a little more time consuming.

SMPL is ideal for the musician/engineer who works alone in a home studio, and at under \$1,000, the unit is a real steal. It is well suited for small jingle houses in need of time code precision. This month, Synchronous Technology plans to introduce a unit with chase-lock capabilities to allow the syncing of two tape recorders.

Computer automation is finally appropriate for the home and demo studio situation. The SMPL System operates on an industry standard now making home recordings interlockable with the larger professional studios. ■

► SMPL SYSTEM

by Tony Braithwaite and Bob Hodas

With Synchronous Technologies' SMPL System, computer-based automation has been brought within reach of the small recording studio. SMPL is the first low-cost system using standard SMPTE time code; generating and reading SMPTE code to perform its various functions of auto locate, autorecord in/out, search and cue, time code controlled metronome, and a pulse drum and synthesizer synchronizer.

SMPL comes complete with a computer control keyboard (which acts as the remote control), power supply, interface card, and all cables needed to access your TV (preferably color) and remote jack on your tape recorder. The owners manual is very straightforward and set up can be completed in less than 10 minutes. SMPL will operate Tascam 234, 38, 48, 58, Portastudio; Otari MX 5050 8-4-2 track; and Fostex B16, A8 (the appropriate remote cable must be specified at time of order). With a little wiring, any remote-capable machine

with electronic switching could use this system. Instructions in the manual are given for adapting from -10 dBV to +4 dBV usage.

Once it's all plugged in and turned on, the four rehearse, entry, event, and write pages can be displayed. All pages displayed are clear and easy to read. The rehearse page displays SMPTE time in hours, minutes, seconds and frames for all functions. Functions displayed are run time, cue, record in, record out, slate, time, SMPTE mode (standard only, no drop frame), tape status (fwd, rev, stop, etc.) and tempo. Run time differs from time in that it displays the one minute SMPTE pad recommended for the front of each tune. In rehearse, you can store your cue and record in/out points while the tape is running with the simple push of a button. A beep verifies punch point locations when they are passed. In this mode a loop from the cue point can be set up and a section rehearsed as many times as necessary using only the transport button, before committing to tape. Once the musician

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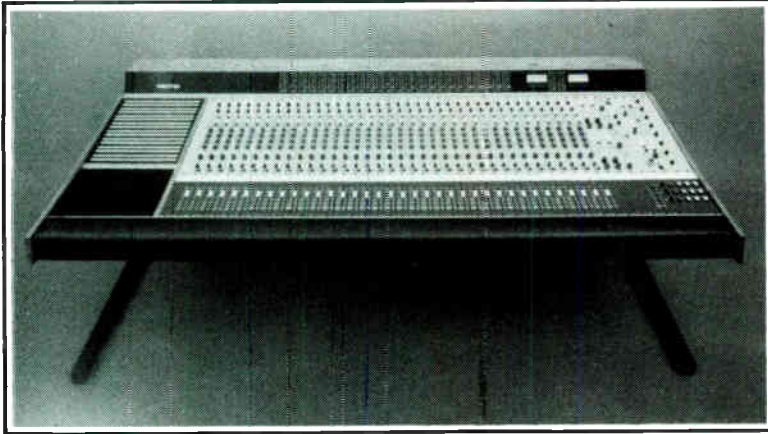
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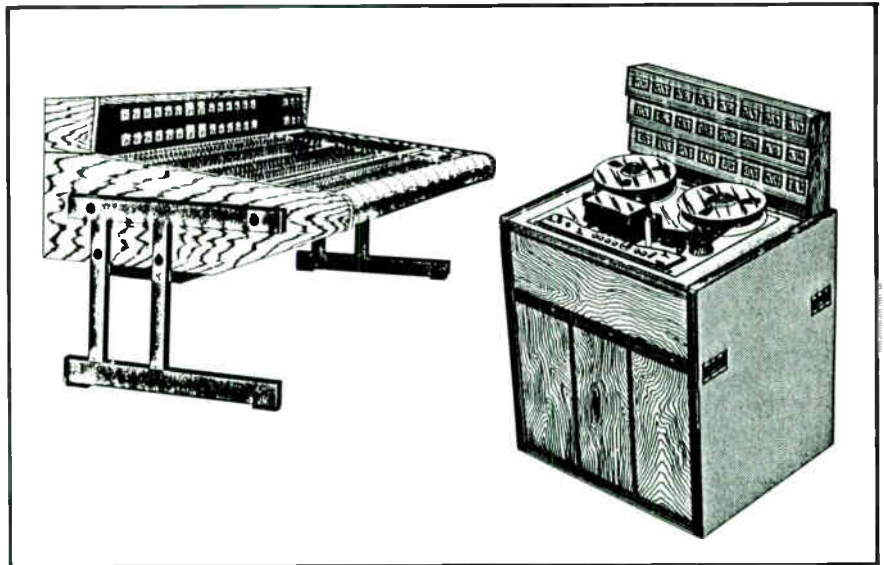
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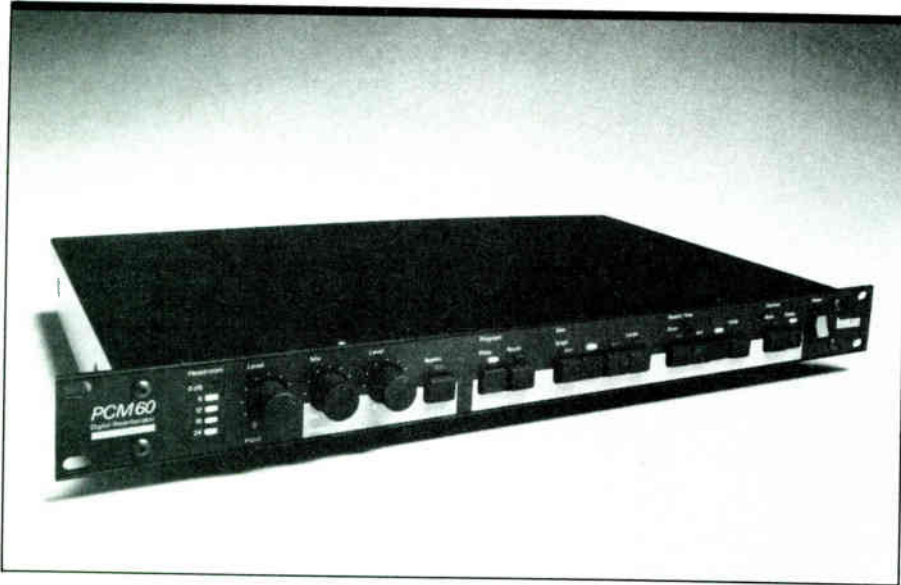
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► The Lexicon PCM 60

by William Johnston

Quality digital reverberation has always been somewhat of a luxury. Possessing a digital reverb system is akin to owning a luxury sports car. Sure, gear down into 0.5 seconds of pure room decay. Meanwhile, you can brag to your friends about being able to go from 0 to 70 seconds instantaneously. And, check out this reverb in reverse! You can almost smell the burning rubber on the pinch roller.

Of course, this kind of flexibility has a place. Yet, a Maserati in a 25 mile per zone can be a bit frivolous. Thus, Lexicon has unveiled its answer to the economy conscious engineer, the PCM60 digital reverberator. The unit is designed to be compatible with a wide range of peripheral equipment for all studio and live performance applications. And, although it lacks some of the flexibility of some more expensive systems, the programs that are available on the PCM60 are excellent.

Lexicon designed the PCM60 to cover the most common reverb applications, realizing that, although special effects are often necessary, reverb is most often used in the same median settings. There are two main programs on the PCM60: Plate and Room. The plate program emulates the basic character-

istics of a plate reverb system, although its sound is more diffuse than that of an actual plate. This is not a drawback, however, since this is an attribute of most digital reverb systems and is perhaps best described as the "digital plate" sound. The other program mode is the room setting. Obviously, this is intended to simulate a normal room environment. The room program features predelays, a highly diffuse sound and a natural sounding decay.

Each of the two main programs can be modified in a variety of ways. First of all, there are four selections for the apparent size of the "acoustical space," ranging from small to large. This selects the amount of pre-delay in the program. In the plate mode, these delays are 1, 2, 7, and 46 ms. In the room mode these delays change to 6, 9, 16, and 37 ms for the four settings.

The reverb decay time is also variable in four steps. The actual decay time, however, is dependent on the size of the room selected. Thus, the range of decay times for the plate mode encompasses 0.2 seconds (small size/short decay) to 4.5 seconds (large size/long decay). The room mode operates between 0.3 seconds and 3.7 seconds for the same parameters.

In each of the modes, the pro-

gram selected can also be modified by a bass and treble contour. In the room mode, the bass contour increases low frequency time below 800 Hz by approximately 50 percent. The treble contour decreases the reverb time by about 25 percent, and a gentle filter above 2000 Hz is added to simulate room absorption. Without the contours, the result is a flat response.

In the plate mode, the menu changes. With only the bass contour engaged, low frequency reverb time is once again increased by 50 percent below 800 Hz. With only the treble engaged, flat response is achieved. When both bass and treble contours are used, high frequency reverb time is decreased by 25 percent above 2000 Hz, and the 2kHz filter is enabled. When both contours are off, low frequency reverb time is decreased by 50 percent below 800 Hz. Although this may seem confusing, the addition of the ability to cut below 800 Hz on the plate program ultimately produces a more realistic "plate" sound.

Thus, this little unit, which at first glance seems inflexible, has a fairly good selection of standard reverb programs. Since each of the four sizes has two separate reverb decay times on two programs with four possible contours, we have amassed 128 unique programs. In comparison, a plate can only adjust RT60 and only has one "program." Most live chambers are fixed to one sound as well. It looks like we may have left the residential zone behind.

OTHER FEATURES

The PCM60 includes a bypass switch for input signals, bypassing all processing, including the input level attenuator, which connects the input directly to both outputs. The PCM60 will automatically bypass if power to the unit is lost. The bypass can be activated by a front panel button, or by a footswitch which can be plugged into the back panel with a ¼-inch jack. The footswitch is available from Lexicon, but most any footswitch is useable.

The front panel also includes a five step LED headroom indicator from -24 dB to 0 dB in six decibel step intervals. I found this meter to be extremely accurate. As soon as the 0 dB indicator would light, digital clipping distortion would occur.

Of course, the PCM60 includes the standard input level control, output level control, and a dry/wet signal mix control. The back panel includes a balanced mono input, stereo unbalanced output, an effects send patch point (pre-verb), an effects return break point (prereverb), and the aforementioned bypass switch input. Lexicon also includes two level matching switches, one for the input, and one for the output. Either or both are selectable for +4 or -20 dB operation.

EVALUATION

My first overall impression of the Lexicon PCM60 was that its sound quality was smooth. Thankfully, the PCM60 lacks most of the "digital graininess" that has been associated with low cost digital reverbs in the past. This was even true of the longest and most diffuse of the programs, where this problem normally occurs.

I found both the plate program and the room program to be of high quality. Although neither of the programs appeared to be an exact sonic equivalent to Lexicon's 224x, I would venture to make the comparison. The PCM60 programs were modeled after the more expensive 224x, and seems to live up to its lineage. Lexicon has been able to create this quality, low-cost reverb through the use of LSI (large scale integrated) chip technology. This, coupled with a newly developed analog

to digital converter, has been responsible for the low price without sacrificing the sonic quality.

The only setting which sounded odd to me was the plate at very short decay times. There was an unnatural quality to it, sounding very electronic. Yet, I found this very useful on snare drum and kick, to add an electronic effect to acoustic drums. I must admit, however, a personal bias for "acoustic" reverb sound.

The effects send and return patch can also be used for a variety of effects. Although in the studio most signal processing would be done before or after the unit, in live performance this patch, in conjunction with the bypass mode, can be effective. The loop can be used for compression, which will lengthen the apparent reverb time. Delay can also be inserted to increase the length of the predelay. Thus with this equipment available, the number of "programs" can be increased further. Equalization and gating can also be inserted for effects. Lexicon also suggests looping two PCM60s, but warns that in some modes (particularly the plate with a long delay) excessive coloration may occur.

The layout of the PCM60 is simple, and can be easily understood. Those who have only worked with conventional reverb types in the past will have no trouble adjusting to the PCM60. The unit occupies one standard 19-inch rack

space, and all functions are easily readable with LED indicators where appropriate. The only visible disadvantage is that the exact reverb time and predelay for any particular setting must be looked up in the manual, as no digital readout is included. However, this is a minimal disadvantage and remedying this would only add to the cost. All buttons are large and lend themselves to quick changes for live performance applications.

The preliminary manual for the PCM60 is informative to both the engineer and the performer. I was a bit amused at the suggestions for the proper setting for the "kick drum sound of the '50s and '60s," yet it shows Lexicon's dedication to create products that are understandable at many levels. The necessary specifications were well displayed, as well as other useful instructions. The manual is not, however, geared towards user service, as no schematic appears. Repair inquiries should be made to Lexicon directly.

To be completely honest, I think the PCM60 is a great bargain. For the price, a digital reverb (or for that matter any reverb) of this quality has never been available before. Too strong a pitch? I don't think so. On my first listen to the PCM60, I had to go back and check the actual price, which is \$1495. I thought I might have made a mistake in the decimal place. ■

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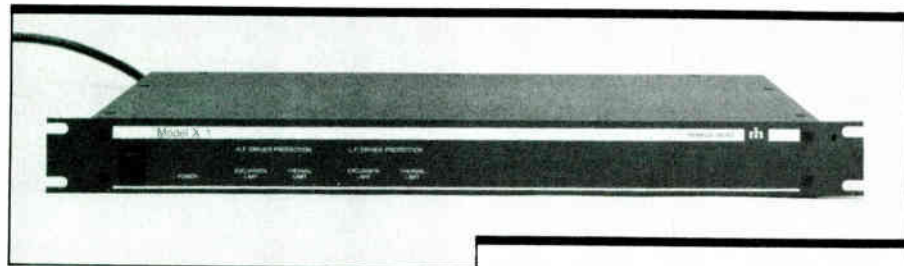
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► Renkus-Heinz Smart System

by Dan Levin

For almost two decades now, monumental advances in solid state electronics have bestowed upon the audio field a gift of technological evolution. Yet historically, loudspeakers remain the most limited and inefficient components of a typical sound system, generally unaided by the technology that's pushing much of the associated gear to new frontiers.

Happily, a growing number of companies are advancing the field, with new products based on the crucial interface between electronics and transducers. One recent example of this is Renkus-Heinz' line of compact speaker systems incorporating revolutionary crossover and speaker protection features. The company's approach is based on a control system that allows for the absolute maximization of sound quality and acoustic output from relatively small speaker enclosures.

To accomplish this goal, a thorough understanding of the limitations and physical properties imposed by compression drivers and moving-coil loudspeakers was of course necessary.

As you may recall, both of these devices perform essentially the same task and are subject to the same electro-mechanical shortcomings. The amount of power presented to the voice coil is one limiting factor, in that the greater the power delivered, the greater the heat developed. This is a true limitation, as anyone who has burned up a voice coil knows. Secondly, since all drivers are of a finite size, the amount of movement of the diaphragm (known as excursion) is also finite. The amount of excursion is inversely proportional to the frequency



(Above) X1 crossover and B1 Array Series speakers.

being reproduced, limiting the frequency range of any given driver. So how does one minimize these properties and still derive maximum potential?

The only practical way to reduce the heat built up due to excessive power is to simply reduce that power level by an appropriate amount. Fairly obvious, one would think. This is typically actuated by compression circuitry, and is basically the same process utilized to deal with thermal overloads in the Renkus-Heinz system. The true elegance of this control system is the manner in which excursion limitations have been avoided while simultaneously using the same solution to further audio advantage.

The SMART speaker system as it's called, consists of a SMART crossover coupled to one or more of the Array Series speakers. A single crossover, capable of driving up to six power amplifiers, is the "brains" of the operation, utilizing microprocessors to sense an input signal (essentially a feedback loop from the power amplifier output) and take corrective action upon the crossover's outputs accordingly. The SMART crossover is available in single (mono) or double channel (stereo) versions.

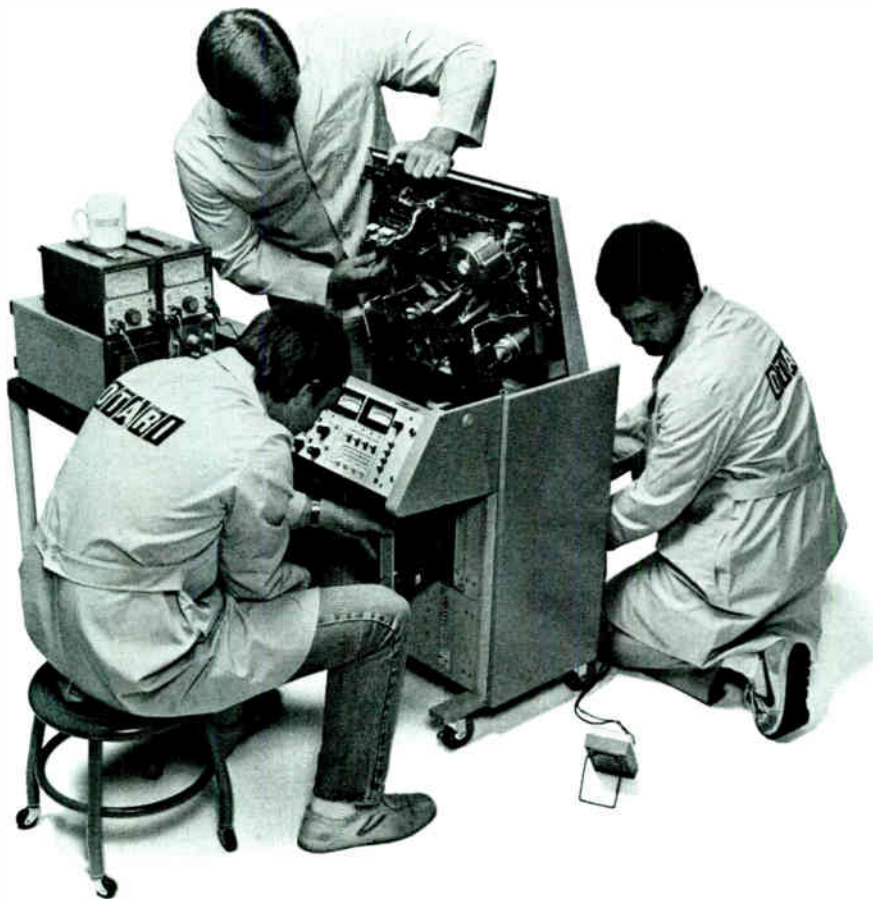
Initially, the smart crossover works as any standard active crossover

does: the input signal is split at the crossover point, 1.2 kHz., with a filter slope of 18 dB per octave. From this point on however, drastic differences are to be found. First, the separate signals are impressed with massive amounts of equalization. This is based in part on the characteristics of the Array Series speakers and will be addressed a little later on. Next the signals go through VCAs which assume the role of power limiting or compression in the event of perceived thermal overloads at the drivers. From here the signals are passed on out to the power amplifiers, which are further routed to not only the appropriate speaker sections, but to the aforementioned feedback loop as well. This loop is then sent to the microprocessors which determine whether or not to take corrective action upon the equalization and/or VCA levels, and if so, how much. LEDs on the front panel indicate whenever any one of the above functions are taking place.

On the back panel one finds a balanced (XLR) and unbalanced (1/4") input, plus two balanced low frequency and high frequency outputs (one each: XLR and stereo 1/4"). There are also two recessed slide switches. One of these activates a loudness compensation circuit not unlike the type found in home stereo systems. However, this particular circuit is continuously variable, and changes with program volume. The remaining switch allows you to either ground the chassis or "float" the ground, a nice convenience. Lastly, there are two 1/4" inputs for the sensing cables which are provided with the SMART system.

So what's this elegant solution to the problem of diaphragm excursion that I've been so slow to explain? The SMART crossover changes the crossover point automatically and instantaneously over the range of 800Hz to 2kHz depending upon the character of the program signal at any instant of time. Also, due to the tight time coherence of the crossover and the near replication of dispersion characteristics between drivers through this frequency region, any change in crossover points proves to be completely inaudible! This has two very impressive consequences.

First, as excursion limits are being approached by one driver the crossover frequency changes, placing the greater burden upon the other driver, which most likely is better suited for reproducing that particular program frequency. The frequencies in question are



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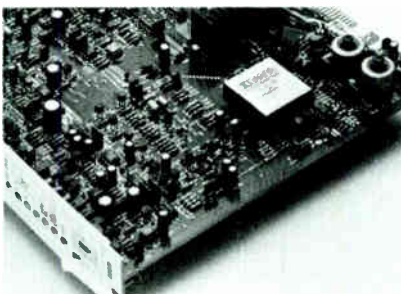
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The Dolby® HX pro option is available on both the MTR-10-4 LX low-speed Mastering Recorder and the DP-80 high-speed Duplication System.

reproduced by both drivers simultaneously and in varying amounts, for smooth, inaudible transitions.

Secondly, this interactive process creates in essence a mid-range speaker where there once was none! Realizing this capability of extended sound reproduction, in the guise of a speaker protection circuit, is really a nifty trick. Taking this concept one more step prompted the heavy equalization imposed by the SMART crossover, to which I referred earlier. Knowing that the speaker components are protected from most any signal-induced failures allows for the safe application of such an extensive boost at both the low and high ends. This results in as much as an extra octave of frequency response, eliminating the need for sub-woofers and super tweeters for most applications.

Obviously, these equalization and speaker protection circuits must be precisely calibrated in conjunction with the speaker enclosures. This makes the SMART crossover a dedicated unit, intended only for use with the Array Series speakers. Don't expect to use it with other speakers and derive the same results.

There are three Array Series speakers available in this new Renkus-Heinz lineup. The largest enclosure, model B1, tested for this review, utilizes two 15" woofers housed in a vented

cabinet, above which is found a 2" compression driver mounted to a wide dispersion horn. Model B2 boasts a single 15" speaker and the same horn, while model B3 contains this same configuration housed in a monitor style cabinet. All enclosures are well constructed of 16-ply birch hardwood, internally braced with angle-iron brackets at all seams, and are covered with a tough indoor-outdoor type carpet.

Model B1 has a rated maximum SPL of 134 dB continuous, 140 dB peak. Sensitivity is 108 dB (1 watt, 1 meter), and it has a nominal impedance of four ohms. The high frequency dispersion is given as 60° x 45°: dimensions are 24"W x 51"H x 17"D, and the enclosure weighs in at 125 lbs.

Model B2 has a rated maximum SPL of 130 dB cont., 136 dB peak. Sensitivity is 105 dB (1 w, 1 m), and it has a nominal impedance of 8 ohms. The high frequency dispersion is given as 90° x 50°. The cabinet stands 20"W x 30"H x 16"D and has a net weight of 85 lbs.

Model B3 has a rated maximum SPL of 129 dB cont., 135 dB peak. Sensitivity is 104 dB (1 w, 1 m), and it also has a nominal impedance of 8 ohms. The high frequency dispersion is again 90° x 50°. The enclosure stands 19"W x 25"H x 28"D, weighing 87 lbs.

Despite the moderate weight of

the B1s, I found them easy to move around by myself. Handles are of the large recessed type, located on either side of the enclosure. The woofer area is completely covered by a heavy perforated steel mesh, which resonated when "plucked," but never audibly vibrated during use. The entire front face of the enclosure is recessed from the leading edges, which allowed the units to be stored face down without contacting any of the inside surfaces, i.e. the horn or grill. This simple design consideration ultimately allowed for one-person transporting — I realize this is of little consequence for fixed installation applications, but for those of us condemned to a life of schlepping gear, this is the sort of detail to which one sings praise!

For patching, a recessed area on the back of each enclosure houses two low frequency inputs (female XLR) and above these, two high frequency inputs (male XLR). These are wired in parallel for interconnecting like units. Available as an option and present on my demos were three "fly-points" per cabinet, located on the top (and also available on the bottom).

One of the most important user responsibilities is to provide power amplification of sufficient magnitude. This keeps the amps operating in their most linear region thereby minimizing clipping distortions and further keeping any signal disturbances to the speaker system, where they are automatically corrected. The amount of power required for the Renkus-Heinz Array Series speakers is 200 watts *per driver*. This is crucial. The two model B1s I demo'd required 600 watts each. This may seem like total overkill, but it's necessary.

To satisfy my curiosity, I intentionally underpowered the system once. The result, in strictly technical terms: pretty funky. When installed correctly however, I found it to be absolutely unsurpassed for a system of its size. True, the system is not cheap. Nor is 1200 watts of power amplification. But for the quality of sound these babies produce, and the degree of speaker protection afforded by the SMART crossover, I'd say it's a pretty "sound" investment.

Now admittedly, I never got the protection circuitry to kick-in, but then again, my program levels probably never reached an extreme overload condition. I'm further aware of the fact that an overwhelmingly positive review tends to impart either doubts of credibility or suspicion of nepotism on the part of the reviewer. To this I will reply, "Not true!" And you've just got to try this system out to believe it.

For further information or the name of the Renkus-Heinz dealer nearest you contact: Renkus-Heinz, Inc. 17851 AB Sky Park Circle, Irvine, CA 92714. (714) 250-0166. ■

Coming Soon!



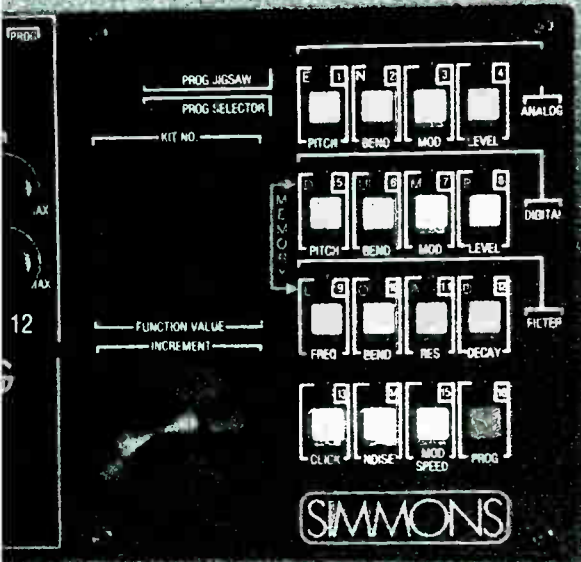
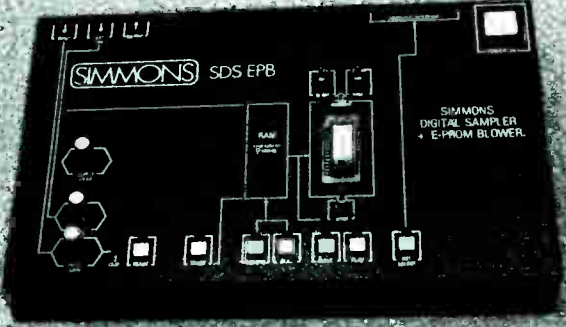
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World Radio History

by Carol Kaye

When I think of guitar sounds in the '60s, I flash back to the great rich sounds that Billy Strange became so well known for. Many of you remember him on "Goldfinger," from the James Bond movie. You've heard him on Elvis records, Frank and Nancy Sinatra tunes, Phil Spector dates and many film and television soundtracks. His stellar career

has so many credits that I couldn't begin to list them here.

Billy now lives and works (in his typically frantic but well organized schedule) in Nashville. I had a chance to spend some time with him recently and playback a few memories.

Mix: When did you start playing?

Billy: I started singing on my father's radio show when I was 5 years old. And I sang through grammar school and then

decided that country music was not my forte and that I should be a jazz player, so I took up the trumpet. But when I was about 17 I developed asthma and could no longer play. I had to move to Arizona to get rid of it. Then a friend of my father's by the name of Buddy Kelly, who was a very fine guitarist, gave me an old Gibson L-5 and said, "Since you can't play trumpet, learn the guitar." He taught me about four or five chords and I just kept it up over the years.

Mix: When did you really start working with the guitar?

Billy: For a good number of years I worked with Spade Cooley. I left Spade and went to work for Smokey Rodgers in San Diego, making terrific money singing and playing a little guitar. I was making \$250 or \$300 a week and then I got a call from Cliffy Stone who had seen me somewhere and said I'd like to have you on my television show, which was a Saturday night show and dance, and I said, "That sounds terrific, I'll do it." So I quit Smokey's and went to work for Cliffy for \$37.50 a week. But the show was good experience and I got to play more guitar. This was about '56 and I began playing record sessions for people on Cliffy's show, like Tommy Sands and Molly Bee and Tennessee Ernie Ford. Practically everybody who worked for Cliffy recorded for Capitol Records, as did I. I had some country chart records, but none that did that well...but back then I was a singer who also played guitar.

Mix: What made you give up singing? I've heard what a good voice you have.

Billy: I really did not enjoy the spotlight that much. The recognition was lovely and the applause was great, but it didn't last long enough. I felt that there was more for me to do and more for me to say musically than what I was capable of vocally.

Mix: When I first met you, it might have been a Phil Spector date in the late '50s or early '60s, I remember they would always call you in for the guitar solos... then a little later Glen Campbell ap-

a chat with
BILLY STRANGE



PHOTO: TED HOLMES

Posing with his employer, Tennessee Ernie Ford, in 1958, for a photo to promote the Gibson Les Paul guitar.

peared on the scene and then it was the two of you getting a lot of the guitar solos in L.A.

Billy: And James Burton eventually replaced both of us. At the time, I was working [Tennessee] Ernie's show in San Francisco, I was flying back to L.A. every day to do sessions. It was funny... in San Francisco I was considered a boy singer who also played guitar, but in Hollywood I was a guitar player who also sang. I'd be working two shows a day for Ernie and then fly back as quick as I could to do dates for Les Baxter or Phil Spector.

Mix: How did you feel about yourself as a studio guitarist? Were you happy?

Billy: I was very, very happy...but a little reticent to call myself a guitarist. It was

wasn't necessarily the greatest thing musically but, because of this novel idea, it lent itself to a more commercial attitude than they had foreseen...and "Ramblin Rose" went on to sell something like seven million records.

Mix: How did you learn arranging?

Billy: The basis of my arranging came from writing arrangements for myself as a singer. Plus I had a few arranger friends like Billy Liebert and Les Taylor. And my neighbor was Hank Mancini, so when I'd get in trouble I'd call Hank and say, "Please help me...I'm doing so and so...how do I write for that? And I got all kinds of advice. I stole from everybody I could. I think we all learn from each other. None of us know it all. I asked Mancini one time about how he got that

PHOTO: DOUG MCKENZIE



(Above) Billy (seated) at London's Pye Studios with Nancy Sinatra and Lee Hazelwood recording the "Nancy in London" album, in 1963. (Left) Billy with Elvis on a 1970 scoring session for the film "Live a Little...Love a Little."



embarrassing for me to go into a session, sit next to Barney Kessel or Howard Robbins or Tommy Tedesco and have Nelson Riddle say to me, "Here's a sixteen bar solo...just play whatever you want to play." At that point in time, I could barely read.

Mix: A lot of jazz players couldn't read.
Billy: My background was from the country marketplace, where guitar sounds and guitar feels were totally different. Most guitar players played way down in level, allowing the engineer to bring them up in the mix. But I came in and sort of attacked, from a level standpoint...and kept my amp wide open. If I made a mistake, everybody heard it. But you felt and heard the power.

Mix: Your unconventional approach saved a lot of sessions.

Billy: I remember doing a session with Nat King Cole. He had this gorgeous, lush arrangement but it was just falling on its ear...nothing was working. So I came up with an old Floyd Kramer piano/steel guitar kind of thing just when they were ready to throw the whole thing away. It

lovely high filtered quality in his violins. And he said, "Very simple. I use 24 strings." And I said, "Can't afford that." So he said, "Cut it back to twelve and add three piccolos."

Mix: Your solos were brilliant in their simplicity.

Billy: I was never a fast guitar player. I'd never write 16th notes into a bar where I could play four just as well. I felt that four good well-chosen notes meant more to a listener, commercially, than my seeing how fast I could amaze them with my finger talent. The emotion that it evokes from you is what you are able to convey. If, technically, you can play it twice as fast, that doesn't make it any easier for the listener to hear.

Mix: Didn't you do quite a bit of work for The Ventures?

Billy: There was a time, about 1963, when they were on tour in Japan and Bob Reisdorf at Dolton Records, who they recorded for, called me and several other studio players and said, "I have to get out a Ventures album, immediately, and the boys won't be back for 90 days." So us

studio musicians became the Ventures, for two or three albums.

Mix: I know that you did all the arrangements for Nancy Sinatra. I remember we did one tune that didn't quite make it, and then all of a sudden you came up with "Boots" ("These Boots are Made for Walkin'.")

Billy: We cut four sides on her and they released two of the sides and canned the other two. Then we went in for the next session and, if you recall, "Boots" was the last song on the session and I think we had fifteen minutes left. We cut a track of it and made a quick change or two. We cut it a second time and I realized that there was a bad horn note in it. We went from a G to an E minor and somebody was playing a G sharp, making it an E seven chord. And I remember begging [producer Lee] Hazelwood saying, "Please, Lee, let's just do one more take." And he said "I can't afford the overtime... besides, nobody will ever hear this song." But Nancy fell in love with the track.

Mix: I remember Nancy took the track to her father, Frank, and he said, "That's a hit. Take it back and put your voice on it." And so you've had to live with that bad note all your life!

Billy: And what's even worse, is that as we walked out of that session, every musician, and even the producer was saying "This is the worst piece of junk... it'll never sell." And, of course, after it became a smash and we went back in to finish the album, then everyone said, "I knew it was a hit the minute I heard it."

—Next month we'll continue our discussion with Billy and find out why he loves living and working in Nashville. ■

LES PAUL



PHOTO MR BONZAI

THE GODFATHER OF MODERN MUSIC

by Mr. Bonzai

Les Paul—what a guy! What a musician, what an inventor, and what a card. Imagine what a kick it must have been listening to a new Les Paul record on the radio and hearing recording tricks like multitracking and slap echo for the very first time. It was the equivalent of *Sgt. Pepper* for an earlier generation.

While in New York recently, I was invited by our editor, Mr. Schwartz, to hop down to Fat Tuesdays for the weekly Les Paul set. It was an ear opener to hear his music and some of the choicest patter imaginable. Les is a true storyteller, both in words and music. I still can't figure why there wasn't a line of fans stretching half way across Manhattan. After the show we chatted and he invited us to his studio/home in Mahwah, New Jersey.

Now keep in mind, Les Paul was overdubbing before anybody knew what it meant or how it was done. He was responsible for the first eight track built by Ampex. He built his first electric guitar at the age of 13 by tearing his Sears guitar apart and attaching the needle from his mother's Victrola. When he was ten he constructed the first harmonica holder in recorded musical history. During the '40s he built an illegal radio station in his New York basement and broadcasted jam sessions all night long over a 12 block area. "The Booger Bros. are on the air. The Pink and Yellow network at the top of your dial!" And, to a multitude of electronic troubadours, the Stradivarius of the 20th Century has become a vintage '50s Les Paul Gibson guitar.

Dream back to 1952 when the Les Paul and Mary Ford "New Sound" had racked up over 10,000,000 record sales

Les proudly displays one of his first performance guitars, a modified 1928 Gibson L-5 he used under the name of "Rhubarb Red."

and join us for a little tour through the home and mind of the man today.

Bonzai: You're well known for your technical innovations and your playing ability, but what about creative auditioning? I heard that you once auditioned in an elevator...

Les: Well, I was actually *waiting* for an elevator, with Ernie Newton, my bass player, and Jimmy Atkins, Chet Atkins' half-brother, who played rhythm guitar and sang. We had been rehearsing for two years and we had two numbers down — we really felt like we owned them.

In those days, the "WLS Barn

LUNCHING WITH BONZAI



PHOTO: DAVID SCHWARTZ

"The Log" is believed to be the first electric solid body guitar. Les puts this together in 1941 from a four by four chunk of wood that he worked on after-hours at the Epiphone Guitar plant. Epiphone later supplied the "wings" so the instrument wouldn't rotate as he played it.

Dance," a radio show out of Chicago, was much bigger than the Grand Ol' Opry and we talked to a booking agent who put us with the road shows. We got booked doing Hillbilly and I was Rhubarb Red. In 1936 I talked Ernie and Jimmy into quitting the "Barn Dance" and we packed up the car to head for the bigtime. The Hoosier Hotshots, Red Foley, Johnny Johnson and the whole group of fellas who lived in our building in Chicago helped us pack. They were all standing around and Ernie says, "Well, we're all ready to go — I'll drive first." He put on a chauffeur's hat and we were having a lot of fun about going to wherever, but we hadn't decided which way to go. It was L.A. or New York, so we flipped a coin and it landed New York. We worked our way to New York via a million detours and by sheer luck we ended up at the Chesterfield Hotel — that's where all the musicians hung out at the time. We had really landed in New York in pretty bad shape. We were washing out our clothes and we couldn't go out anywhere until they had dried. But we were happy just being stupid and young.

I told the guys not to worry because

I knew Paul Whiteman very well and there would be no problem in getting a job. I had never met Paul Whiteman so I had to sort of tell a white lie to get the guys to have faith. So, they kept prodding me: "When're you gonna call your buddy?"

I was sort of cornered so I looked his number up in the phone book and he

was just a couple of blocks away at 53rd and Broadway, where the Ed Sullivan Theater is now. I called and the secretary asked who it was and I said, "Rhubarb Red — no, it's Les Paul." I had decided to

"It's odd, but you can think of something and actually build it or patent it and then find out that it's already been sitting out there somewhere."

change my name but I wasn't used to it after playing hillbilly for so long. She told me he was busy and I told her we'd like to see him. She said, "I'm sure you would,

but he's busy," and hung up. The guys are standing there asking what he said, so I told them the secretary said to come right over.

We walked over, got in the elevator and got off on the 12th floor looking smack dab down that long corridor past her sitting at the desk. I could see Paul Whiteman like miles down the road. I said, "I'm Les Paul and I've come over to talk to Paul Whiteman." Paul heard me and said, "Close that goddamn door." The door closes and there we are in the hallway. Ernie looks at me and says, "I thought you knew him real well." I said, "Well, from that distance he probably didn't recognize me and anyway, in New York it's different." At that moment out comes Fred Waring, right next to where we were standing. He pushed the button to go down — later on I found out that he was having his offices rennovated and they were working on his bathroom that day so he was using Paul Whiteman's. I walked over to him and said, "You are Mr. Waring aren't you?" He says, "Yeah, yeah, yeah, but if you're thinkin' what I'm thinkin' — I've got 62 Pennsylvanians and I'm having a hard time feeding them." I says, "Well the elevator's way down in the basement — can we play til it gets here?" Then he says, "Well I can't do much about it anyway."

We broke out with "After You've

Gone" and played it faster and faster as the elevator started up — it was terribly fast anyway. He was quite impressed with us, so he told us to get in the elevator and we went down to the next floor and followed him into an enormous rehearsal room with 62 Pennsylvanians — the orchestra, the glee club, everything. He asked the band to stop and told them he had run into — "What do you call yourselves?" he asked me. I kiddingly said we were the Ozark String Trio, and we kidded around a bit and then he said, "Seriously, these three guys played for me while I was waiting for the elevator and I want you to hear 'em. If you like them as much as I do, we're gonna add 'em to the Pennsylvanians. We played for them and they applauded and we became three more members, which made it 65.

Bonzai: Was your playing new to them?

Les: Very new. First of all, the electric guitar was quite unique.

Bonzai: Was this the guitar you had made from a Sears guitar with some pickups from your mother's record player?

Les: No, this was later on. I had gotten past the earphone element where you use the magnet and the coil and put it under the strings. Lyon and Heally had

come out in 1935 with their pickup, which was something you attached to the bridge and put under the strings, and it had a volume control on it. Mine was similar, but it mounted to a little cut-out by the fingerboard. You can see it right over there — that's the guitar I had. It

"When I got into multitracking and overdubbing, I took the guitar and deliberately began to change its sound... Bob Moog once said to me if I hadn't been clowning around with all those sounds, he would never have come up with the synthesizer..."

says Rhubard Red on it. That's the guitar I used for that audition. But what probably impressed Fred Waring the most was the fact that my bass player had a brush that he held in his right hand, like a drummer's brush, and he had a piece of sandpaper glued onto the bass, so that when he went "boom" he followed with a "shoosh." We had that going along with the electric guitar and he had a high hat as well — this guy had everything but something stuck up his rear end. We were all busy, and Jimmy was an excellent singer with a low voice like Bing Crosby's. We had a unique sound.

Bonzai: Your real name is Lester...

Les: Polsfuss — it's German. My mother's name is Stutz. I grew up in Waukesha, Wisconsin, playin' the guitar and harmonica.

Bonzai: Was the harmonica your first instrument?

Les: Yeah...

Bonzai: And didn't you build yourself a little brace?

Les: Yeah, I can show it to you. It's the original. I never changed it from the second I built it. It's made from a coat-hanger — never patented it and it's still one of the best harmonica racks around. You see, you can mount two harmonicas and change from one to the other without moving your hands by turning them over with your chin. With two harmonicas you can play in four keys, because if you blow you're in "C," say, and if you draw you're in another key.

Bonzai: So, you've been into multiplicity from the very start...

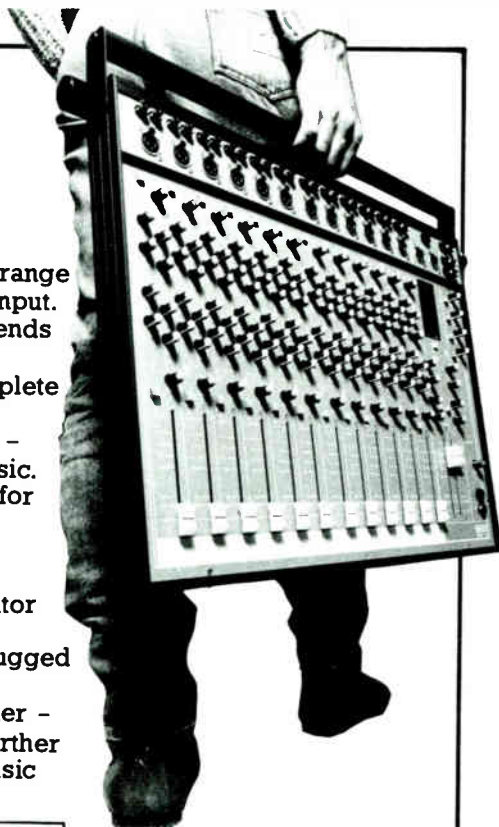
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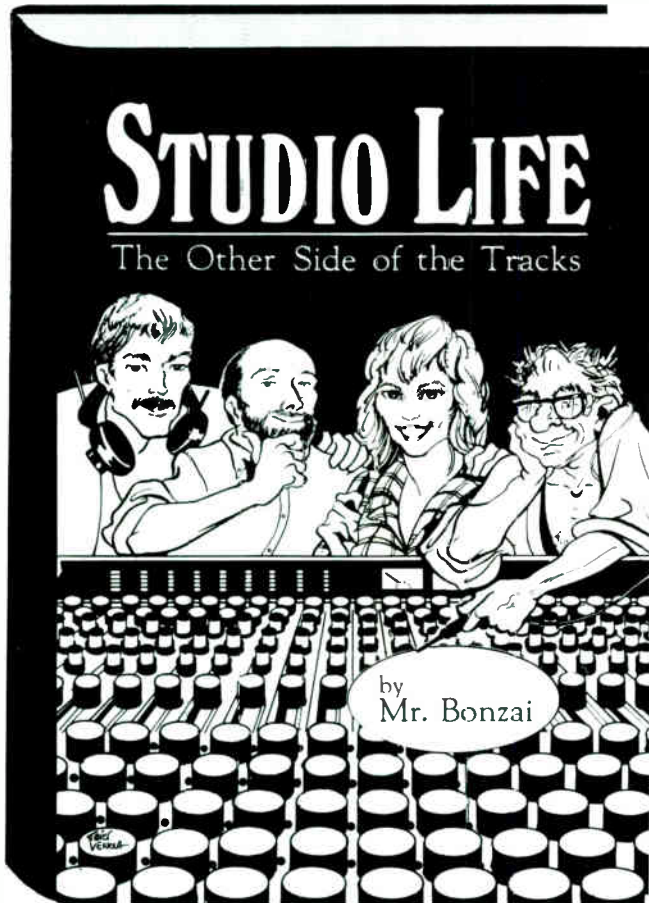
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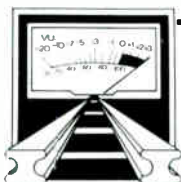
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Les: And simplicity. Everything I did was as simple as I could get it, and as reliable and workable and as stable as possible.

Bonzai: Can you remember those moments of invention, that "Eureka!"?

Les: It was all accidental. You never can tell when it will happen. It's odd that you should ask that — something came whizzin' by my mind yesterday. I thought to myself, there's another case where you

Les: In 1942, Meredith Wilson, our musical director, was approached by the Navy. They said that if he had a guy in his band that had a very good ear and was associated with electronics as well as music, they needed him for a special project. Meredith just pointed at me.

They wanted me to be submerged in a diving bell and listen to real submarine sounds and then to a simulated submarine. I was asked to explain the differences I heard between the subterfuge

In 1983 Les was presented with a Grammy, by NARAS president Bill Ivey, for his lifetime contributions to the recording industry.



PHOTO: COURTESY NARAS

don't have a list of things you're going to invent. It just flashes in your mind.

Bonzai: Do you think that somebody else might have come up with your inventions if you hadn't?

Les: No matter what I'm thinking of, there's no reason for me to think that there aren't many others thinking the same thing. It's odd, but you can think of something and actually build it or patent it and then find out that it's already been sitting out there somewhere.

Bonzai: I heard a story about you playing with the Armed Forces Radio Services during WWII...

box and the real McCoy, so they could misguide the enemy and get them to go chasing a decoy. I analyzed the sound and told them things like there was a squeak at seven kiloHertz — seven kilocycles at that time. When it was over, they thanked me, and I was curious about something. I asked one of the engineers what kind of transducer they were using and learned that it was berium tenate. They gave me a cigar box full of the stuff and I built a guitar using it in 1943. In 1950, I was still working with this high impedance device which is the electrical acoustical box that amplifies the Ovation guitars — piezoelectric. I could have patented it because it didn't

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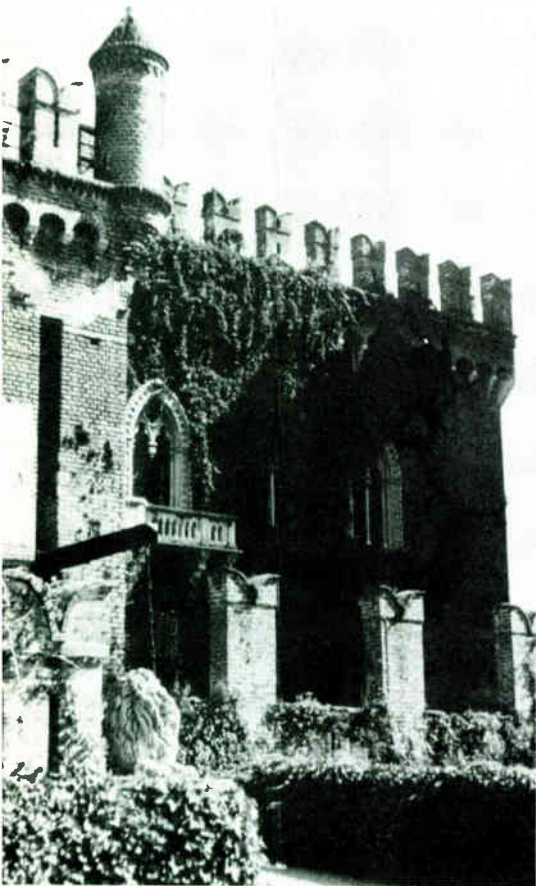
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LARK STUDIOS

by Richard Dean

You'd be right to think that a 17th Century castle, complete with moat, castellated roof, portcullis, draw-



bridge, and a remote-controlled oak door is an unlikely place for a recording studio. But it's the home of Lark Studios, the first with the so-called "Tom Hidley Design" acoustic.

Some people know about the new control room acoustics system from Tom Hidley, who used to work for JBL and Westlake, later founding the Eastlake operation. The Eastlake operation has effectively been taken over by Dave

Hawkins, formerly of Scenic Sound, in what started out as a co-operative agreement with Hidley.

I accepted an invitation from Alan Stewart of AlanGrove to see — and

Castle entrance showing drawbridge and castellated roof.

more to the point, hear — the first of Hidley's new treatments in commercial operation. AlanGrove are the video and audio studio building specialists working with Hidley on the construction of the new design. The venue was to be Lark Studios, Italy's first Eastlake creation, nestling within the buttressed contours of a 17th Century castle in Caramatre, a small village on the northern outskirts of Milan, Italy.

Since Lark was built in 1975 there are now about half a dozen Eastlake installations in Italy, and the studio itself is a fairly typical example — shaggy-pile carpeting, rock and bark wall finishes, areas set aside for piano, percussion, guitars, a separate "live" room for strings and horns, and a solo/voiceover area between the sliding doors to the control room. But that's where normality comes to an abrupt halt.

While retaining the characteristic shape of something resembling a stretched decagon, the control room has been extensively changed. Gone is the paneled ceiling, much of the bark, and most of the rock. In their place are deep acoustic cavities or "traps," and the carpet has been rolled back to reveal the original narrow-panel floorboarding. In short, the whole acoustic has been deadened, with the first reflection coming from the floor, a completely different approach to the Eastlake way of doing things.

Enter studio manager and engineer/producer Alan Goldberg, who joined Lark as technical manager in 1979, about a year after the studio had started on a commercial basis. After all, it was his decision to spend almost 10,000 pounds on the new system when he and

record company partner Expanded Music took over from the original owners at the beginning of this year. What made him do it?

"It all began with what should have been a fairly routine upgrade of our old Gauss woofers for a more powerful version in 1981," says South African-born Goldberg. "We started to notice what I would describe as a sort of 'honky' effect in the mid-range. At that time we had Gauss horn drivers and Emilar tweeters, and didn't suspect the new woofers which Gauss had assured us would sound the same as the old ones.

"We changed the amps from Crown to SAE, and the horns and tweeters for a single-unit JBL. But something still wasn't right. Nothing showed up on the spectrum analyzer, and even Nick Martin of Scenic Sounds couldn't find anything wrong. We changed the JBL's for TADs, thinking that their extra 5kHz at the top end to 20kHz might solve the problem. In 1983 we finally replaced the Gauss woofers that had started all the paranoia in the first place with JBL units; but the nagging doubts remained. It wasn't until Tom Hidley mentioned his new approach to control room acoustics that I started to think that the problem might be of a more fundamental nature."

Lark's control room was changed to the new acoustic in the standard five days by AlanGrove in March of this year. Since then, Goldberg has been delighted with the results. But if after all this time he thinks he's found the answer, what was causing the vexingly elusive problem in the first place?

"The reverb times at various frequencies have been modified, and the room is now practically 'flat,'" he says. "At present we're working with a 30Hz system and the room equalization has been reduced by more than 85 per cent to just the odd dB here and there. We're hoping to upgrade to the full 20Hz spec in due course which we believe would eliminate the need for any monitor graphics at all." The 20Hz treatment requires more trapping with a ceiling height of 16 ft. minimum, while the new 120° horn (compared to the existing 180°) is claimed to improve directivity and reduce "cellular" effects.

But according to Goldberg, the most important feature of Hidley's design is its handling of first reflections. "There are three components in a control room's acoustic — first reflection, ambience, and reverb," he says. "The original Eastlake design pre-supposes that a lot of first reflections will create uniformity. That's why there are so many reflective wall finishes, and a paneled ceiling. The monitor system's direct sound reaches the engineer fractionally before a cluster of first reflections, which trigger reverb that is ultimately absorb-

ed in trapping at the back and the deep-pile carpet.

"Unfortunately that approach — which produces a very well-known and initially pleasing 'brightness' to the sound — also introduces phase irregularities. The frequency-dependent additions and cancellations which result cause listening fatigue, and also make the listening position very critical. With this new design, stereo balance is retained not only right across the desk, but also along most of the corresponding front-to-back axes as well. The first reflections come from the ground, with the wall and ceiling traps representing an infinite air baffle — it's very much like an ideal environment in the open air.

"I've also found that the monitoring level is far less critical," adds Goldberg, "to the point where I can listen with clarity anywhere between a very low level, or at a level high to the point where I hear distortion before I feel pain. I've deduced that this has to do with the short-term effect of the phase problem; at low level, the error sounds obscure the music beyond the ear's recognition, while at high levels the errors disturb the ear earlier than would a clean signal." For the record, the current arrangement uses 600W per channel FM bi-power amps to feed Emilar top end, TAD horn, and JBL woofer units.



RH monitor and surround across desk.

So much for the theory — we put it to the test. Goldberg brought out some new material from the affectionately-dubbed "El Puma," a major South American customer who, with album

sales consistently reaching beyond the three million mark, has become an almost legendary figure in Europe's massive MOR market. Half a dozen tear-stained hankies later, we heard an F1 digital test tape of Phil Collins and Michael Jackson — not recorded at Lark of course.

There's no exotic volcanic rock lining the walls, no rambling foliage, and not so much as a drop of ornamental fountain dribble in the new Lark installation. It's very much a working room, with recessed machines and the console as the main attractions. But after living for a decade or more with normality enshrined by control room glamour, this seemed a somewhat drab environment for hit record production. But these thoughts soon became academic. As soon as the count-ins had stopped, my attention locked to the sound.

This was a curiously effortless process, with no bobbing around to find the right position or fiddling around with the monitor level. In fact while the stereo image was good for the whole desk-width as Goldberg had claimed, I also noticed a high degree of vertical tolerance. So leaning back in the chair replay-style or even standing up made little or no difference to the sound in comparison to that in the rather more intensive over-the-desk balancing/mixing position.

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As I had expected since the first conversation in the room, the acoustic emerged as being less "bright" than its contemporaries. But while acoustics are notoriously difficult to talk about objectively, an exceptionally clear and open sound would be the way that I would describe it. I remembered a very recent visit to an Eastlake studio, and my discomfort with the mid to top end response. On that occasion, a spectrum analyzer revealed that two distinct peaks existed near the top, at relatively high monitoring levels. If Goldberg's theories were correct, that could have been

Lark and Morning put together today), he ran out of money. Worse still, he lost the record company when his distributors pulled out their loan-backing guarantees. A clause in the guarantee arrangement gave them charge of all the artists in the case of insolvency, which they duly claimed in what some see as a rather under-handed move.

The legal wrangles continue even now, while Cosetta works as a rather resigned man in the bookings office. But he managed to keep hold of the castle, and is hoping to raise two million pounds from its sale. Lark and Morning

up some of the remaining area, but most of it — a grand entrance hall with beautiful arched and painted ceilings, stained glass windows and a double staircase — lies empty except in some cases for storage. Dozens of rooms either await refurbishing or are currently occupied by the owner. There's even a dungeon complete with its original portcullis and a maze of narrow passages and spiral stone steps.

You might think that with the future of his tenancy in some question, coupled with the challenging prospect of organizing a castle take-over bid, Goldberg would be distracted from the fine detail of his studio on a day to day basis. But he remains as dedicated to technical advance as ever.

"I prefer Telcom noise reduction to Dolby," he says, "and found that the cards fit the same racks. So we use Telcom on the 24 track Studer with the Otari 24 track still on Dolby at present. I'd like to upgrade those in the future, and may change the two track Studer for the new Nagra T model."

Goldberg says that his Giese synchroniser is more user-friendly than the Audio Kinetics model, and has the Otari remote on a trolley, with Studer's installed in the desk. Instead of an effects rack, Goldberg has a veritable free-standing column — full of everything you have and haven't heard of including the AMS RMX 16 and DMX 15; Lexicon 224X, Delta T and Prime Time delay; a selection of UREI, Kepex and dbx limiters, gates, and compressors; an Orban de-esser; UREI Little Dipper; DeltaLab 4 flanger; a Pultec programmable EQ; and the good old Eventide Harmonizer and Flanger, to mention a few.

But there's no doubt where Goldberg's heart lies among Lark Studio's effects battlements. It's the Quantec Room Simulator, just part of an array which includes the EMT 251 digital system, EMT 240 gold foil and 140 steel plate, and AKG's BX20 spring.

"Quantec are right when they say you can program anything from a tin can to a cathedral," says Goldberg. "There's a 'freeze frame' feature to simply hold a sound sample continuously, with options to clear or add other sounds to it, which is quite fun. But the real bonus is that all the main parameters are there from reverb time to first reflection delay, cluster intensity, and room volume to create practically any acoustical response."

Perhaps one day, I mused, a sampling program would be written to allow the results of mike and tone tests to be fed directly to a Quantec or similar, from any acoustical environment; a sort of "room take-away" service. But you'd still need somewhere neutral to playback the results. That's what Hidley thinks he's achieved with his new control room design. ■



Arch detail, old entrance hall.

something to do with phase additions from the room.

There was no such feeling here, and without suggesting that the threshold of pain is the right place to monitor a master mix, we turned up the volume and brought out the sound pressure level meter. I was surprised to read 112dB on the scale at a level which may not have been ideal for solving the *New York Times* crossword in your head, but was comfortable enough for short periods. As one who shies from the ever-hotter-curries or louder-still-monitoring schools of thought, I think I would have cut out sooner under normal circumstances.

Actually Lark is one of two studios built into the castle's premises in 1975 by its current owner, a Mr. Cossetta, and the story behind the two studios in the castle is not a happy one. I'm told that Cosetta, who ran a record company, paid just 250,000 pounds for the building in 1975. But while buying equipment for what he was to call Stonecastle Studios with a staff of 15 (compared to the six at

are meanwhile clinging to their rather fragile leases, but Goldberg is hoping to buy the castle himself, with the help of a consortium.

The other studio is now called Morning Studios and majority-owned by a bass player named "Red" of long-standing Euroband, Pooh. Red has left the original Eastlake control room intact, but bought a new MCI console to replace the original Cadac. Lark's Cadac has been modified to 32 inputs/24 outputs with a separate half-width monitor panel, and "Melkuist" automation which Goldberg co-developed with Sid Price and Robin Bransbury, now of Audio Kinetics. Incidentally if you ask any Italian what "Pooh" means, the only thing they can think of is a rock band — which is perhaps just as well.

Eddie Veale designed a string room for Lark in one of the dining halls which required little more than a new foundation and floor, and Goldberg is in the process of renovating a small theater for sound work. Accommodation takes

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Ministry: Al Jourgensen Does It His Way

Can a former major-label recording artist find happiness with an esoteric independent record company?

You betcha. Just ask Al Jourgensen, sole sonic force behind the technodance ensemble Ministry. "I love this," he says of his affiliation with Chicago indie Wax Trax Records. "No red tape. That's my motto."

When Ministry (which is essentially Jourgensen on record and a musical collective on the road) reared its synthesized head on the ever-dwindling Chicago new music scene, prompting all sorts of major-label A&R types to come sniffing around, scenewatchers were overjoyed. At last—national recognition for a Chicago area band that didn't sound like Styx, Survivor, or Cheap Trick. And when Ministry signed with Arista, that most forward-minded of big league record companies, it looked like they just might help put Chicago back on the map of musical innovation.

Alas, it did not come to pass. To begin with, Jourgensen found to his dismay (shortly after starting to record his Arista debut *With Sympathy* at The Cars' Boston studio Syncro Sound) that he couldn't get away from record company ledger men and their stifling "advice" on how to produce his record. "Within two weeks," Jourgensen recalls, shaking his head, "I already knew, 'boy, this isn't for me.'"

When *With Sympathy* was released just over a year ago, it suffered "every bad break in the book," accord-



ing to former Ministry manager Peter Katsis; the biggest of which was it got swallowed up in Arista's move from independent distribution to the RCA fold. "Obviously, with a baby act, nobody wanted to order very much, 'cause they didn't know if there would be a return policy," Al says, "and by the time they got it all resolved, it was already eight weeks into the record. At that point it's kind of hard to get excited."

Add to that the even more complex problem of record company brass being divided on which singles to release and which to do videos for, to the point where "half the country got a track called 'Effigy' as a single, half got 'Revenge,' and everyone really wanted 'Work For Love' in the first place; it was just crazy.

Then we were told, 'Fly to London, do a video in 14 hours, fly back the next day, and start your two-month tour . . .'"

Hardships, woes—every band yearning for a big record deal should have such problems, or so you might think. But Ministry's situation, says Al, had truly developed into something intolerable. All Ministry could show for its big-time record deal was a dance chart hit with "Work For Love," and that wasn't really such a big deal—they'd accomplished the same thing with their first independent single "Cold Life" on local label Wax Trax Records.

And it was straight back to the friendly confines of Wax Trax that Jourgensen headed, sadder but wiser, once

—PAGE 136

THE FAR SIDE

By GARY LARSON



"Hey, thank you! Thank you! That was 'Tie a Yellow Ribbon.' ... Now, what say we all really get down?"

The Rhino Experiment: Is this any way to run a record company?

Credit it all to Wild Man Fischer. Well, some of it, anyway . . .

The Wild Man, ubiquitous and legendary street person of 1960s Sunset Strip origin (now an L.A. institution and fixture at Dodger games) used to hang out at Rhino's Westwood Boulevard store quite a bit in the early '70s. Such became the affection for this self-appointed mascot that, when Rhino decided to dabble in recording, the first artist was . . . Wild Man Fischer.

"The first single we put out was indeed Wild Man Fischer's 'Go To Rhino Records,'" says Rhino president Harold

Bronson.

"Everybody in the store was really into him. We put his single out essentially to give away to our customers as Christmas gifts."

Instead, Bronson and Rhino founder Richard Foos got something of a gift in return.

"We got this amazing response," Bronson says. "It was the most popular record at University High School. And when this DJ in England named John Peele started playing the record, it became so big that it made his year-end poll of listeners' all-time favorite songs. Wild Man was number 48."

There are certainly humbler beginnings for record companies. There must be . . .

Rhino Records was named after the key figure in Eugene Ionesco's play, *Rhinoceros*. The Rhino in the play, ex-

MUSIC NOTES

plains Bronson, was a symbol of "non-conformity."

In the volatile world of producing commercial records, Rhino has effectively lived up to this reputation. In about eight years, with a stable of artists gently described as eclectic, Rhino has gone from an offbeat, weirdo record store to... well, an offbeat, weirdo record company.

With a slew of records by artists such as former wrestler Fred Blässie (self-proclaimed "king of men"), Gefilte Joe & the Fish (the world's only known senior citizen Jewish rock band), Barnes & Barnes (of "Fishheads" fame), the Temple City Kazoo Orchestra, Julie Brown ("The Homecoming Queen's Got a Gun") and of course, Fischer, it is hard to avoid labeling Rhino anything other than "weird." What is not so weird, or hard to understand, is why Rhino Records is growing and prospering more each year. Guided by the classic record-collector instincts of Foes and Bronson, Rhino has simply done what no other label has. It is preserving a lot of would-be lost history, and filling the niche of the novelty-record producer. Rhino has, if nothing else, proved to be an invaluable pipsqueak among commercial record industry megalopoloids.

Consider:

In the last eight years Rhino has single-handedly and somewhat miraculously rescued entire chapters in pop recording from that most dreaded enemy of the recording artist, oblivion. Since 1978, when Rhino first began pressing disks, Foes and Bronson have put out otherwise forgotten or lost records by The Turtles, The Monkees, Love, Spirit, Frank Zappa, Bobby Day, the Lovin' Spoonful, Rodney Dangerfield, and The Olympics, to name a few.

On the way, Rhino has accrued its share of controversy (which it wears like a badge.) There was, for example, that collection of Beatles novelty songs (you know, like Allan Sherman's "I Hate the Beatles") with the album cover depicting, among other Beatle-related persons, a Beatlemaniac looking not unlike that what's-his-name who murdered John Lennon. (After some protest, Rhino changed the cover.) There was the release of very early Zappa material (1963 Cucamonga recordings with Ray Collins) without Frank's blessings. This, too, resulted in an album cover change (Zappa's face was removed.) Most recently, there was a flap over The Olympics—the group, not the games.

"It's really unfortunate," says 33-year-old Bronson, "that our legal system is set up so people think they have to sue all the time."

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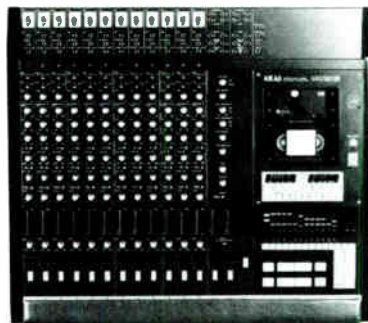


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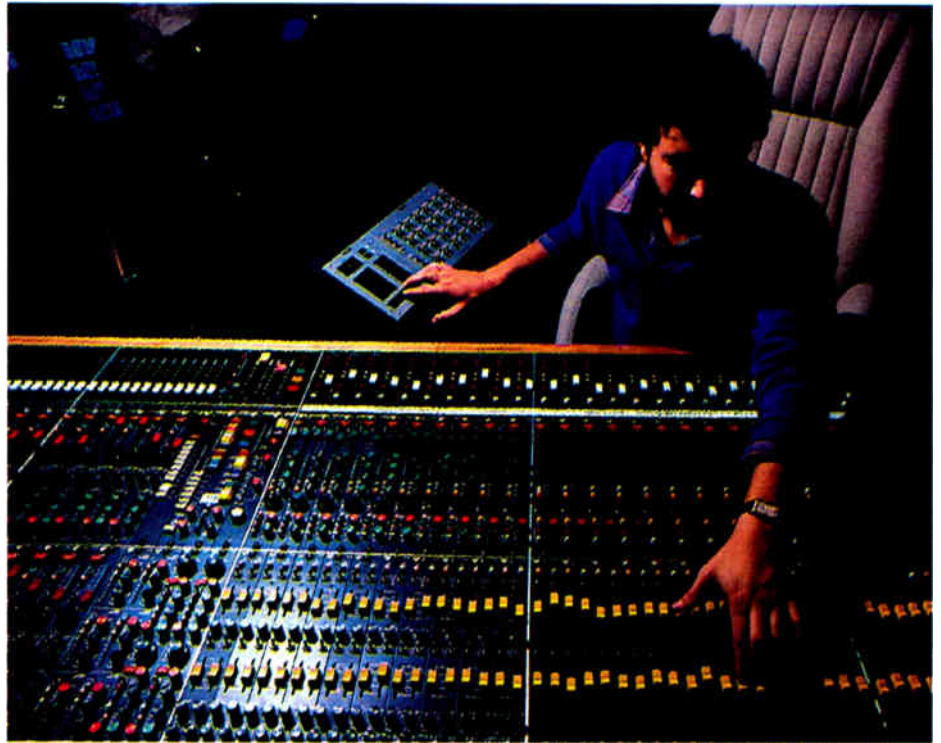
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Rhino's Harold Bronson (left) and Richard Foos.

—FROM PAGE 128, RHINO

This time, the threat of the suit stems from the Rhino record, *The Official Record of The Olympics*. The album is a release of long-treasured tracks by The Olympics, a group of four black men who had a string of hits (including "Western Movies") in the '50s. Although the cover plainly depicts the gentlemen who comprised this group, the Los Angeles Olympic Organizing Committee took issue. The thinking was that the average record-buyer might pick up this Olympics record thinking it was full of national anthems and marches—you know, athletic event music.

"From the letter they sent us," Bronson laments from Rhino's Santa Monica office/pressing plant, "it doesn't even appear that the LAOOC saw a copy of our album, which is revolting to me if you're gonna send somebody a cease and desist letter."

LAOOC official Robert L. Baum, for the record, was quoted in the Hollywood *Daily Variety* as saying that Rhino's joke was "particularly egregious" because an authorized album of Olympics music was licensed to CBS Records.

Foos and Bronson issued this response:

"You might want to collect a royalty from the city for using your name on street signs. [Olympic Boulevard is one of L.A.'s main thoroughfares] . . . and anyone who could not tell these two albums apart is probably in such wretched shape that we have serious doubts they could even find their way into a record store."

And so, seemingly, did Rhino extricate its horn from another dilemma. Following, for the reader unfamiliar with

Rhino's habits, is a partial list of some of the other things Rhino Records has gotten away with—er, produced:

- The newly-released EP by legendary television talk show host Wally George, including the ultra-right winger's hits-to-be, "Wal-ly! Wal-ly!" "America, Why I Love Her," and "Wally Rap."

- The soundtrack to *Little Shop of Horrors*—the original movie, not the recent stage musical.

- Christmas Time With the Three Stooges*—a reissue of the trio's early 1960s novelty records.

- The Best of Louie, Louie*—A collection of various versions of what might be the most popular beer-bar-band standard of modern times.

- The Rhino Brothers Present the World's Worst Records*—a compilation of such unforgettable (once you've heard them, you won't forget them) tunes as "Kinko the Clown," "The Crusher," and Edith "Egg Lady" Massey's rendition of "Big Girls Don't Cry" (she's the one in *Pink Flamingos*). This record, which came equipped with a barf bag, was Rhino's biggest seller of 1983.

- Big Daddy*—A compendium of 1970s and '80s hits, such as "You Don't Send Me Flowers," "Eye of the Tiger," and "Ebony and Ivory" done with loving detail in '50s style.

- Freddy Cannon's Fourteen Booming Hits*—Some might argue that this is more in the "lost classic" category, what with such all-time favorites as "Palisades Park" included.

- Rhino's first video release, *My Breakfast With Blassie*, the ridiculously funny send-up of *My Dinner With Andre* by the late, great Andy Kaufman.

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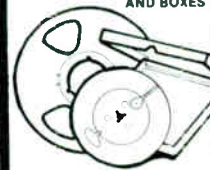


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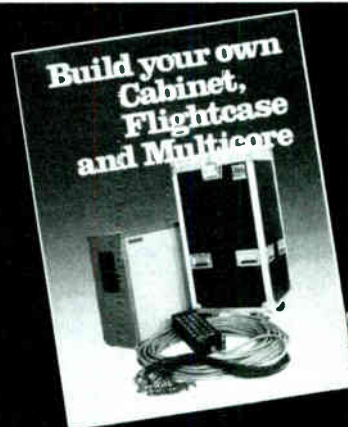
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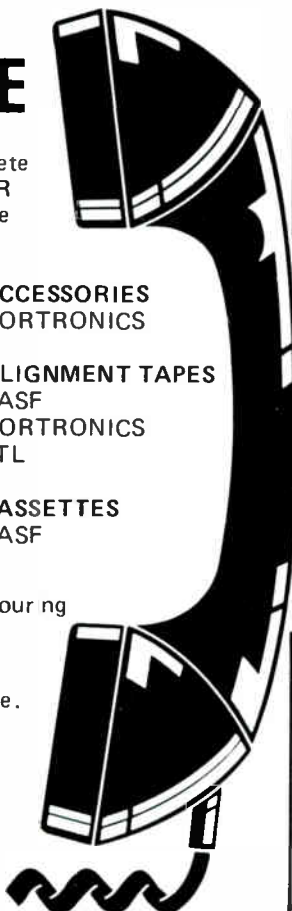
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—FROM PAGE 131, RHINO

Is this any way to run a record company?

Bronson sits in his large, high-ceilinged office. The walls are coated with posters and photographs. Alfred E. Newman, horror movie hostess Elvira (she now records for Rhino), Lenny Bruce, Frank Zappa, old stills of the Yardbirds, a Julie London picture disk (!), old Fillmore posters, a national tabloid bearing the headline, "I Married a UFO Alien" (just underneath a story about a wonder "hot dog diet")—the kind of stuff you'd expect to find on the walls at Rhino.

Bronson repeatedly yells "Message!" into a squawk-box as his secretary fields calls in the front office. He seems very much the record company executive, minus the stereotypical avariciousness. He even has an executive putter on hand.

"As I was saying, *Big Daddy* was our best record. The Grammy Committee loved it. It was played for the people on the committee who were not familiar with it. They put it on the turntable, and didn't take it off until it played all the way through!"

A compliment, to be sure, but did the record win a Grammy? No. This points up the major barrier Rhino has always faced. People don't always *get it*. An album like *Big Daddy* is original, innovative, well-produced, interesting—in fact, it's unique. But it's so weird . . .

"A lot of major labels look at what we put out, and they say, 'well, I don't understand it,'" moans Bronson.

Frustration aside, the Rhino boys are quite proud of their record, so to speak. And well they should be. It's been long-playing . . .

Foos, now 34, met Bronson in the back of a Santa Monica electronics supply store in 1972. The curly headed, bespectacled Foos had graduated that same year with a degree in sociology from California State University, Northridge (that's in the fabled San Fernando Valley), but had found his love for music—mostly old rhythm and blues—more compelling than his interest in social work.

He opened a small record concession in the back of a place called Apollo Electronics in Santa Monica—dealing mostly in old, forgotten, half-forgotten, and otherwise hard-to-get disks. Bronson walked in one day and bought the original *Locomotion* album by Little Eva for 35 cents. He never forgot that—or Foos.

Within a year, the concession had blossomed to the point where Foos wanted to move on. He did—opening Rhino Records at the present-day Westwood Boulevard site. Meanwhile, Bronson was a student at UCLA—curiously enough, also majoring in sociology.

"What I wanted to do," Bronson remembered, "was work for a record company. I was a college representative for Columbia Records, and I wanted to be absorbed into the company."

That never happened. Bronson turned to writing. A job at *Cashbox* magazine lasted two weeks. He was let go for not tying his shoelaces properly—or something equally weighty. It was, in his own words, a "real shock"—that old real world.

The solution? He began freelancing for various publications including *Rolling Stone*, and . . .

"I retreated, and went to work at Rhino."

It was a retreat that somewhat ironically did land Bronson back in the world of recording—and not as a corporate underling. He would eventually wind up in charge—but first there were six years to spend at the store. . . .

"The store," says Foos, who sold the place to go full-time into making records in '78, "is still regarded as something of a trend-setter. We were the first ones to sell and get into punk and new wave. We were the first to get into Windham Hill releases. We were selling Elvis Costello imports a year before his albums were released in this country—"

"We were the first," adds Bronson, "to import Stiff Records from England. When reggae became popular, we were the first ones to carry it and push it here. We were the first to push African music, like King Sunny Ade. . . ."

Why? Certainly Foos' and Bronson's collective tastes, which span most forms of music, had a lot to do with this gift of foresight. Also, Rhino was unbridled by commercial considerations—being primarily a used record store. Finally, the location wasn't bad: three miles from UCLA, right in the heart of big-spending-young-people land.

By the time the pompadoured, finger-popping rhino with the spinning disk on his horn first appeared on the record label, the Rhino audience was well established. No wonder "Go To Rhino Records" was a hit. So what did it take to push Foos over the edge? What made him sell his beloved store (with which he maintains good relations) to take the uncertain plunge into producing? Wild Man, certainly, provided the initial impetus, but something else cemented his resolve: "The Temple City Kazoo Orchestra." Of course.

"It was our first big success," says Bronson, far more talkative than the retiring, Foos (who looks chronically amused). "We were operating part-time out of the back of the store. We didn't really have any set-up or promotion

—PAGE 134

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The Cat's Meow

How does a cat like Stanley, lead vocalist on the Meow Mix commercials, make it big? Like so many others, he owes it all to his producer. In this case, Shelly Palmer and the production team at Shelton Leigh Palmer & Co. in New York City.

Palmer has composed and produced a lot of interesting commercial soundtracks lately, and he's happy, if not surprised, about Stanley's rocketing success story. So, the question arises, how did Palmer get an ordinary cat to perform an entire musical line?

When Jim Weller of Della Femina Travisano & Partners wanted to have a *real* cat to sing their jingle (as opposed to the human imitators who usually dub the musical meows), he came to Palmer, one of the recognized leaders in digital music synthesis in the commercial production industry.

"This started out as a typical digital sampling problem," said Palmer. Before Palmer could tackle any of the other problems, he had to have the perfect "meow" sample. This meant auditioning

cats—lots of cats. After what amounted to a feline *Star Search*, Palmer got what he wanted from Stanley. "To get the right sample I used a trick well known to music producers," said Palmer. "I made the cat sing for his supper." Unfortunately, sampling was not the solution to this seemingly simple production problem.

"Sampling is a welcome addition to the techniques of audio synthesis," noted Palmer, "but sampled sounds tend to have limited musical ranges. For example, the sampled meow lost most of its harmonic quality plus or minus a major third."

To beat the problem of limited musical range, Palmer & Co. developed and implemented a new concept in digital music synthesis called "Timbre Frame Re-synthesis." "This technique was pioneered by New England Digital for their Synclavier II. However, their re-synthesis algorithm does not work well with aperiodic sounds like cat's meows. We used the computer to analyze Stanley's meow and then we built a mathematical model of the meow in software. The result was a realistic meow timbre with a musically useful range of over three octaves."

In his debut commercial, Stanley is the voice of a cat having a close encounter with an alien spaceship. When the extra-terrestrials begin tonal communication, (to the famous "Meow, Meow, Meow" theme), Stanley sings back his response in a re-synthesized *real* cat voice with purr-fect pitch.

Palmer says Stanley hasn't spoken a word to him since the commercial went national. "He's just another *fat cat* as far as I'm concerned." ■

—FROM PAGE 133, RHINO

people; and this record sold real well for that time."

How well?

"The album was the number one requested album on KROQ [then L.A.'s biggest alternative FM station] for a month straight. That's what really led us to believe we had a viable business."

The Temple City Kazoo Orchestra, which is what its name suggests, recorded Led Zeppelin's "Whole Lotta Love" on the album. It went on to become a classic on the *Dr. Demento Show*, and Rhino went on to sell a whole lotta records.

In time, the press caught on. Rhino releases, in recent years, have been important events. The L.A. *Herald-Examiner* devoted several music columns to nothing but news of new Rhino records—whether it was an interview picture disk by The Yardbirds, a live recording by Love in a 1978 reunion concert, a long-lost Lightnin' Hopkins album, a 1981 live recording by Jan & Dean, albums by leftover Mothers of Invention (they called themselves the "Grandmothers" on their two Rhino LPs), an album of the "best" (didn't know there was *any*) of Johnny Crawford (you know, the kid on the *Rifleman*), the best of the Bobby Fuller Four, the best of Ritchie Valens, the best of Allan Sherman, a three-volume history of surf music (including Dick Dale and The Surfaris), a glossed-over early '70s LP by Gary U.S. Bonds, a great 52-minute album of John Lee Hooker and Canned Heat in concert, a collection of what might arguably be called Henny Youngman's "greatest" jokes, a Henny Youngman "rap" record—the list is remarkable.

Just what are the "Rhino Brothers" most proud of having released?

"Well, the *Best of Love*," says Foos. "And we put out a Bobby Day album—with 'Rockin' Robin,' 'Little Bitty Pretty One,' 'The Bluebird, the Buzzard, and the Oriole,' and others. These are both records I always wanted. I wanted them, and they never existed. No 'Best of Bobby Day' album, or of Love. These

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things were extremely satisfying to produce."

Foos and Bronson are not the sole arbiters of what Rhino releases. They are open to suggestions. Beach Boys fan Richard Stevens sold them on the idea of recording an album by The Honeys (Marilyn Wilson, Ginger Blake, Diane Rovell), which included two previously unrecorded Brian Wilson songs. Although the album didn't go over real well (the single got *some* airplay), Bronson said Rhino "produced the best album possible," which prompted him to bring up the most enduring bugaboo of the industry: airplay. It is hard enough to get "product" on the radio when the product is not glaringly commercial. But when the stuff is *weird*...

"Sure, Rhino is battling a fairly unimaginative mentality," says Bronson. "If you listen to a record like *Big Daddy*, a record we all believe in, you see that it could have *mass appeal*. Everybody likes '50s music, ten-year-old kids have grown up on *Happy Days*, but you go to a radio station—even an oldies station—and it's 'well, we can't handle something like this; we only play hits.'... We have a lot of people who like this stuff but

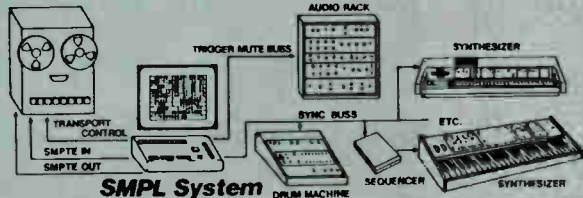


PHOTO: MR. BONZAI

An inflated Mark Mothersbaugh, of Devo, waves to his mutated fans on the set of the music video "Are You Experienced?" The clip depicts the cryptic return of Jimi Hendrix amidst a Devo dream flashback to the '60s, complete with a throbbing mob of mini-skirted hippie girls. Devo's Gerald Casale directed the clip.

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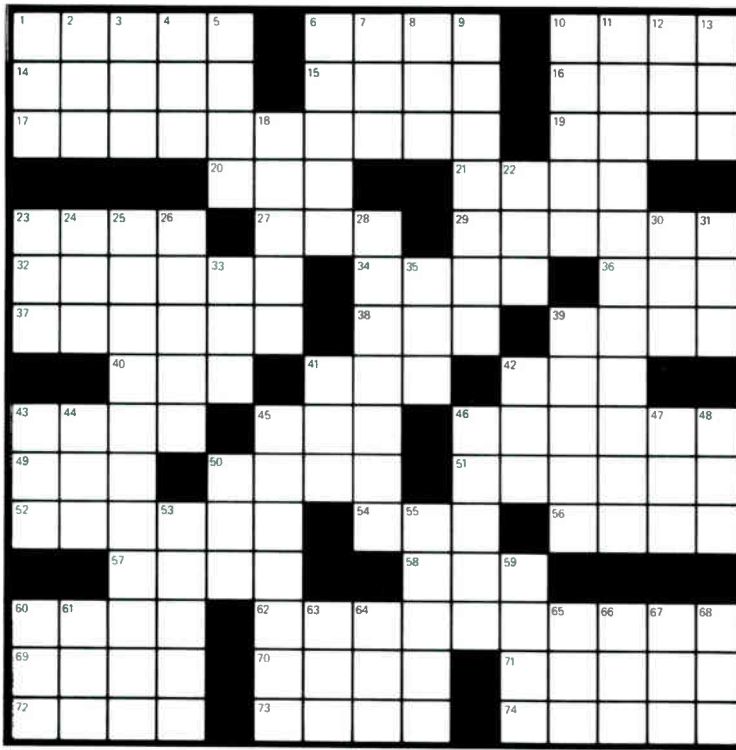
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MIX WORDS

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"ABSOLUTELY GEAR"

ACROSS

1. Seated _____ the salt
6. _____ La Rue, silent "cowboy"
10. Hebrew letter
14. New Orleans suburb
15. Canadian prov.
16. Console push button
17. _____ intelligence, Kurzweil specialty
19. A piece of glory
20. Palindromic word
21. Deuce game
23. Ye _____
27. Unusual _____
29. _____ an upbeat
32. Box _____
34. _____ avis
36. _____ amp
37. Spirited _____
38. _____ longa, vita brevis
39. Germ _____
40. See 1D
41. Storm part
42. Actress Hagen _____
43. Top _____
45. Sister of Hungarian beauty
46. Radii _____
49. "_____ of love," Honeydrippers' hit
50. Hazard for the Robert E. Lee
51. Official clocks
52. Crawled _____
54. High note
56. Country club denizens
57. Senor, in the Black Forest
58. The last word the bull hears
60. David Copperfield, at one time
62. Analog synthesizer essential
69. Something to drop
70. Relic _____
71. Wear a hair shirt
72. Cockney abodes
73. Several archeological sites
74. Grammy grp.

DOWN

1. Ovine utterance
2. Go astray
3. Navigator's abbr.
4. Sash
5. Certain partner
6. Like a shoe or a certain cocktail
7. "Stings like a bee" guy

8. Rail schedule wd.

9. Certain tops
10. Posed
11. Stentorian?
12. Poetic past
13. Word with egg and young
18. Literary device
22. _____ pig's eye
23. Military sch.
24. Swimmer's term
25. Groove box?
26. Lab burners
28. Conveyance charge
30. Tellurium, e.g.
31. Man's nickname
33. Russian river
35. Metric measure
39. Bristol _____
41. Little _____
42. News org.
43. _____ was saying
44. Date abbr.
45. Sci-fi creature
46. Booth
47. Verb of the "esse" family
48. Draft org.
50. Religious offering (abbr.)
53. Picks up
55. Certain body parts
59. Spirit
60. The _____ (formerly The Detours)
61. Take _____
63. Prophet makers
64. Mechanical energy intermediary
65. Standard for road cases
66. Rocky hill
67. _____ roll
68. Legal thing

who are too frustrated to do anything with it."

This has not stopped Rhino from recording another album of *Big Daddy* material (including a version of "Girls Just Want to Have Fun" done a la "Duke of Earl"), nor from recording more albums—period. There were seven LPs released on the Rhino label in 1978. In 1984, there were 47. The company also expanded to act as distributor for the San Francisco-based R&B label, Solid Smoke—fulfilling another dream of die-hard R&B devotee Foos.

Most recently, there have been new albums by Barnes & Barnes (including a sure-fire fixture on the Demento Show entitled "ZZ Top Beard") and an EP entitled "Goddess in Progress" by Julie Brown, who scored highly with "The Homecoming Queen's Got a Gun" and "Earth Girls are Easy." Are there any special dreams that the boys at Rhino have yet to realize?

"I think that the ideal reissue would be a best of the Dave Clark Five album," says Bronson, his eyes brightening. "They were very much a part of growing up in the 1960s America. People say, 'Well, they're a second-rate or third-rate Beatles.' But they are very underrated. If you listen now, a lot of things stand out. The sound of the drum mix was very high for that day, and there were real production values. Some of the records were inspired—'Any Way You Want It,' that chaotic sound..."

So...

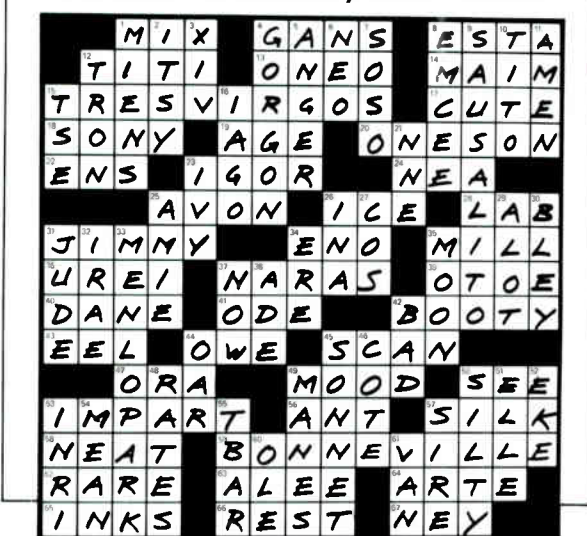
"We sent a couple of letters to Dave. The rumor is that he wants a million dollars or something. Rather than respond to Rhino, and understand that we can do the best job on his stuff and maybe sell the most of it, he's waiting for a big money deal."

In any case, the company will persist, with or without Dave Clark. Will the direction continue as it has? Whither Rhino?

"Well," says Foos, "we can't compete with the majors. We've tried to carve our own niche on a smaller scale. We appeal to two general types: the remnants of the gonzo record industry days when people wanted more unusual odd-ball types of records, and the record fan—the real fan who really wants to see original recordings of original groups from the formative years of rock and roll. We believe there are enough people out there who care about these things to support our label."

—Rip Rense

Solution to January Mix Words



—FROM PAGE 128, MINISTRY

his Arista contract had been legally wriggled out of.

MUSIC NOTES

Wax Trax is an outgrowth of a record store of the same name, a new music/import emporium on Chicago's Lincoln Avenue. The label had only a few releases to its credit since its 1980 inception—including "Cold Life," which reportedly sold 10,000 initial copies, and a single by Divine called "Born To Be Cheap," checking in at over 20,000 copies—when Wax Trax proprietor Jim Nash decided to enter the manufacturing and distribution arena. He secured U.S. licensing last spring for the latest product from European artmongers Popular History of Signs, Front 242, and The Blackouts, for starts. "These were very popular records in the store—when we could get them," says Nash. "Practically the only way to keep them in stock was to manufacture and distribute them ourselves."

Wax Trax Records is now a three-way partnership between Nash, his retail associate Danny Flesher, and Jourgensen. Al now finds himself not only recording Ministry vinyl under the Wax Trax aegis, he's also A&R chief.

Jourgensen says he puts in eight-hour days at the office as a record exec "in between touring." He is currently putting finishing touches on Ministry's first full-length Wax Trax LP at Syncro Sound. "I do basic tracks here at Chicago Trax and Chicago Recording Co. (CRC)," he says, "and I mix at Syncro Sound. Syncro is an artist-run studio; Ric Ocasek owns it. They have all the gear you need to do modern dance music. And I'm used to the room, and I get along great with the engineer, Don Moore. Since I'm producing myself now, I need a very good engineer. I know how my music should sound, but I don't know all the knob turning."

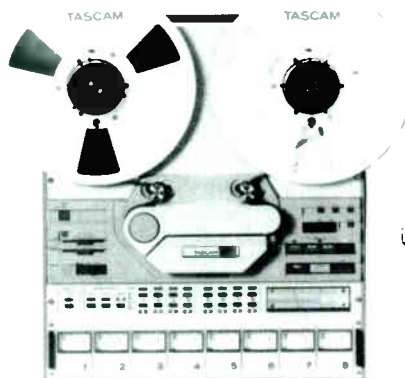
Jourgensen's been taking the latest road edition of Ministry on Midwestern and Eastern concert circuits since last fall. It consists of longtime percussionist Stevo, who's been involved with Ministry since there was a Ministry, and whose studio talents have been utilized by Ric Ocasek, among others; Al's wife Patty Marsh Jourgensen on keyboards, whom Al notes happily is due to be delivered a junior keyboard player in April; bassist Brad Hallen; keyboardist John Soroka; and off-and-on vocalist Yvonne Gage, a recording artist in her own right for Epic affiliate Chicago International Records.

"The Ministry Corp. is just me," says Al, who handles guitar and lead vocals on the road (as well as on record.) "All these people are a live touring act, with their own little offshoots. If everyone did a solo project, it'd sound a lot different than Ministry."

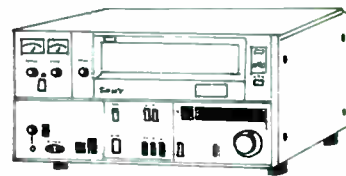
"But when it comes to Ministry, it's basically tunnel vision."

—Moira McCormick

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MUSIC NOTES



Zeta Systems 8x2 Programmable Mixer

The Zeta Programmable Mixer is a full feature 8 input, 2 output mixing board with three band EQ, monitor send, effects send, pan, level, aux in and effects return—all fully programmable. The unit's full MIDI compatibility allows communication with other programmable devices and keyboards. The built-in programmer saves 99 front panel control settings, and memory contents can be edited, copied to other program locations, or dumped to cassette.

A "fade time" control provides adjustable linear slewing from one program to another, for smooth fades, panning and changes in EQ or effects, ranging from 0 to 15 seconds. Another feature, the tape synchronization function, allows program changes to be placed on tape for fully automated mixdown of master to stereo. The mixer is priced at \$2,995.

Oberheim Patch Hunt Tape Available

The best OB-8 synthesizer patches from last year's Oberheim "Patch Hunt" contest are in and a data cassette containing 120 new sounds developed by OB-8 owners from across the globe is now available to the public. The sounds range from traditional instruments to esoteric sound effects, and can be loaded into any OB-8 synthesizer via the cassette interface. There is a \$10 charge for the cassette to cover shipping and handling. Orders should be directed to OB-8 Patch Hunt, Oberheim Electronics Inc., 2250 S. Barrington Avenue, Los Angeles, CA 90064.

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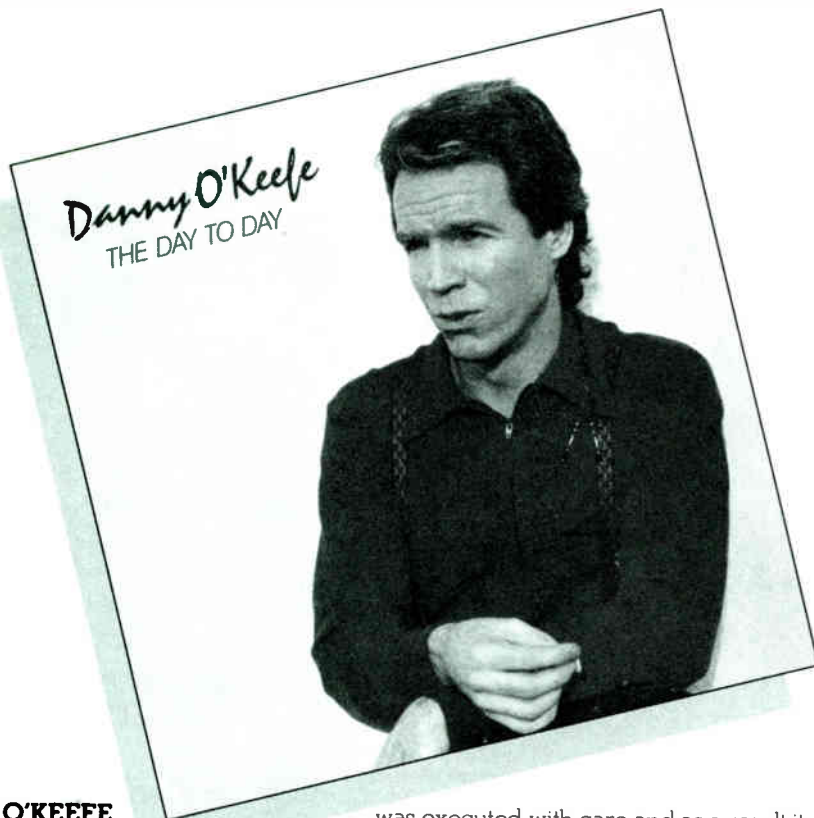


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DANNY O'KEEFE

The Day to Day
Coldwater 5384

Produced by Matthew McCauley; engineered by Mark Linett and Paul Brown; recorded at Amigo Studios, North Hollywood, CA; additional tracks produced by Tony Peluso; engineered by Peluso and Ralph Sutton at Hitsville Studios.

Danny O'Keefe is, without question, one of the most interesting of the singer-songwriters to emerge in the early '70s. Songs like "Goodtime Charlie's Got the Blues," "Magdalena" and "The Road" are simply the best known songs in a catalog filled with gems. And while he has not put out an album since 1979's underrated *The Global Blues*, it should not surprise those familiar with this extraordinarily gifted writer that his latest album, *The Day to Day*, is loaded with great melodies and consistently intelligent lyrics. Certainly this is the best O'Keefe record since *Breezy Stories* more than a decade ago.

What *is* surprising is that O'Keefe ever stopped being viewed as a hot commodity by the major labels and ended up putting out this solid set of tunes on a newly-formed independent label, Sausalito, California-based Coldwater Records. Without the financial support of a big company, O'Keefe had numerous budgetary constraints, which makes the quality of *The Day to Day* all the more remarkable. But the project

was executed with care and as a result it looks and sounds like a record costing five times as much as it did.

The first smart decision made by the triumvirate of O'Keefe, producer Matthew McCauley and Coldwater Records chief Bill Buckley, was to put down most of the basic tracks utilizing Oberheim's OBX system. O'Keefe and McCauley worked out synth, bass and drum parts on the Oberheim well before they ever set foot in Amigo Studios (formerly Warner Bros.' studio). "Working that way was certainly to the artist's, the record company's, and producer's advantage because, obviously, you're not spending \$100 an hour to do arranging," comments Mark Linett who, with Paul Brown, engineered the Amigo sessions.

Because the Oberheim's drum parts are "extremely good," according to Linett, many of the original Oberheim parts did not need much augmentation, but occasionally Linett would opt for a half-natural, half-synthetic combo. "We'd also do things like take the Oberheim's tom-tom and pump it out into the room and record it there, using the studio monitors and a stereo mike to get some real ambience."

Linett admits that, "It was a little strange for me to have a tracking day that was essentially a drum machine and a synthesizer. I'm used to having six or seven musicians and building it from there. But with the Oberheim, when it comes time to mix, you have tremen-

dous latitude over the sorts of coloration and echo you want to use. Especially with the drum tracks, you can do things that are virtually impossible in a live drum situation unless you build it one drum at a time, which I've done, too."

According to Linett, O'Keefe was very involved with every stage of the recording. "He worked heavily with Matthew on setting up the arrangements, and then he was in on the mixing sessions, too. He knew what he wanted this record to sound like, and I think in the end he got what he wanted."

Several musicians were eventually brought in to give the arrangements more depth, including percussionist Steve Foreman, bassist Veyler Hildebrand and guitarist Steve Ferris, who sizzles on "Hold Your Fire." Singer Leah Kunkel, her three-part harmony stacked by McCauley so that she sounds like a whole back-up chorus, adds a lilting beauty to the already beautiful "Some-day," which sounds like an adult contemporary classic if there ever was one. (Actually, though, the first single, "Along for the Ride," got very wide play on AC stations; it's one of those tunes that's so catchy you can sing along with it by the end of the *first* listening.)

Three tracks on the album that were added shortly before its release have a different producer and engineering team, but the sound of the album is still amazingly unified, tied together by O'Keefe's mellifluous vocals—at once honey-smooth and slightly angst-ridden—and his singular vision as a lyricist and songwriter. Every song on the album offers a different slice of reality, from brilliant portraits of life in the cold city in songs like "Hold Your Fire," "Protection" and "The Sidewalk Symphony" (all three good bets for AOR radio) to his evocative glimpse at a boxer ("The Prize"), and the wistful "If it Weren't for the Rain." A number of these songs rock a lot harder than most would expect from O'Keefe, but it doesn't sound at all forced, and the change in moods from contemporary sounding rockers to the softer ballads about relationships is not at all jarring; if anything it shows the breadth of O'Keefe's talent.

With independent releases, the Sword of Damocles that hangs over a given project is usually the fear that it will never *quite* break through to the masses. But this is a record worth betting on, either as an independent or as one to be picked up eventually by the majors. There's simply too much excellent material on *The Day to Day* for it to become a casualty of record business politics.

—Blair Jackson

WOMEN HIT THE ROAD

—FROM PAGE 51, WOMEN

Current Gig: Recording engineer at Soundworks in NYC.

Background: Sound and roadie work for the Good Rats, Ram Jam (former Epic act) and NY band the Cruz Brothers.



Dee Veccia

Current Gig: Assistant engineer at 39th Street Music Productions in NYC; Hunter College student.

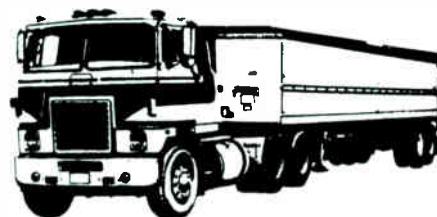
Background: Sound, lights and roadie gigs for New England area rock bands, lights for Pure Prairie League.



Judy Elliot-Brown

Current Gig: Chief maintenance engineer at Classic Sounds in NYC.

Background: Roadie for Billy Squier, A&M group Piper, house mixer and drum roadie for Midwest group Flame.



Rosanne Soifer

Current Gig: Writer of this article, NYC-based musician and freelance writer, business agent for Musicians' Local 802.

Background: Keyboard player for Nashville based country road band the Town & Country Revue.

How did you get on the road in the first place?

Dozier: I've always been on the road; I've ever worked the chitlin circuit. The road is the only way to play rock and roll, and right now the road is a major part of my career with Billy Idol. Billy's management had seen me at the Ritz and Dance-teria, and in the NY punk scene, everybody hears and sees everybody else. I guess they liked what they saw and heard, so they asked me to join them. There was no formal "audition."

Culum: I had friends who had a band; that's how a lot of people start out. Since we were all friends there was never any hassle. Later I started working for Central Lights in New Jersey.

Peterson: I first went on the road with some friends—their road crew quit, and there I was. The same thing happened with Ram Jam. With the Good Rats, the road manager wanted me for the job, even if the band didn't at first.

Veccia: I started doing lights and roadie work for friends in bands after I got out of the Institute for Audio Research. Then the Diane Scanlon Band gave me a chance to do sound and I picked up more jobs from that. You can't *not* do the road and expect to get anywhere.

Elliot-Brown: I was doing cartages with a friend and eventually learned my way around a sound board. Then a friend got a gig with Billy Squier's band. I met them and started working with them, too, but

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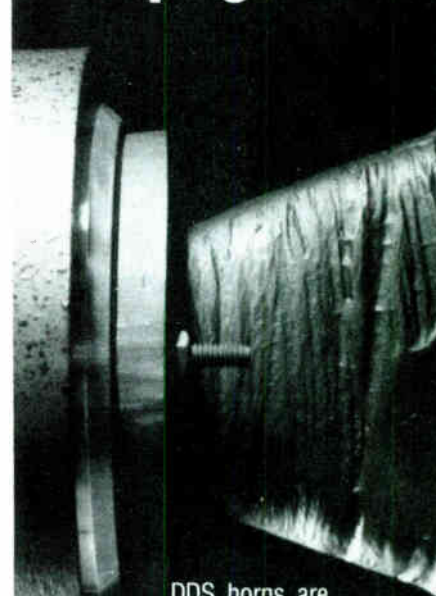


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WOMEN HIT THE ROAD



as a freebie. Eventually I started getting paid.

Soifer: I put a looking-for-a-gig-will-travel sign on the bulletin board of the Nashville Musician's Union. Just a phone number and instrument, no name. I got a call from the bass player of the band I subsequently joined asking me to come audition. I guess they liked how I played, but I think the fact that I drove to the audition 15 miles away and hauled my own equipment during a severe snowstorm showed them I could do the job.

What do you feel are common road experiences shared by everyone?

Dozier: Exhaustion!

Culum: Emergencies like sitting under the drum set and holding the cymbals while the band was playing in a tennis court during a dust storm!

Peterson: The insecurity—those in charge always made you feel that they were constantly looking to replace you.

Veccia: I think everyone had to experience being an Indian instead of a chief most of the time.

Elliot-Brown: The case of the Hertz truck that died *twice* on the interstate. They finally delivered us another one—with a faulty starter. That was also the same tour we were blessed with an inexperienced lightman. The whole thing was a perfect illustration of Murphy's Law in full bloom.

Soifer: Everyone I've spoken to who's done the road has encountered the Local-Musician-Who-Wants-To-Join-You . . . especially if your band is good. Some of them could be mighty persuasive! I particularly remember a pedal steel player from Georgia who had his good ol' boy act honed to perfection. Thank God he wasn't very good!

How do you negotiate the travel and sleeping arrangements?

Dozier: With Billy Idol, we usually go by plane and I get my own room. But it wasn't always that way. On the road, you must learn to share.

Culum: I drove most of the time—buses without mufflers. I'd sleep wherever and whenever I could.

Peterson: With both the Good Rats and Ram Jam, I did the driving, an 18-foot Ryder truck. I don't think I ever slept. I agreed to share a room, but sometimes we all had to cram into one. It was part of the job.

Veccia: I had to share a room on the road. Since I'm an only child from a small family, I had a lot of adapting to do. Once I had to share a room with the drummer and his girlfriend. That was awkward!

Elliot-Brown: With Billy Squier, we got

one room per pair of roadies, so I always shared. When we drove the truck, I was always made to sleep in the middle over the stickshift because I was the smallest. With Flame, I can remember only sleeping in dressing rooms or at the venues, which were usually 500 miles apart.

Soifer: I shared a room with the drummer. All I said about it was that I might need a bit more privacy than him. It wasn't exactly easy, but it was part of the gig.

Did you ever feel you were treated unfairly because you were a female?

Dozier: Even though I'm up there playing on stage and have my own room when we travel, so many people assume I'm a groupie or a girlfriend. Especially club owners and local promoters. It never occurs to look or to ask first. I'm always aware of their attitudes because Billy and the other guys are such gentlemen. Once I was assaulted by two security guards at a concert in California as I was going backstage. It never occurred to them that I was working and had a right to be there. When will these guys see that women can work and do things on their own?

Culum: When we were on the same bill with another band, the other band would always tell *me* how to run *our* soundboard! Yet if you showed that you knew your business, sometimes the guys would get very offended and try to "double" you. I remember once Def Leppard actually freaked out when they found out I knew what a Les Paul was!

Peterson: Often club managers would refuse to deal with me directly, which was maddening, because it was my job as roadie to meet them and arrange the unloading and sound checks. Once I got very sick with an ear infection, but I kept on working, because I knew if I said *anything*, the band would say something like, "Oh shit, now *she* gets sick" and maybe fire me. I'm sure if I were male, I would have been sent home or to a hospital to recuperate, and had my job back when I recovered.

Veccia: If I went into a music store to buy some equipment, knowing what I needed when I went in there, I'd always get questioned by the guy behind the counter. He'd be so sure I didn't know what I was talking about! And why was it that if you'd refuse a guy's offer of "help," you'd get accused of being a dyke?

Elliot-Brown: When I finally got on Billy Squier's payroll, I was listed as J. Elliot—no first name. Why? I was told that a woman in my job didn't "fit the macho image of rock and roll!" The management also told me to keep out of the way when media or photographers were present.

Soifer: I found out that the manager of the band was asking the singers we backed (country acts like Barbara Fairchild, Melba Montgomery, Bobby Borchers and Johnny Russell) if they would "mind" having a woman in the band, for fear I'd "distract!" Once I got stopped by the cops in Amarillo while I was walking down the street on the way to the laundromat, carrying a laundry bag. They had never seen me before, and assumed I was a new streetwalker or something. I was shoved into the patrol car while they called Nashville and New York police to check up on me. By the time I got back to the hotel I was shaking and ready to cry. But the guys thought it was the funniest thing they'd heard all week.

What advice would you give to women who are considering road work?

Dozier: Be careful who you hang out with and do the gig the best you know how. Sometimes it's better to look the other way on a lot you may see, and don't take most of the things guys say too seriously.

Culum: Managing Electric Lady is a lot like being on the road, and the same things apply: treat everyone fairly and on the same level, and prove yourself by using what's in your head. If a woman isn't physically very healthy, I don't think the road would be a good idea.

Peterson: You have to know who you are, because often you'll feel like an outcast, and you'll often be alone. Why? You are not a girl in the audience, or a girl back home, or a girl the guys sleep with—and God help you if you think you are! Also, a "social life" consisting of bars and truckstops is very hard to put in perspective, so use your common sense. If a woman is unphysically fit or goes through withdrawal without a daily shower or her manicure, she'll never survive the road.

Veccia: You're going to meet with opposition, so you must first believe in yourself that you *can* do the job. The road isn't for someone who has problems working for someone else.

Elliot-Brown: If you can't deal with sweat and no sleep, forget it! Also, if you want to get on a major tour, remember it's usually very political who gets to go—so learn how to deal effectively with the management.

Soifer: You'll probably get exposed to (if you haven't already) male attitudes that are basically Neanderthal in conception and scope. Don't take it too seriously. Now is not the time to get on your soapbox (or trapcase) and preach women's lib! And I think it's not too smart to screw around (in *any* way) with the guys on your job. ■

—FROM PAGE 122, LES PAUL

get patented until Barcus Berry patented it years later. I thought everybody knew about it, but I just couldn't get it to work exactly the way I wanted it to. Bell Labs made me all kinds of ceramic pickups.

There's nothing out there right now that I can look at in the solid state field which is actually 100% motionless. You're using a piece of material that is bent and under stress and that creates the voltage, the transfer of energy from mechanical to electrical. I was fooling around with it, but went back to the electro-mechanical method because it had more of what I wanted, knowing that the other way would give you more of the actual sound of an acoustical instrument. I was just cruising in another lane.

When I got into multitracking and overdubbing, I took the guitar and deliberately began to change its sound — to get the sound of playing underwater, in a phonebooth, upside down and crosswise. Bob Moog once said to me if I hadn't been clowning around with all those sounds, he never would have come up with the synthesizer, which is one of the great compliments.

Bonzai: Let's pick one of those sounds — how did you get the underwater sound?

Les: Tape loop — well, it was a disk loop at the time. I had been working on the idea for two years and was sitting one day with Laird Rich, a friend of mine, arm wrestling in a beer joint at Santa Monica and Western in Hollywood. He pulled me right down and says, "How come you're not concentrating?" I told him I was still thinking about that echo and how I didn't want a long time delay, like from an echo chamber. I wasn't after that "hey, hey, hey" like you're in the Alps. He says, "Do you mean by any chance like you take a playback head and place it behind the record head?" My goodness, we jumped out of our chairs, left the women to pay the bill and find their own way home. We jumped into my Model A Ford and went home and within 20 minutes we ripped off that tone arm and held it behind the record head and as soon as we got that slap-back on disk we got the answer. 'Course that became history and I never patented it. Fred Waring had advised me to patent a number of my inventions. It goes all the way back to my first harmonica rack and my mother's piano rolls. As a kid I would punch new holes in the piano rolls and if I made a clam, I would put tape over the hole and move it over. My mother got some of the damndest intros to "Barney Google."

Bonzai: Did you ever think how similar that was to digital audio?

Les: Not at the time, of course, but the thing that impressed me was that no matter how slow or fast you set the roll to go, the key remained the same. Analog

changes pitch with the speed.

It was in 1928 or '29, when I was about 12, that I invented my first recording machine. I built an electrical recording lathe and, to my amazement, I learned years later that the electrical application was patented by Bell Labs...in 1928, I believe. I was playing with the same thing and I thought that everybody

"As a kid I would
punch new holes in
the piano, rolls...my
mother got some of
the damndest intros to
'Barney Google'."

was doing it. I was using a crank phonograph. I didn't have an electrical motor on there. I'm to this day very bad at patenting things.

Bonzai: Didn't a little girl uncover your secret of multiple voices in your stage performances?

Les: Well, this was during the '50s and *Life* magazine wanted to do a big article exposing my secrets. We created the sound of our multitracked records live on stage. The tape machine was then not thought of being used to do the multi voices on stage. By that time I had left the disk idea and had gone to tape. Bing Crosby got me my first tape machine and immediately a light went on in my head to put a fourth head on it and make it do sound-on-sound. In '53 I devised this gem over here, which was my first multitrack recorder with tape loop echo and everything else I wanted.

But for our stage show, we did a very simple thing — put a microphone on Mary's sister off stage and gave her some earphones. The audience heard two voices instead of one, and if Mary coughed, Mary's sister coughed. No matter what the ad lib was, it was followed either at the same time, or right after, which confused people tremendously. A man came to me backstage, and says, "Mr. Paul, I know that it's a secret as to how you get these multiple sounds. People are saying it's definitely radar." They had a million explanations. He asked if I would tell him yes or no if he guessed how I was doing it. I said, "That's fair enough...sure." He says, "You have another lady singing offstage." I told him he was right and he said that his six-year old daughter had thought of it and asked

him, "Where's the other lady?" It was simple, but she was the first one to figure it out. It wasn't until 1956 that I took Mary's sister out of the act and started using tape.

Bonzai: Was that related to the "Les Paulverisor?"

Les: That's right.

Bonzai: Was that a triggering device on your guitar?

Les: Partially, but I won't expose the whole thing. It was a triggering device but it had many more functions. At the time, people were amazed at how many things I could do instantaneously. Today things are moving so fast that there's nothing that you can't do if you want to get intricate, but as I said earlier — how simple and reliable can you make it?

Bonzai: I read somewhere that you recorded W.C. Fields...

Les: Oh, yes...probably the only records ever made with him were done in my back yard. I became close to him working in the Armed Forces Radio Service, and a top writer, Bill Morrow, came to me and asked if he could use my studio to record Bill Fields. He arrived in a big black limo with a gal in a black dress — his mistress, I believe. He had his Listerine bottle with him for his martinis and we kept diluting them so he wouldn't get too stoned. Outside of my immediate clique, he was the first one to hear my multitracking.

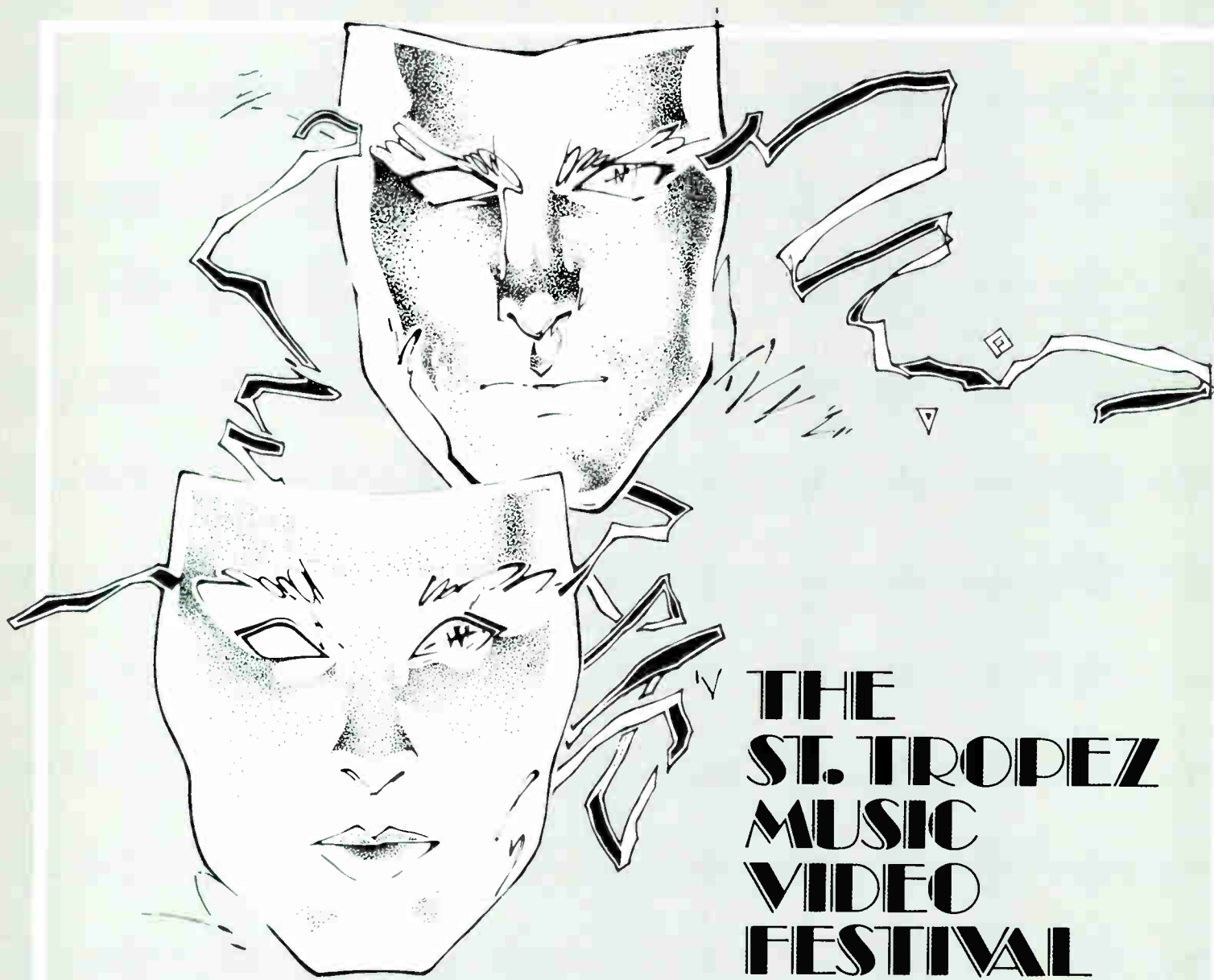
Bonzai: Did he want to do comedy overdubbing so he could talk with himself?

Les: No, he was too busy telling me that he played the banjo. When I played him some of the multitrack recordings he said that I played like an octopus and that name held with me. When I made the multitrack tape machine, instead of putting track one, two, etc., I marked it Octopus one, two, three. It was funny working with him, because he couldn't read his cue cards. We had a sign painter come over and paint signs so big you could see them for miles.

Bonzai: Which of your inventions paid off the most?

Les: The Les Paul guitar — but it took years to get it really going. Mr. Berlin, who was the head of Gibson and I were having dinner shortly before his death and he asked me, "When you came to me with that broomstick with the pickup in 1941, did you ever believe in your wildest dreams that it was actually hockable?" Of course I did. I was the only one who believed it at the time, but I never got discouraged. ■

(Many thanks to the Capitol Records research department and to Les Paul scholar Mark Smotroff.)



THE ST. TROPEZ MUSIC VIDEO FESTIVAL

by Phil Tripp

The new art form, technology, and business of music video have truly come into their own as evidenced by the rash of awards, conferences, and festivals that have sprung up in the last year. An event that is indicative of some of the problems that music video is undergoing was the First International Music Video Festival held in early October in St. Tropez. As a market for long form product, a juried competition of clips and long forms and a series of seminars, the festival fell short of its goals.

The statistics were impressive, though. Organizers claimed an attendance of 1800 participants from over 20 countries, representation of 380 companies and over 400 journalists, including 17 film crews and 57 radio stations. Even so, the problems encountered in the initial year of the event caused intense arguments about the

judging procedures of both clips and long forms, as well as logistical foul-ups. Attendees found themselves somewhat lost in a foreign country in widely scattered hotels with confused transportation facilities trying to do business without a central marketplace for product and a language problem for most.

Yet it was a strong indicator of the interest in and growth attained by the industry that has evolved from a cultural curiosity to a full blown industry in just a few short years. The problems encountered by the Festival's organizers — publishers RS Communications of Paris, headed by 23 year old Rupert Schmid — mirrored the growing pains and development of music video itself as it becomes a major home video product as well as a programming panacea.

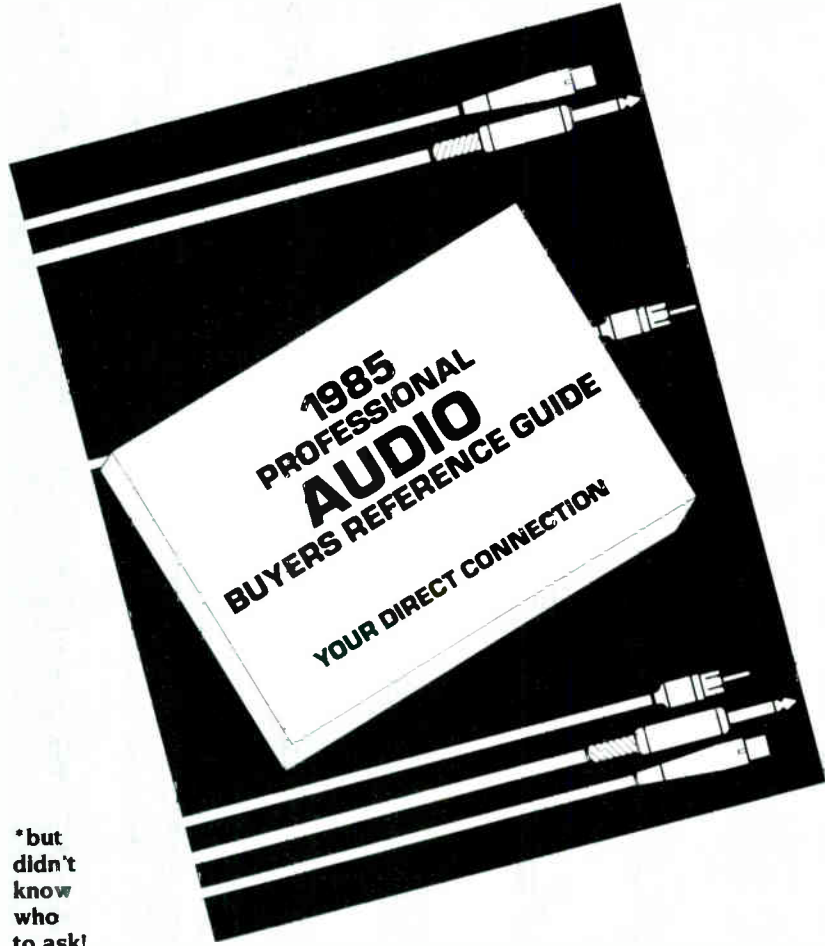
It was an odd mix of participants — the business sector looking to sell or acquire product, itinerant directors and producers with a view towards

obtaining recognition and procuring more business, swarms of media, and the glitterati and illuminati of the industry. Julian Temple, noted director of The Rolling Stones' Video Rewind, summed it up best saying that the video fraternity was "an industry in search of itself. Perhaps it is still too early to expect the industry to appreciate an event of this magnitude or to be able to use it properly."

As expected, the festival was a financial loss with organizer Schmid investing over \$900,000 with a shortfall of over \$250,000. But the major failure was the judging of product in the competition with over 60 judges scurrying through a glut of over 450 clips and 105 long forms as well as a scattering of commercials utilizing music video as a hook — an art form popular on French television. The primary problems with the judging were both technical and logistical. Duplication of product was prohibited and most entries came in so close



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to the deadline that many tapes in NTSC format could not be transferred to SECAM because of a lack of facilities. Additionally, the judges were split into nine panels and there weren't enough triple format (NTSC, PAL, and SECAM) machines available for the confusing range of tapes. This slowed the judging the first day when panels had to formulate many of their own parameters of judging to adapt to the circumstances and time factors. President of the judges, Jean Jacques Beneix, director of the feature film *Diva*, stated, "This industry had better get used to adaptation of rules — we had to establish the rules as we went along."

In response to intense criticism that long form product had been initially judged by viewing only seven minutes of each, he said, "It was not a fair way of doing it — just seeing a piece of each — but at least it was the same for everyone. But through our mistakes and the big qualities of the Festival itself, we discovered things that made us richer in knowledge."

In a final press conference preceding the awards, Schmid and Beneix outlined the problems with judging and promised to correct them next year with a pre-selection process, better organization of the transfer and duplication of tapes for the judging and display of product, as well as a rule that only videos produced in the next year would be eligible.

Another criticism voiced by director Tim Pope was addressed — the lack of judges from outside the industry and of an age group and target audience that the videos are aimed toward. Pope was the second youngest judge at 28 with the youngest being a 14-year-old student, Tamara Lane Cohen. She felt that her decisions were "not that far off from the other judges. In the final analysis, we were pretty much in agreement as to the decision we made on clips and long forms."

Product that had been entered in the competition was also screened locally at different venues, on the huge floating DiamondVision screen in the center of the harbor and on the Monte Carlo television station for the term of the event. Tapes had to be shuffled from the judging to the central studios eliminating the possibility of entrants being able to get their tapes back for their own showings if they had failed to dupe enough copies for their own use.

Another area of complaint was the seminars which discussed issues of the industry. Some of the issues were moot points such as the debate of film versus video, while others dealing with payments and profits from the genre have been adequately covered by other conferences with few new developments. The perspective was decidedly French and European with a dearth of US and UK participants in most of the

panels and a very poor translation of the speakers for the mostly English speaking audience. Press releases were mostly in French and the staff of the Festival were surprisingly unilingual, frustrating the English speaking press and participants.

Nonetheless, RS plans to stage the event again next year (with a stronger emphasis on marketing aspects) pro-

VIDCOM

Long a market for home video with a slathering of horror flicks, the usual assortment of porn films, and a glut of third rate features, the tenth VIDCOM saw expansion of the marketplace into a number of interesting areas, most notably music video. This year's event drew heavy participation from companies primarily engaged in distribution and acquisition of music video as well as companies that had only one or two selections to offer in their product range.

Polygram Music Video, Videoform, Picture Music International, and Pacific Arts were prominent in their booths with a large array of concert and compilation product, rockumentaries, and video albums and singles. One surprising entry was Pioneer LaserDisc whose expanded catalog of music video includes a series of ambient videos produced from songs of Windham Hill Records artists as well as an odd collection of like videos using soft core nudity and implied violence — a genre unique to the Japanese music video market.

Over 800 companies registered with 271 stands, 373 without stands and 169 simply with executives present. Attendance was reported to be over 10,000 with almost 50 countries represented. Still, attendance was not what the organizers had hoped for. Even with the expanded program market covering software for home video, as well as the ancillary markets of satellite and cable, plus the hardware aspects of teletext and the mini MIJID market which focuses on home computer software, VIDOM was surprisingly quiet at times with most of the deals being made away from the event at lunches and back in the hotels.

Music video will see a higher prominence next year according to organizer Bernard Chevy who may introduce a special section for that product, as he is doing this year at the MIDEM confab held this month which will feature a separate hall for clip producers and directors as well as a market for product.

—Phil Tripp

to establish a central meeting place and better facilities for private viewing of product and a better transportation system for ferrying around attendees. This year, Renault was a sponsor, supplying more than 20 Supercing compact cars for use by the festival's drivers. Cointreau was another sponsor, who supplied the festival drink called the "Cointreau Clip" — a noxious concoction of the liqueur and fruit juices. RS hopes to attract more sponsors next year to offset costs, and the company sees the likelihood of a profit in 1985. Though dates are not set, it is likely that it will occur around the time of VIDCOM in Cannes.

This year's VIDCOM proved to be a competitor with St. Tropez, with several of the major companies in the home video arena opting not to cover both events. Thorn EMI, Polygram, Picture Music International and several others were notable by their absence though some companies like Videoform did participate more as observers.

But media were well represented with an incredible array of TV and film crews, roving reporters, and cliques of international journalists searching for the elusive story. Most concentrated on trying to get aboard the fleet of yachts brought in by Duran Duran, Elton John's manager John Reid, Robert Stigwood and others. The ostentatious wealth flaunted by many of the participants was in sharp contrast to the complaints made by many record execs of escalating costs, improbable profit potential and unrecoverable costs of making clips.

However, by the magnitude of the event and the enthusiasm of the participants, it appears that music video still holds the artistic and profit potential for the future if the industry can find itself and the players don't repeat the same mistakes of overkill, formularization and politics that brought the recording industry to its knees in the late '70s.

Major awards for the Festival included: Best Clip — "You Might Think"

—The Cars

Silver Award — Paul McCartney and

Michael Jackson — "Say Say Say"

Bronze Award — Michael Jackson

—"Thriller"

Best Long Form — "Heartbeat City"

—The Cars

Silver Award — "The Compleat Beatles"

Bronze Award — "Caught In The Act"

—Styx

Best script, direction and special effects

—"You Might Think" The Cars

Best photography, costumes, design and casting "Say Say Say" — Paul

McCartney and Michael Jackson

Best Choreography — "Thriller"

Michael Jackson

Best British video — "Two Tribes"

Frankie Goes To Hollywood

Best Australian Video — "Sad Songs"

Elton John

VIDEO NEWS

by Mia Amato

"Businesslike" best describes the recent *Billboard Video Music Conference*, notable for an almost total absence of recording artists and record company executives — most attending were those who work at producing or distributing promotional clips. Awards for technical excellence wound up basically split between *John Landis* "Thriller" and "You Might Think" from *Charlex*. Our favorite clip showed up in the independent label screenings. "Homecoming Queen's Got a Gun" falls into the novelty genre, a teen angst satire in which a blonde deb pulls a pistol from the folds of a pink chiffon gown and wreaks havoc on her class rivals. Oddly enough, the clip, produced by *Terrance McNally*, has a happy ending.

McNally said the clip and the single, distributed by LA indie label *Rhino Records*, were put together by a group of theatrically-minded friends, including singer *Julie Brown* and director *Tom Daley*. "One of the reasons we were able to make the clip look so good on a very small budget is that we had professional actors," McNally explained. "The concept works because the acting is believable."

The meeting also was a show of strength for the newly-formed *Music Video Producers Association* (MVP). Association founder *Ken Walz* said the group doesn't plan to immediately tackle the issue of royalty payments for music video producers, but has as its first goals standardizing bidding between record labels and production companies, and guidelines for payment in the thorny areas of last-minute project cancellations and creative fees for providing "concepts" (See related story this issue). MVP's bid form and organization structure shows the hand of Barney Melskey, who helped organized the Association of Independent Commercial Producers (AICP) along similar lines.

Another group forming is the *American Video Jockey Association* for VJs working in nightclubs. AVJA is also providing a clip pool to members and can be contacted at (213) 248-4196.

What's going on in the studios... in New York, *Silvercup Studios* set some kind of soundstage record by hosting the production of four different music videos at the same time: *Howie Deutch* was directing *Billy Joel* in "Keeping the Faith" while the *Isley Brothers* were working with *Steve Kahn*; in other parts of the vast former bread factory *Eric Carmen* and *Hall & Oates* filmed their latest clips.

National Video has completed a 30-minute demo cassette for the *Grateful Dead*, which will be distributed to television news programs, and a shorter demo for the English band *Chaser*. "Some Day They're Gonna Need My Band," directed by *Cedric Whitehouse*, pictures the musicians literally knocking on record company doors in search of a label — not a fiction, as the band is looking for a distributor for its single. *Editel/NY's Peter Karp* edited the *Jackson's* extravagant horror-genre "Torture" clip. Directed by *Jeff Stein* for *PMI*, the six-minute film took ten days to post (the breakdancing skeletons were created in a separate film sequence by *Peter Wallach*).

Luis Aira directed *Kashif's* "Are You the Woman" for production company *Ingalls Inc.* and their client *Arista*. For *MGMM*, *Russell Mulcahy* directed both "The War Song" for *Culture Club* and "Into the Fire" for heavy-metal band *Dokken*. The two videos accompanying *Julian Lennon's* debut hit singles were posted at *Teatown Video* in New York under the direction of filmmaker *Sam Peckinpah*. Teatown's *Marlen Hecht* also reports that the facility has added Betacam component editing to its interformat services. So has *Matrix Video*.

Elsewhere...downtown San Antonio's Fiesta Plaza is the home of a new \$3 million video complex. *Focus Productions* will offer full post and studio services including a 5000-seat theater equipped with computerized lighting. Also in San Antonio, *TMS Productions* announced installation of the city's first and only Ampex ADO for special effects.

Dallas Post Production Center has been active editing a video

for *Leon Russell* and a one-hour TV special starring country singer *Waylon Jennings*. Also posted were two rock specials for European distribution for *Dej Productions*, edited by *Dale Thorn*.

"The groups in the Dej specials were so different — *Talking Heads*, *AC/DC*, *Black Sabbath*, for example — we got to do some off the wall editing," says Dale.

Third Coast Video (Austin) collaborated with the *BBC* for a documentary tracing Scottish fiddle music to its country decendants in Texas, Kentucky, and Tennessee. In rock projects, they've also created blue screen sequences for *Joe Carasco's* clip, "Current Events," and a taped concert for local group the *Sextones*. Mobile audio for the latter was supplied by *Riverside Sound*.

A new Rank Cintel film-to-tape transfer is installed at *Northwest Teleproductions* (Minneapolis). *Videosmith* (Philadelphia) now has the Quantel DPB series 7000 Paint Box and artist *Linda Clough* to mastermind retouching, rotoscoping, animated graphics and drawing effects. Grammy Gospel winners *DeGarmo and Key* produced two videos at *Arden Teleproductions* (Memphis), which hosted a press premiere for the Christian rockers in studio.

Art tapes go for the gold, maybe the platinum... sales unit criteria for the home video equivalent of the gold record were doubled by the RIAA, reflecting strong sales by cassettes and an increased VCR population of well over 10 million owned. Domestic sales of \$2 million retail or 50,000 cassettes and disks rate a gold award. Platinum certification was raised to \$4 million sales or 100,000 units.

—CONTINUED ON PAGE 148



PHOTO: IAN DRYDEN

Julie Brown, like, totally depressed at the untimely demise of her best friend *Debbi* in "Homecoming Queen's Got a Gun."

—FROM PAGE 147

Non-narrative art videotapes with musical soundtracks continue to break into the home video mainstream. Besides *Steve Beck's* video synthesizer art tape, which he says "is doing quite well" in mail order sales, the artist's *Electron* video label has released a cassette of psychedelic filmworks by animator *Vince Collins* and a video single, "Breakdance," with a peppy soundtrack and figure animation created entirely on an Apple computer. *Sony Video Software* has released "Evolutionary Spiral," uniting the jazz fusion music of *Weather Report* with video special effects created by *Mark Mawrence* and *Larry Lachman* of MIT. The 15 minute cassette sells for \$16.95. Also available in stores from Sony is "Danspak II," a second music video tape from the team of *Merrill Aldighieri* and *Joe Tripician* — with explosive new music and a cameo by *Lou Reed* — and "Body Music," a half-hour of erotica electrified by *Homer & Associates*.

MCA Home Video has an agreement to distribute a *Doors* compilation long-form program...*Ray Davies* of the *Kinks* has completed production of a musical narrative, "Return to Waterloo," to be distributed by *RCA Video*. ■



Participants gather on the set of "L.A. Woman," a conceptual seven-minute video for *MCA Home Video's Doors* long-form music video. Producing the program is Monitor Award winner *George Paige*, with the *Doors'* *Ray Manzarek*, *Robby Krieger* and *John Densmore* overseeing the production. The long-form music video, scheduled for release in 1985, will feature rare concert and archival footage of the late *Jim Morrison* and the *Doors*. Pictured left to right are: *John Doe* of the band "X," who appears in "L.A. Woman;" actress *Krista Errikson*; cinematographer *Allen Daviau* (of "E.T." fame); *Doors* member *Ray Manzarek*, who directed the "L.A. Woman" video; and *Doors* manager *Ben Edmonds*.

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THE BILLBOARD SIXTH ANNUAL VIDEO MUSIC CONFERENCE

by Mr. Bonzai

Well, once again, *Billboard* engineered a really chatty, schmoozy and entertaining gathering of video music artists, producers, directors, critics, technicians and lounge lizards. And boy, were the lounges spiffy. The new Sheraton Premiere in Universal City (don't it sound like the future?) has the gracious decor to make this garage industry a bona fide "scene."

I wandered into so many lounges that I missed a few of the educational seminars, but I did catch a mini-lecture by director *Joe Dea* (of *Greg Kihn* fame). Joe, with writer *Richard Day*, provided a funky, low brow grounding backdrop to the studios proceedings by explaining how those expensive special effects can be done cheaply. Need some spectacular cloud effects? Shoot through a fishbowl filled with water and swirling milk. Can't afford to rent a smoke machine? Jam a pack of lit cigarettes into your vacuum cleaner hose and put it in reverse (the "blow" function). After clearing

—PAGE 154



Cyndi Lauper, Ken Walz, two members of Cyndi's band, Michael Negrin (cameraman), Dave Wolff (Cyndi's manager and co-star) in the music video "Time After Time."

years before MTV went on the air. Current and former Billboard Music Conference organizers Lee Zhitto, Thomas Noonan, Kris Sofley and Steve Traidman have provided an invaluable critical forum for the evolution of the International Music Video Community. Producer Jon Roseman deserves special credit for finding and marketing a stable of directors and producers (including this writer) who have gone on to create their own video music production companies. "The Godfather of Video Music," Roseman was as usual outspoken and uncensored, a one-man controversy prepared to expound on almost any issue. John Weaver and Keith MacMillan of KEEFCO, who have produced hundreds of consistently high quality music videos for the likes of Paul McCartney, Blondie, and Jethro Tull, were there. Another pioneer in the field, and one of the most experienced American Video Music producers is Ken Walz. *Mix* publisher/editor David Schwartz and I interviewed Ken for MVP.

Mix: Let's review where you came from. How did you get into music video?

Walz: I spent about four years in advertising. I was an account executive for such products as Frito corn chips, TWA and Blue Bonnet margarine commercials. One day this guy came into my office and said, "I present rock concerts at colleges. We need sponsorship. Would your client be interested in doing that?" Well, my client wasn't interested, but I loved the idea. So I quit and went with his company and I got advertisers to come and sponsor the Grateful Dead, Melanie, Elton John. This is back in the early '70s—and that company was successful for about a year or so. I came across a director named Stephen Verona. Stephen was about to do a film for CBS records called their "convention" film. They would do a 90-minute film, with about 30 or 40 different CBS recording artists, to show at their convention to get all of the sales people from all over the world hyped up about the new releases. That's how I got into filming music. This was way before ABC's *In Concert* or *Don Kirshner's Rock Concert*, any of the other things that had contemporary music on television. So, through the early '70s I did a lot of that kind of work. Eventually, I drifted into commercials and did industrial films for Faberge, J&B Scotch, things like that. I did a couple of segments of the

KEN WALZ

A PRODUCER'S PROFILE

by Lou CasaBianca

The setting was the glossy new Sheraton Premiere Hotel in Universal City. The event was the 6th Annual Billboard Video Music Conference. The mood was upbeat and positive. Most of the important players in the music video business were in attendance or represented. One of the most repeated comments by panelists was "whatever else you might say about them, if it wasn't for

MTV we probably wouldn't be here today." I heard myself saying that "MTV probably wouldn't be here today" if it wasn't for the artists, producers, directors and record companies who produced the videos that have been its bread and butter for over three years.

BILLBOARD & THE PRODUCERS

Billboard, in particular, deserves recognition for creating the Music Video Conference six years ago, three

American Sportsman for ABC, went over to Nepal and did a show on the Bengal tiger with Shelly Hack, which was a terrific experience for me. When I got back from that I knew I could produce anything.

Mix: Yours is probably one of the most diverse backgrounds of anybody in the video music business—you've done documentary, sports, industrials, commercials. . . .

Walz: Yes, that's why I like the film angle, because the variety is there and it keeps you alive. So I've always been up for different things, but ever since I did the work for Blue Angel, which was Cyndi Lauper's old band, the music video has been about 80 percent of my work.

Mix: Music video has finally come of age as television programming. Everything that's ever been shot becomes programming sooner or later. How long ago did you work with Cyndi and Blue Angel?

Walz: Blue Angel was Cyndi's first band, and that was about four years ago.

Mix: Isn't it fair to say that her record label would acknowledge that her video and high rotation airplay on MTV made her career?

Walz: Any record company will confirm that. The record was out there and it wasn't really moving. A lot of radio people resisted it because it sounded kind of strange and it was a bit of a novelty record. Then the video hit and it all changed practically overnight. I knew Cyndi and I knew her personality would come through with that song ["Girls Just Want to Have Fun"]. In the second video we would show her other half, which we did with "Time After Time," because then people understood that she could sing well. She could sing a ballad, she could act, she could be sensitive as well as being crazy. So that nailed it down for her, then she was on her way.

Mix: Which song did you do with Huey Lewis?

Walz: I did "The Heart of Rock 'n' Roll" this spring. We spent a day in New York and two days here in Los Angeles. We had no choice on that one—the song goes, "New York, New York"—so we knew where we had to go, and that was fun. Huey is a wonderful guy, he is thoroughly professional, all the guys in his band are great to work with. Huey and Bob Brown [his manager] are funny and they work hard. You say "be there at six in the morning," and they moan and groan, but they were there at five to six. In one night we had a shot at Danceteria with all the weird people, Times Square, with Huey crossing the street, there was a stunt, so we had a stuntman on that, and a helicopter shot over the Brooklyn Bridge. Then we came out here [Los An-

geles] and spent one whole day in a club shooting the performance stuff, another day riding around with the bus and all the pick-up shots. So that was a complicated one, but it went very smoothly because everyone was very together and cooperative.

Mix: Just for the record, what was the budget you had to work with for "The Heart of Rock 'n' Roll."

Walz: In the \$60,000 area. Not particularly profitable, as you can imagine.

Mix: Can you tell us about the Billy Joel "Piano Man" video?

Walz: The Billy Joel video was shot back in 1972 for the CBS records convention when he was doing "Piano Man." In fact, we were setting up in the CBS recording studios waiting for him to come in. No one ever knew what he looked like. Then this kid came in with a leather jacket and hung around for a while. Then he walked up to the piano and started to do Chuck Berry imitations, then Joe Cocker. Billy Joel does great imitations. And then everyone says, "Hey, you're great, what's your name?" "Oh, I'm Billy Joel." "Great, we're going to be shooting you in a few minutes. Stay there, we'll get the lights and get started." I'm sure I was the first person to shoot him, because it was his first album.

Mix: What are you working on now?

Walz: Well, I just finished one for Polygram for a band called Anamotion, which is sort of a dance kind of sound, which is fun for a change. When I go back I'm shooting a new artist for Arista named Janie Street. I'm fairly proud of the diversity of my work. This year I did Huey, and Cyndi, then I did one for *Beat Street*, the breakdance movie, which had none of the footage, it was all original stuff. Then I did Juice Newton, the Oak Ridge Boys, Van Stephenson, Anamotion, Janie Street; they are all very different.

Mix: If a label with an already established artist approaches you with a song, do you conceive several scenarios and see which ones they are the most attracted to, then develop them, or do you have one vision for each?

Walz: It seems to be different every time. With Cyndi's stuff, there was no competition. I didn't have to submit a script; we just went to work and polished and made it right. Huey came along and had that idea practically written out—he spent so many hours on the road on that bus he had time to write his videos. So that was easy. When it comes in cold, I work with several writers and directors and I write sometimes, so it just depends. I might send it out to a couple of directors and see what they come up with. I might give it to two writers or two directors, or some combination, or if I have an idea myself, I

just write it up myself—it varies. I think you should know 90 percent for sure where you're going, otherwise you're having discussions on a set and it's costing money. If there is a little bit of flexibility, sometimes you see a piece of business or action that really works well and you can just change it. That is why I'm reluctant to give record companies storyboards with pictures, because they're going to be looking at those pictures. It's just like advertising, and I've been through that. I know that when a production company gets a storyboard, they know that they better shoot that storyboard. So one of the best things with music videos is you can kind of change it around a little bit as the circumstances dictate.

As a producer, that is good for me sometimes because if I see that we are getting behind or we're having some production problem that is going to cost money, maybe I can do a little shortcut that won't affect the piece at all, but will bring us back on schedule, or make the whole thing turn out on budget. So far, the record company and the artists are only concerned with a piece that works. If it isn't exactly what you had on script, but it's still good, or better, terrific. With "Girls Just Want to Have Fun" we shot so much good stuff that we lengthened the song for the video. The video is 30 seconds longer than the record version. In "Time After Time" Cyndi really rose to the occasion. She stared out of that train window and conjured up a tear. I don't know how actresses do that.

Mix: Do you have any plans with her to do any more videos at this point?

Walz: Cyndi's doing a couple of live videos now. They filmed her show in Texas and the next two that you see will be performance, and then she goes in to do a new album. I'm glad I did those though, because we won a lot of awards and got a lot of recognition for it. On a business level they were totally successful and on a professional, creative level they were very worthwhile.

Mix: What approach do you use for the sound and playback to interlock all of your machines? Everybody seems to have their own variation on a theme in terms of how they lay it down on film.

Walz: Well, everything I do is on film. I get a copy of the song and get a 60 pulse on it and put it on a Nagra and off we go. Usually in the post, I use 35mm mag for the sound. Some of the record companies are now using half-inch copies of their master and having me put the sync signal on one of the channels and using that for our sound.

Mix: Do you use half-inch four track?

Walz: Yes. Stereo left and right, time code and sync signal. So it syncs with

playback copy. I like the 35mm sound.

Mix: 35mm sound and 16mm film?

Walz: Yes, I think that's got to be the best. We run our 3/8 mag tape, and in some cases the 1/2-inch, at the same time that we run our 1/4-inch for the Nagra, so that they all have the same sync signal on it.

Mix: This will be a big change for stereo TV . . . and a breakthrough for the record business. Video music has gotten a lot more acceptance from the record companies compared to a few years ago.

Walz: They really resisted like crazy, because they didn't know anything about it.

Mix: They considered it a fad, at best. Just a couple days ago I read an article about the record industry execs and producers who now believe that video is the future of the record industry.

Walz: That's interesting, because there are people here at this hotel that told me five years ago that music videos did not sell records and that they were an expensive waste of everyone's time. And now they are here on panels to boost video music.

Mix: What artists would you like to work with?

Walz: Good question. To hedge that just a little bit, I find that I get the most personal satisfaction working with the new people. Because first of all, they don't drive you crazy and they are so happy that you are working with them that they will do anything. And you have an opportunity to really launch a new career. I saw it happen with Cyndi, and I love watching that. It happened to some extent with Patty Smythe and "The Warrior." Because Patty had this little cutesy-pie image, so we just decided to go all the way and toughen her up and that video was very successful. So I enjoy that challenge. The down side is that you always get the smaller budgets to work the miracles. If you're Elton John or Billy Joel, with \$150,000 to \$200,000 budgets, there's no problem. But, if you're Janie Street, the woman I'm going to be working with in a couple of weeks, you're lucky if you get . . . well, I don't want to tell you what the budget is. Actually they are pretty generous, but you get the low end budget scale, and so you strain a little bit.

Mix: You really can't touch anything that's going to be in the context of a music video scenario without begging, borrowing, or stealing, which a lot of people are doing now, for less than \$30,000 to \$40,000.

Walz: That's for sure. And even then, you're cutting all sorts of corners.

Mix: Do you shoot with a union crew?

Walz: They're all union crew, but they

are not union shoots. The best people are going to be in the union.

Mix: How about the cameramen?

Walz: I've done three videos this year with Daniel Pearl, who is a favorite of mine. He is a good friend, and I think he's a wonderful cameraman. But, I've worked with a couple dozen others who were certainly good. It just kind of depends on the job. I used Frances Kenney on "Girls Just Want to Have Fun" and then on the New York segment of "Heart of Rock 'n' Roll" because he has documentary background, he comes across very fast, he has a Steadicam, and he was perfect for the high energy kind of shoot.

Mix: Do you do your work with one specific editor?

Walz: Yes, what I do is edit on film. I have a wonderful film editor by the name of Norman Smith, who won an Emmy and has done some beautiful work. Then we transfer only the scenes which he has selected and we put a code on those scenes, do a computer print-out and go into a one-inch editing session, and we're out of there in a couple hours, because you just punch in a couple numbers and the machine does the rest.

Mix: What videos do you like, if you were to pick a couple that you think stand out?

Walz: I loved "Wrapped Around Your Finger" by The Police. It was so original and beautiful—so clean and simple. I like "I'm Still Standing," by Elton John, that kind of thing. I guess I have a tendency to like the English directors, although I've never actually worked with one. But some of the stuff they do is really fresh. As long as it is different, I tend to like it, even if it's not so good. Because it's getting harder and harder to be original in this industry. Over 2,000 videos are being produced every year, and how many times can you come up with something fresh? So, if I see something that at least is original, I give it a lot of points, even if it's not executed very well. Another video I really like is Rick Springfield's "Bop Till You Drop."

Mix: So much of the advertising world is mimicking the pacing and photographic techniques of music videos.

Walz: That's typical of Madison Avenue. They wait to see what is happening and then they jump on it.

Mix: It costs more money to make a 30-second commercial than a four-minute video. I think that could be the salvation for the director in a lot of ways. Those who want to make money on a more realistic schedule, go back into advertising with that kind of experience under their belt. Put together some 60's and 58-second pieces that really have

that pizzazz. And especially when the TV stereo really starts to happen because advertising people are going to want to exploit that as quickly as they can . . .

Walz: It's a nice time to be doing this as a producer. It's still rocky and we're starting a Music Video Producer's Association to try to get some guidelines down, so it isn't such a circus every time you go after a job, it's ridiculous. But it's slowly turning into a real industry and once that happens, it will be a lot more pleasurable. We as producers can unify our efforts. We talk and we get along and we are not just a bunch of separate islands trying to get the same job and we try to help each other, and that's healthy.

Mix: Your procedure seems to be much more film-oriented, than video.

Walz: Yes, I do it because, as I said, I have a terrific film editor, who could certainly do it on tape, but prefers to do it on film. I think the method of building a piece with film is a bit different. You get into a different pacing and mood . . . it's cheaper because you don't transfer all your dailies on one-inch. You transfer every scene you use in the video, so there's no dirt or anything. You send it to the negative cutter and he just takes that scene and puts it in order, then splices it all together, then just transfers the entire scene. We still have the flexibility of moving it around. You want the dissolve to last another half second, you've got the space to do it. So, I love the idea and also I can make a flat deal with my editor for X number of dollars, and on this video he'll work a day-and-a-half and sometimes he'll work four days on the thing. I'm using another little trick now—when I shoot in 35 I get a 16 reduction print, a workprint—so he works in his loft on his Steenbeck and he works all hours whenever he feels like it. It's a little bit cheaper. You don't have to pay for printing 35, although we always transfer to a 35 negative, and I'm out of my transfers in three hours, tops. I don't envy these people who transfer three hours worth of footage. It's got to be real expensive; I don't care what good rates you've got.

Mix: What kind of things would you like to do that you haven't already done?

Walz: Well, I'd like to do features. I think everyone in the film business looks toward that one day. I don't do videos to do features, though. I really think that is the wrong approach to this business. But I do think that they can be a launching pad. I think that Hollywood, and certainly Madison Avenue, is taking a look at us very carefully now. And I can do a low budget feature like nobody's business, because I'm so used to doing four minutes of feature film quality for \$40,000. I think I'm in a good position to amaze them with how cheaply I could do a movie. ■

VIDEO PRODUCERS:

Where's the Payback?

by Neal Weinstock

Record producers, movie producers, TV and video producers all have approximately one thing in common: that title, *producer*. Music video producers are now growing into a hybrid job which brings together bits and pieces of what it's like to produce in these related forms—and introduces new elements all its own, too. Just what that job turns into is still largely up in the air. Where it lands will depend on the imaginations, abilities, and energies of those who are pioneering the role, and even more so on the shape of the technological frontier in which they find themselves.

And where the producer's job comes down will tell, more clearly than any other sign, where the business of music video will be. And where the money will be.

And art chases money.

We all know pretty much what record producers do (except, of course, for the indefinable "somethings" that make for great producers). One with more than his share of the indefinable is Phil Ramone, who defines a common enough record producer's attitude toward the new medium's effects on a new act: "The record can get washed in with the wrong video and the wrong television appearances. It's just unfortunate. Sometimes the images that are thrown out for a person like that are too hard to live up to right away. . . . I think to make a consummate artist, for all these new young people that I'm working with now, you have to spend the months, not rush the record out, and make sure about what their live appearances and their videos will be like. I have to be a much bigger participant than I used to be. I've always been involved with people's live shows, but now I realize that working with good directors and video production is as much a part of the record as what I did originally."

Being a "much bigger partici-

pant" involves work somewhat dissimilar from solely producing records. In video, the director functions analogously to a record producer in the audio studio—while the video producer, a) raises money, b) babysits over money and the production.

Good babysitters, or "line" producers, are sorely needed in film and video production, but they don't make all that much money, they don't control very much, and they don't risk very much. Money raisers are the most valuable—and feared—animals in the capitalist menagerie. What happens to music video will largely depend on what producers are able to do to raise money.

Why do investors give producers money? Usually, because they expect to make money by doing so. In the most typical situation for our new medium thus far, record companies give producers money because they expect to sell more of their product as a result of video publicity. This casts the music video producer in an analogous situation to a freelance film production house that makes commercials for ad agencies. This is not a bad business to be in (heaven knows, it pays more than music video), but it is really a very small industry. Commercial production houses have expanded into music video partly because they see the analogy, but also, hopefully, as an *expansion*. Pop music is worth a billion dollars a year in this country. Video is deciding the fate of pop. The canny capitalist producer does not merely want to serve another Madison Avenue-like master.

Some see little choice. Says Simon Field, the producer behind Lime-light (and scores of videos), "Production companies will never really earn any money in royalties for music video from home video—or from much of anyplace else—because the record companies own the rights."

Instead, Field sees music video

producers becoming a new generation of record producers. "It's somewhat like filmmaking for advertising, but the subject happens to be records, that we're selling," says Field. "When music people make soundtracks for motion pictures, that's exactly the opposite thing. . . . [music video] production companies will be analogous to audio producers, eventually. We all recognize the direct correlation of a well-made film to the success of an album. The record companies will want to get back to that same recipe formula. Then the production companies who feel they have a hand in any record's success can make themselves an elite, with relation to supply."

Working on contract to a label is one way—now the most dominant way—to produce music videos. It's not the only way. For example, Antony Payne of GASP! Productions says his company has, "never done a video for a record company's A&R department. . . . What I do might just look very naive. If I want to work with someone, I'll just ring them up. People are very surprised when I say that; 'You're not supposed to be able to get through!' In fact, there are all these guys employed to make sure you don't get through. . . . We've dealt with the performers and their managers directly."

Payne emerged from the ad biz into music video. He knows what it's like to contract commercials, and found it constricting. His idiosyncratic way of going beyond that points out a way for "mini-musical" (as he calls the form) makers to avoid becoming commercial makers for record labels.

It comes back to that basic capitalist function of the producer: finding investors. Payne has found that, by and large, a good video is worth more to the artist than the label. Labels won't pay his director's (Bob Giraldi) high stakes salary nearly as readily as performers. Is this yet another case of rock stars cooling their burning egos by pissing money? Don't record labels make more profit off most records than the performers, and don't they have vast accounting departments to tell them how much a good video can be worth?

In fact, labels certainly make higher profits off most individual albums than the performers do. (The notorious exceptions of the late '70s need no additional documentation.) But performers can easily make more on the video. Surveys are slowly proving that the video tie-in with record sales is nowhere near so one-to-one as radio play of the record. Videos function like TV commercials that promote name recognition of a product for months, even years ahead. They do not merely promote one record, they promote an act's career. And after a hit video and hit record, the average act is going to do whatever it possibly can to renegotiate its record con-

tract. If the act switches labels after a hit, the good the hit does for the original label is strictly limited.

And so videos force the record industry to become even more like its Hollywood neighbor, the movies. The investors most interested in a video's success are those with most interest in the act's career. For already established and/or wealthy acts, this is just fine. For other acts, raising the scratch for production involves piecing together other interested profit-sharers.

Besides the label, who might these interested parties be? 1) A feature film production. "Any medium, any form," says film critic James Monaco. "The choice whether a property first appears as novel or film, television show, play, or nonfiction magazine article depends mainly on marketing strategies. One good reason media companies are merging into conglomerates is that it has become clear in the last ten or fifteen years that form is, in marketing terms, arbitrary." Mu-vids can sell movies as easily as albums, as easily as themselves. Where would those two summer jungle adventures, *Romancing the Stone* and *Against All Odds*, have been without the videos?

2) Tele-production. What is the meaning of MTV and others paying for mu-vid play if not as a sign of a different relationship between mu-vids and TV, as compared to 45s and radio? Mu-vids can be more like other TV programming than like commercials. The spin-off theory Monaco describes works just as well with TV as film, but TV thus far has problems with three minute program lengths. The solution has already begun, and it goes by names like *Friday Night Videos*.

Here we have producers packaging videos into standard program lengths, and offering them cheaply to standard networks as well as ad hoc networks. Stations buy these assemblages

because they're cheap, but they also buy them for ratings and revenue. Such programs differ in all sorts of ways from the musical "specials" featuring assorted pop stars that have never really flown on TV. For one, no one star is required to carry all the interest. For another, mu-vid productions are bigger budgeted, more imaginative, better than the old style TV song-and-dance. But more important than anything else, the audience for pop music now watches television. Teenage rock fans have not historically watched much television, but now music video conditions them to do so. And they (we) are aging, becoming demographically similar to the middle agers of the '50s and '60s who used to watch so many musical variety shows on TV.

In other words, it pays to sell music video package programs to the tube.

And, 3) it pays to sell to home video, of course. But who does it pay? Who can afford to put together all the rights? Record labels, certainly, and thus Simon Field's point of view. But technological shake-up such as we've been seeing in music video would seem to allow for a new sort of beast: the independent video label.

Antony Payne sees GASP! as a possible beginning of such a label. "Yes, we've tended to work with established stars," he says. "But there would be tremendous satisfaction in helping to bring along the right sort of talent. . . ." Stars could help pay the way for producing newer acts, and success for long form video (on air, cable and cassette) could strengthen producers even more. The proliferation of home video distributors and TV channels benefits producers most of all. It all may just add up to independent producers being able to put together the same sort of one-shot packages of freelance talents that have become the rule in the film industry.

Are the present record labels going to roll over and play dead? From a

creative standpoint, that may just be a very profitable thing to do. Again, an analogy to the movies. With many exceptions, a general rule about distributing films has slowly established itself since the death of the old studio system. In the long run, it is more profitable to be a powerful distributor than have anything else to do with filmmaking, and less risky, too. Movies are made by people who combine artistic goals with a burning desire to strike it rich quick. Such people are inherently more willing to take risks than distributors, whose decision-makers are in a more comfortable line of work. Record labels have, in the past, combined the comfy distributor and risky entrepreneurial functions. But the position has been advanced (in a bar at the last AES Show, if you must know) that the record industry's depression of a few moons ago was all about just this relationship. Comfy distributors do not make good entrepreneurs.

Do good entrepreneurs (good at what they do, now, we're not talking morality) make good comfy distributors? Sure, and technological change tends to allow this to happen. This is probably precisely what is on Antony Payne's mind when he talks about a video label.

For a producer to get real power involves a complete command of the marketing process, of anything having to do with his product. If there are to be lunch boxes with your rock star's name on them, they'd better come out at the proper time vis a vis that authorized *Life of _____*, and also vis a vis the movie, the TV show, the home video, etc. The only element in that marketing mix used to be the record, but that was a long time ago. Now the most important element is the video. You can bet the people who control the most important element are going to at least try to control the rest. The closer they get, the most interesting will be this industry of music videos. ■

—FROM PAGE 148, VIDEO NEWS

the first three rows with a fire extinguisher, Joe relinquished the stage to the artist's panel.

Ray Manzarek, former Doors keyboardist and current director of the long form video of Doors hits, spoke very practically about the biz but managed to slip in a healthy dose of poetic and artistic insights. "The technologies will change, but humans will continue to communicate with humans," he understated (or could that be overstated?). Grace Slick, that irrepressibly hip mama and unpretentious wisecracker, answered all the flack

about MTV being restrictive in its programming with "MTV is a fruit-stand — you don't go in and ask for artichokes." Weird Al Yankovic mentioned that when he played Dallas shortly before his "Eat It" hit video, he had audiences of 20 or so hard core fans. So, for the time being, MTV is the big kid on the block — but the consensus seemed to be "We're tired of just making records. Videos are exciting, they're fun, they're frustrating and they're inevitable."

The culmination of the serious days and the wild nights was the

award ceremony for this year's "Billies," hosted by that fitting pioneer of the art form, Fee Waybill of the Tubes. Not bothering to worry about the big guns of this year's MTV televised ceremonies, Fee whisked us through a dizzily paced roundup of deserved recognition and slipped in a few awards of his own, like Best Excuses, such as: "What do you mean those bimbos won't take their clothes off!" and "If you don't hire my hairdresser, you don't get to do the video."

Many thanks for a most educational event. ■

...Covers Sound Reinforcement



Almost 20 percent of Mix readers are involved in sound reinforcement, and Mix addresses their interests every month in our live sound section, Sound on Stage. Sound on Stage focuses on how the sound is handled for major tours and venues: the sound of Pavarotti at Madison Square Garden . . . the sound systems of unique nightclubs, like the Palace in Hollywood and Park West in Chicago . . . the unique sound and staging required for the US Festival and the Democratic National Convention. Sound on Stage also previews new sound reinforcement products and reports news of the live sound industry.

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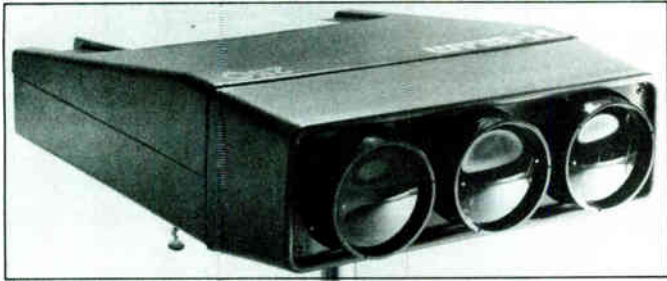
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HARDWARE | SOFTWARE



Navitar Hi-Beam 250

D.O. Industries, of East Rochester, NY, has added the Hi-Beam 250 video projector system to its line of Navitar products. The Hi-Beam 250 is an industrial quality video projector that provides bright, clear pictures from either video tape, laser disk or RGB inputs. Screen sizes are adjustable between 3 feet and 12 feet.

Standard features include dual focus, high resolution lenses, modular electronic components and easy set-up. The Hi-Beam is capable of ceiling or floor mounting, front or rear projection, and can be used with flat or curved screens.

The Hi-Beam 250 is available in three models: Hi-Beam 250A, base unit (with composite video and RGB inputs); Hi-Beam 250B, base unit with programmable TTL (12 different possible options are available); Hi-Beam 250C, all of above features, with multiple input (six options) switcher box.

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available in this new console is a built-in cartridge machine sequencer. The SAC 2000 also features remote activation of input modules or cart sequences from separate studios or from remote broadcast sites via a special sub-audible tone unit. This allows spot or music pre-sets at the console and their activation from the field.

This versatile, modular console, available in 10, 16 and 24 input versions, offers premium quality technology and componentry at moderate prices. Standard features include: three stereo outputs plus mono sum, full metering, multiple input selection with logic-follow, four channel telephone mix-minus, multi-band equalization, delay control and universal machine control logic.

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Opamp Audio Press Box

The Model A-18/2ML audio press box from Opamp Labs of Los Angeles, CA, is a high quality, transformer-isolated, portable distribution system mounted in a Haliburton aluminum case. Two isolated microphone inputs (switchable to line level) with gain controls and VU meter are provided, as are 18 separate op-amp and transformer isolated outputs, each having XLR, 1/4-inch, RCA and 3.5mm jacks; mike/line switch; and ground floating (ground lifts are not required). Channel isolation is rated at 70 dB, frequency response is 20 to 20k Hz, and the unit is priced at \$1,975.

Circle #120 on Reader Service Card



Spectrum OX-24 Dimmer

The OX-24, from Spectrum Design & Development, of Allentown, PA, is a six channel, rack mount dimmer capable of 2400 watt per channel operation. Like the company's popular OX-12 unit, the OX-24 utilizes a modular panel design so the user can tailor the unit to meet specific needs.

The modular panels allow four different power output configurations and three circuit protection options. Two control connectors are provided for easy stacking, and the OX-24's adjustable control signal permits intersystem compatibility with most other manufacturers. The heatsink/triac assemblies are externally replaceable to facilitate servicing.

Circle #118 on Reader Service Card

Soundcraft Stereo On-Air Console

Soundcraft Electronics, of Santa Monica, CA has introduced the Stereo On-Air Console, for broadcast use. Uniquely

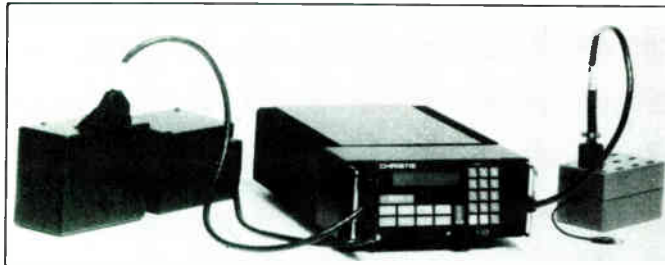


Tension Gauge for One-Inch VTRs

Tentel, of Campbell, CA has introduced a new Tentelometer® Model T2-H18-CBD tape tension gauge designed pri-

marily for Sony BVH and Ampex VPR one-inch type "C" video recorders. The stainless steel measuring probes have been miniaturized to fit into the limited spaces on the newer type "C" machines and have ball bearing rollers for more accurate readings and to eliminate effects on the servo system. The scale is calibrated for 2-18 ounce (60-500gm) readings. The T2-H18-CBD sells for \$690 with the viscous damping option, fitting carrying case and instruction booklet.

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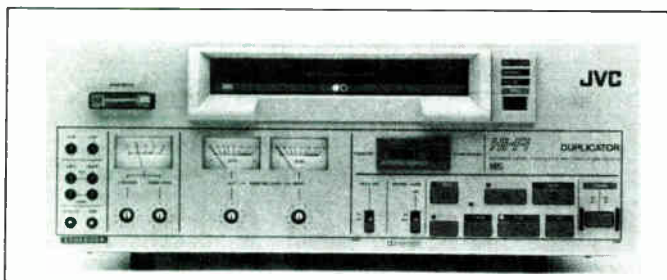


Christie Programmable Charger

Christie Electric of Torrance, CA has introduced the first fully-programmable battery charger/analyzer, dubbed CASP (Charger/Analyzer/Sequencer/Power supply). The unit has six ports which can accommodate six entirely different types of batteries. Each port can be independently programmed to any sequence of charges or discharges. The microcomputer controller compiles data during the sequence, analyzing the batteries' condition.

An optional DC module adapts the CASP into a light-weight, portable charger/analyzer; a printer module provides a hard copy of function and test results. CASP may also be used as a programmable power-supply rated from 0 to 50 volts.

Circle #122 on Reader Service Card



JVC VHS Hi-Fi Duplicator

With engineering and operation designed expressly for duplicating facilities, JVC's professional video communications division has developed the BR-7000UR, the only VHS recorder with test points for drum pulse, video RF, and Hi-Fi audio RF on the front panel so technicians can evaluate the deck's performance while still on line.

The BR-7000UR was designed for continuous VHS Hi-Fi videotape duplication and features a rugged, direct-drive transport system and a front panel serial number and hour meter to quickly identify a machine and its operating hours.

These innovations—test points, serial number and hour meter—are the direct result of suggestions from duplication experts. Other features are an oversized cassette door; large LED indicators for recording, video tracking and audio; a protective cover for controls; manual audio FM, both standard and Hi-Fi; video AGC on/off switch; tab out recording and plug-in circuit board construction. Extra touches on the BR-7000UR include Dolby B noise reduction and a window for easy access to the tape path, especially practical for cleaning.

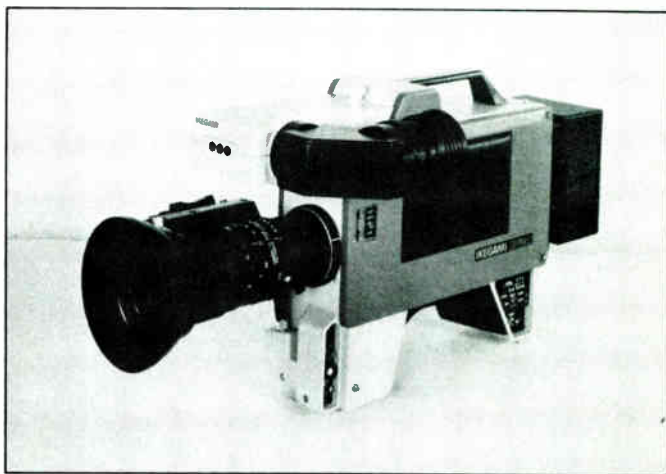
Circle #123 on Reader Service Card

Sony Shielded Audio Monitors

The SS-P520 audio monitors from Sony Professional Audio are the first major manufacturer speakers to feature internal shielding to prevent magnetic interference with television picture tubes. The new monitors allow mixing in a situation comparable to playback in the viewer's home, whereas conventional speakers must usually be placed at least two feet from video monitors.

The speakers incorporate a two-way design, with a frequency response of 60 to 15k Hz and a power handling capacity of 80 watts. The compact 19-inch cabinets can be "book-shelf-," console-, or rack-mounted.

Circle #124 on Reader Service Card



Low-Cost Ikegami Plumbicon Camera

The Ikegami low-cost, high-performance broadcast-quality portable ENG/EFP color-TV camera designed for budget-conscious professionals is now available with Plumbicon® pickup tubes. The new ITC-730AP has increased video gain of +9/+18 dB for a maximum sensitivity of 4 footcandles with an f/1.4 lens, with a signal-to-noise ratio of better than 55 dB. Center horizontal resolution exceeds 600 TV lines, with corners optimized by dynamic focus. Dynamic range has been expanded—without sacrificing resolution or S/N ratio in low-light image areas—by use of highlight compression circuitry.

The camera employs 2/3-inch electrostatic-focus, magnetic-deflection Plumbicon® pickup tubes for reduced high-light lag, 2H detail corrector, auto-white balance, and a viewfinder status indicator monitors battery, white balance, gain, VTR, genlock and filter position. The ITC-730AP has been designed for easy service and maintenance: camera tubes are readily accessible for replacement, and modular construction is employed throughout. A standard bayonet-type lens mount is used which permits lens interchangeability with Ikegami's ITC-350, ITC-730A, HL-79D and HL-95E cameras. The camera is priced at \$9,860.

Circle #125 on Reader Service Card

Comprehensive Video Lighting Catalog

Comprehensive Video Supply Corporation of Northvale, NJ, has introduced a new line of lighting gear described in their "Lighting Systems and Accessories Catalog." The catalog describes a variety of individual instruments, lighting kits and accessories such as filters, rigging and mounts.

For a free copy of the catalog, contact your local authorized Comprehensive dealer or Comprehensive Video Supply Corporation at 148 Veterans Drive, Northvale, New Jersey 07647 or call 1-800-526-0242 (toll free); in New Jersey, call 201-767-7990.

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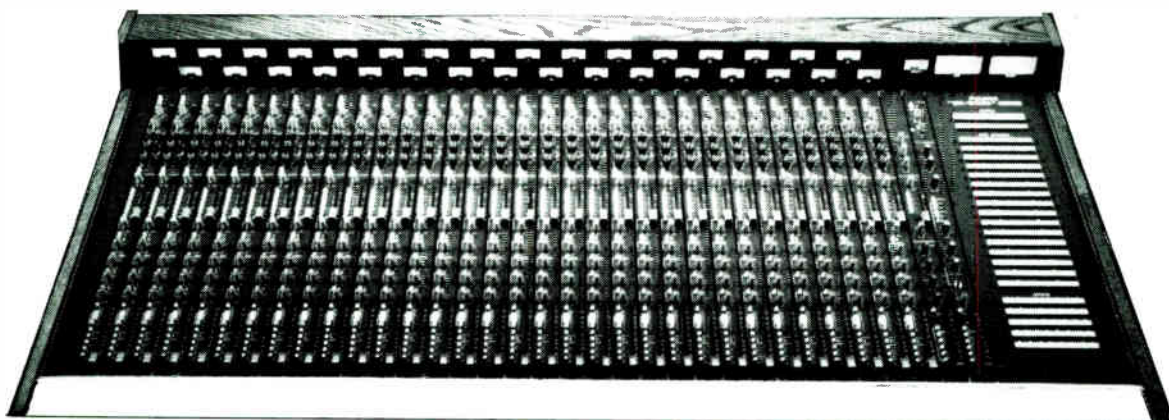
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