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THE RECORDING INDUSTRY MAGAZINE

Mix

**Listings:
Southeast Studios**

**Nashville Debates
Digital**

**Software-Based
Effects Processors**

Allen Toussaint

**Foreign Record
Licensing**

The Dirt Band

Interview: Robbie Robertson

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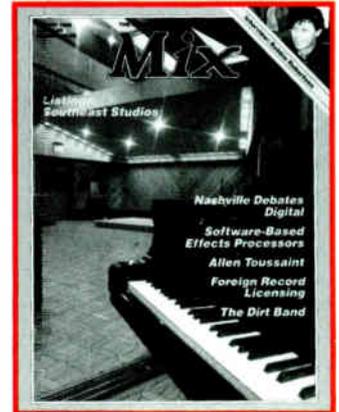
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Cover: Main recording room at Emerald Sound, Nashville, Tennessee.

Designed by John Edwards, and owned by songwriter/producers David Malloy and Even Stevens, the studio also features a Neve 8058 console and Studer A800 24-track.

Photo: Melody Gimble
Corner photo:
Robbie Robertson
Photo: Mr. Bonzai



Our Spotlight on Southeast Studios begins with Linda Johnson's report on regional activity (page 110), continues with Rose Clayton's look at digital in Nashville, and concludes with complete studio listings on page 127. David Gans and Moira McCormick chat with country chart toppers the Nitty Gritty Dirt Band (John McEuen is at left), while Robyn Flans profiles their producers (page 64).

Several articles in this issue have an international focus: Ken Pohlmann looks at CD mastering at Philips' plant in the Netherlands (page 12); Rosanne Soifer examines foreign record licensing (page 18); and in a special expanded "International Update" section (page 22), our writers take a look at the European AES show, London's popular Mayfair Studios, and producer Joe Wissert, an American working in Australia.



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THE STRONGEST LINK

Otari's new EC-101 synchronizer module, when combined with the MTR-90 audio machine, creates an entirely new audio post-production system that uses a time-code-only link, via mic cable, with the master. This unique "pre-engineered" combination offers performance well beyond that of any other audio tape recorder.

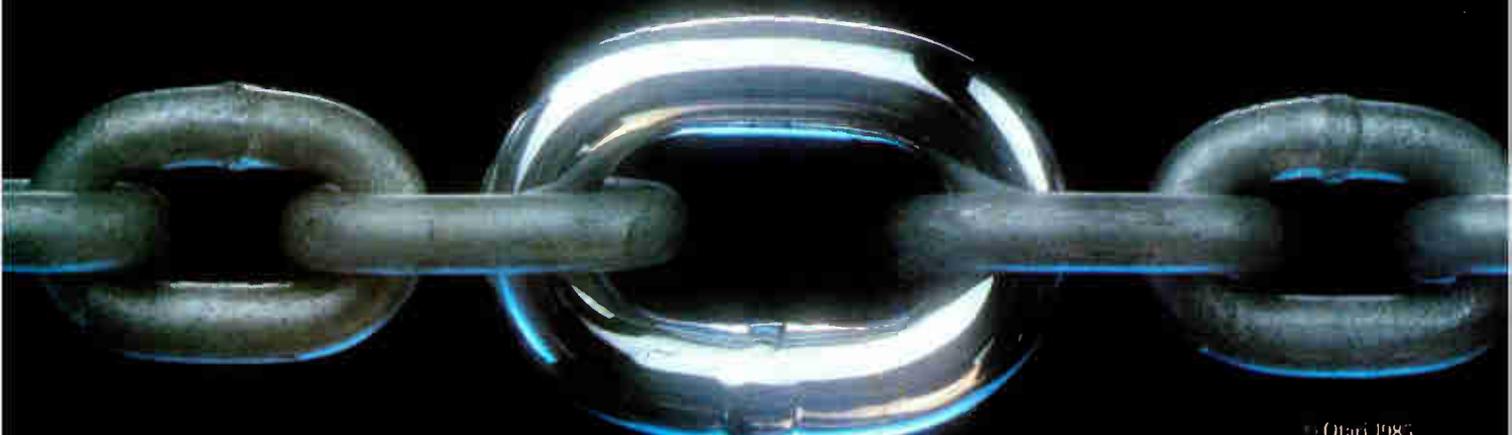


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OTARI



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World Radio History

CURRENT

JBL Acquires Soundcraft U.S.

JBL Professional has reached an exclusive agreement with Soundcraft Electronics to distribute Soundcraft's product line of professional mixing consoles, tape machines and power amplifiers in the United States and Mexico. The new separate JBL division, to be referred to as Soundcraft U.S.A., will be under the direction of JBL Professional president Ron Means and will continue to operate from its Santa Monica, California offices. Wayne Freeman will remain as head of the sales and marketing side of Soundcraft U.S.A., while Soundcraft president Betty Bennett will retire to raise a family and remain as a consultant to Soundcraft U.S.A.

KORG Takes Over Unicord

KORG, Keio Electronic Laboratory Corporation, of Toyko, Japan, has acquired the assets of Unicord from Wickes Manufacturing Company and will now operate as KORG U.S.A., Inc. with Don England as president of the new organization. Under the new arrangement, KORG U.S.A. will distribute Korg keyboards, synthesizers, electronics, tuners and effects, Marshall guitar and bass amplification systems and Stand Innovations by Manfrotto. Other officers of the new company are Michael Kovins, executive vice president, Marshall amplification; Jeffrey Wiletsky, vice president, operation and administration; K. Kimball Holland, vice president, keyboard product development; and Mitch Colby, vice president, product development.

San Francisco Site for Music Fair

A wide ranging industry/consumer trade fair is being hosted by the San Francisco chapter of the National Academy of Recording Arts and Sciences June 27 through 29 at the San Francisco Concourse of Showplace Square. The event is billed as a celebration of the Bay Area music and recording

industry, featuring on-going live performances by top Bay Area artists, audio and video presentations, demonstrations, seminars and trade exhibits from music and audio manufacturers, dealers and services. An attendance of over 15,000 is expected, ranging from music enthusiasts to industry professionals. The first day is being reserved as "industry only." Founding sponsors for the San Francisco Music Fair include Sound Genesis, Windham Hill Records, Music Annex and Mix Publications. For exhibitor information, contact the producers, Events West, at Star Route 454, Sausalito, CA 94965, or call (415) 383-9378.

Cameo Hosts Music Technology Expo

The Music Technology Expo, an event to promote interest in multi-track recording, sound reinforcement, "semi-pro" video and electronic keyboards, will be held May 17 and 18 at the Hollywood Roosevelt Hotel in Hol-

lywood, California. The expo is being created for Cameo, a non-profit organization made up of professional audio and music electronics equipment manufacturers, by Dave Kelsey, who launched the 1977 Multi-Track Expo that formed Cameo. The show is being produced by Kelsey's Los Angeles based company, Audio Promotions. For more information, contact Dave Kelsey/Audio Promotions, 9060 Santa Monica Blvd., Suite 300, Los Angeles, CA 90069.

Vocal Fair in L.A.

The Los Angeles Vocal Registry, a membership organization for vocalists, will hold a Vocal Faire March 29 at L.A.'s Hyatt on Sunset Hotel. The day-long event will feature classes, workshops, panels and exhibits on many aspects of singing for amateur and professional vocalists. Tickets are \$50 in advance and \$60 at the door, and more information can be had by calling (213) 465-9626.

Mix Wants Your Problems (and Solutions)

Mix Publications is calling to all readers for information to be included in an upcoming Mix Publications book on interfacing musical instruments. Any and all questions, problems, solutions, answers or data pertaining to hooking these instruments together are needed. This would include information about control schemes, such as voltage control and MIDI; timing schemes, such as gate-and-trigger, sync clocks, SMPTE, sync-to-tape; computer interfaces; and electrical considerations, such as connecting "pro" audio gear (as opposed to "semi-pro" or "creative") to musical instruments. Data on specific instruments is most helpful, partic-

ularly older, out of date instruments or extremely new systems. A few examples: processor delay times for individual instruments and how you deal with them, details of the computer interface found on the Yamaha CP-35 electronic piano, a list of inputs and outputs on the old Oberheim 4-voice synthesizer, etc.

Also of use is information pertaining to instrument pickup systems and their applications, with specific data gain being most useful. We cannot guarantee an answer to every question we receive, but we will attempt to answer as many as possible.

Thank you.
Mix Publications

INDUSTRY NOTES

The **National Sound and Communications Association Conference and Expo** and the **Electronic Distribution Show and Conference** will be held simultaneously in Las Vegas, April 29 through May 1. For schedules and information, contact NSCA at (312) 593-8360. . . . Humorist/satirist **Stan Freberg** will be the featured speaker at the radio luncheon April 15 during the **National Association of Broadcasters' 64th Annual Convention** at the Dallas Convention Center. . . . The **International Film Workshops** will be offering a weekend session on sound recording geared for film production personnel March 23 through 25 in Ojai, CA. Call (207) 236-8581 for details. . . . The **American Federation of Musicians** has moved its international headquarters to Suite 600, Paramount Building, 1501 Broadway, New York, NY 10036. . . . **George F. Currie** has been promoted to president of the Professional Audio Division of the **Sony Corporation of America**, stepping up from the vice presidency spot. . . . **Charlie Winkler**, marketing director of the Audio-Technica professional products division, has resigned to form a professional sound products sales representation firm, **Charlie Winkler & Associates**, located in Uniontown, OH, and calling on dealers and distributors in Ohio, Pennsylvania and West Virginia. . . . Audio wiring manufacturer **Conquest Sound** is relocating to a new plant in Tinley Park, IL. . . . **David Bowman** has been chosen to fill the newly created position of director of professional dealer products at **Studer Revox America, Inc.** . . . **Dee G. Tatum** has been promoted to distributor and

international sales manager for **International Music Company** of Fort Worth, Texas. . . . **Murray S. Kunis** has joined studio designers **Lakeside Associates, Inc.** as vice president of business development at their new offices at 4 Alegria, Irvine, CA 92720. . . . **William Bruce Pharr** has been promoted to marketing manager, audio tape products at **Ampex Corporation's** Magnetic Tape Division. . . . **Tubecraft**, formerly of **Hybrid Cases**, has been incorporated and has begun operating independently as **F.M. Tubecraft Support Systems Inc.** and producing tubular support systems for musical, audio/video and computer equipment at 1121 Unit 26 Lincoln Ave., Holbrook, NY 11741. . . . San Francisco producer/engineer **Robin Woodland** is offering a 30-hour recording workshop for musicians and engineers. Call (415) 861-3151 for more information. . . . **Phillip N. Shuey** has been elected the 1986 chapter president of the Los Angeles chapter of the **Association of Visual Communicators**. . . . **Eastern Acoustics Works** has announced the appointments of **Pro Tech Marketing**, **Fleetwood Marketing** and **World Wide Electronics** as field sales representatives in the Southeast, Midwest and Florida, respectively. . . . **Sharp Electronics Corporation** has appointed **Hughes Associates** in Huntsville, Alabama as its southeast sales representative. . . . **James Oster** has returned to **Positive Video** in Orinda, CA to the position of vice president-engineering. . . . **Technical Projects, Inc.**, the U.S. subsidiary of British pro equipment manufacturer **Technical Projects, Ltd.** have relocated and can be reached

at P.O. Box 1449, Barrington, IL 60010, phone (800) 562-5872. . . . **J.D. Price** has joined Pittsburgh, PA audio/video production facility **Production Masters, Inc.** as editor/director. . . . Video monitor manufacturer **Conrac** has appointed **Ralph Semyck** to the post of midwest regional sales manager. . . . The professional products division of **Bose Corporation** has appointed **Barry R. Luz** as product planner and **Mark R. Mayfield** as marketing development specialist. . . . **Biamp Systems, Inc.** has added **George Mamerow** as vice president of manufacturing, **Jerry Payette** as vice president of finance and **Joseph J. Tushner** as a manufacturing engineer. . . . **William Lee** has been appointed applications engineer at **LEMO U.S.A. Inc.** . . . **Gold Line** has been lined up to produce the **Loft** product line, formerly manufactured by **Phoenix Audio Labs**. . . . **Hohner, Inc.**, of Richmond, VA, and **Sabian, Ltd.**, of Meductic, Canada have formed a division, through a joint venture, to market and distribute **Hohner, Sonor** and **Sabian** professional lines of musical instruments in the United States. . . . **Beautiful Dancing Productions**, in conjunction with **New York University**, is producing a national college music compilation album called *The Dean's List* which will be assembled from their search of the most talented university bands and their best original music. To be eligible, a band must send a tape with two songs and a brief description of the group. For more information, contact **Ken Makow** at (212) 614-9714. . . .

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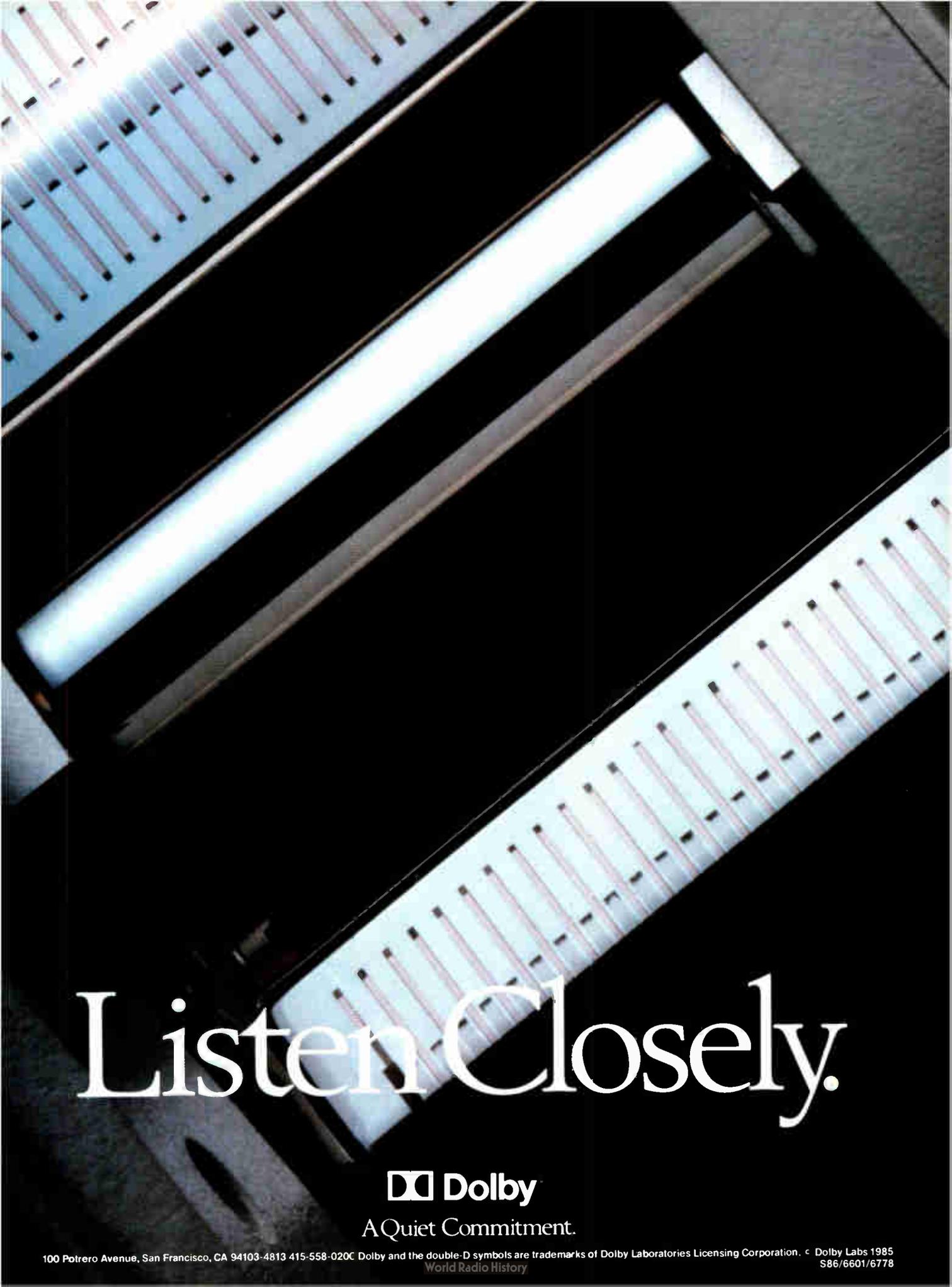
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SESSIONS

NORTHEAST

At *39th Street Music*, **Howard King** produced tracks for **Sheryl Lee Ralph** (of *Dream Girls* fame) with **Richard Kaye** engineering, and **John Paul Cavanaugh** assisting. Also **Benny Diggs** and **Joseph Jouberg** co-produced an LP featuring **Phil Ballou** with **Kaye** engineering... **Billy Ocean** was in NYC's **Celestial Sounds** recording his new album for Jive Records, with the production team of **Barry Eastmond** and **Wayne Brathwaite**. **Darroll Gustamachio** engineered, with **Kurt Upper** assisting... At **Northeastern Digital** in Boston, two Compact Disc projects were completed for Rykodisc, New England's premier Compact Disc label: a CD master of *Old and in the Way* with **Jerry Garcia** and friends in concert; also a new series of environmental recordings, entitled *Natural Habitat*, recorded by NDR owner, **Toby Mountain**... At **RPM Sound Studios** in New York City, Swedish bass player, **Jonas Hellborg** completed recording and mixing his latest album for Important Records. **Bob Musso** engineered with **Mike Krowiak** assisting... At **Reel Platinum Studios** in Lodi, NJ, **Yogo** put final touches on their upcoming A&M Records release *Life in a Cave*... At **The Power House**, Camden, NJ, the wild, theatrical foursome **Das Yahoos** finished work on their five-song EP, produced by **Ben Vaughn**, and engineered by **Mark Schultz**... **Patrick Adams** was in **Power Play Studios** (L.I.C., NY) working on numerous projects including a co-production with **Mervin and Melvin Steels** of their new song "Can't Wait Until Tomorrow." **DK Dyson** is the artist and **Patrick** engineered... Recent sessions at **UCA Recording** in Utica, NY, included work on a new album for Upstate favorite **Jon Liebving**... At **Classic Sound** in Manhattan, jazz pianist **Keith MacDonald** recorded a trio record for Landmark Records with producer **Helen Keane**. **A.T. Michael MacDonald** engineered with assistant **M. Denise McGrath**... Composer/guitarist **Rick Bunn** was at **Inner Ear Recording** producing four new songs along with singer **Al Caligiuri** for independent release. **Steve Vavagiakis** engineered with **Matt Schottenfeld** assisting... **Joe Jackson** finished composing and rehearsing for his upcoming LP on A&M Records at **Bearsville Studios** in upstate NY... The Boston-based reggae band **The I-Tones** were in newly opened **Courtlan Recording** (Hanson, MA) completing tracks for their new album with producer **Barry Finnerty** and engineer **Fred Danner**... **Alfa Anderson**, formerly of Chic, was in NYC's **Blank Tapes Recording** working on her solo

project, **Alfa** and **Tinker Barfield** producing. Musicians on the project include **Yogi Horton**, **Skip Anderson**, **Doc Powell** and **Tinker Barfield**. **Joe Arlotta** produced... **Kim Jordan**, keyboardist for **Gil Scott-Heron** recorded tracks for an album of her own at **Lion and Fox Recording** in Washington, D.C... **The Ramones** spent the last half of December in New York recording a new album at **Intergalactic Music** with engineer **Jorge Esteban**. The album was produced by **Jean Beauvoir** for Warner Bros...

SOUTHERN CAL.

Producer **Spencer Proffer** has been in L.A.'s **Pasha Music House** studio with **Quiet Riot** recording the band's third album for Pasha/CBS Records... Recent **Le Mobile** activity included continuing work with the **Grateful Dead** on their forthcoming feature video. The audio/video recording sessions took place at the Marin Civic Auditorium north of San Francisco. **Le Mobile** also recorded heavy metalter **Ronnie James Dio** in San Bernardino and San Diego for release on LP... Guitarist **Cary Sharaf** (ex-Billy Squier) was in at **Encore Studios** in Burbank laying down tracks with drummer **Tommy Amato** (ex-Savoy Brown) and bassist **Dave Waterbury** (ex-Spirit) for an LP expected out this year. Veteran engineer **Chuck Rosa** recorded the sessions... **MCA/Camel Artists Giuffria** recently completed 24-track pre-production for their forthcoming LP with **Rick Delena** and **Bill Freesh** at **Harlequin Studios** in Northridge... At **Lion Share** in L.A. **Michael Omartian** produced **Peter Cetera** for Warner Bros. Engineering was by **John Guess** with assistance by **Khaliq Glover**... Rock group **T-Minus** was cutting an LP at **Skip Saylor Recording** in L.A. **Skip** and **John Hug** were producing with **Saylor** behind the board as well... At **Monterey Sound** in Glendale, CA, romantic vocalist **Omar** was in mixing a new Latin LP for **PSO Records**. Producing was **Dennis C. Brown**, with engineering by **Phil Brown**... **Odin** has been recording tracks for an upcoming LP with producer/engineer **Robert Margouleff** and **Don Mack** at **Downtown Sound** in L.A... **Darius & the Magnets** recently completed a three-song demo at **Mad Hatter** in Silverlake, and mixing was completed at **Cherokee** in Hollywood. Cassette mastering was done by **Bernie Grundman** at his Hollywood studio. The tape was produced by **Denis Degher**... At **Soundcastle** in L.A., **Neil Diamond** was in with **Maurice White** producing and **Tom Perry** engineering, **Bino Espinoza** assisting... At

Preferred Sound in Woodland Hills, CA, country singer **Bill Erickson** has been working with some of the area's best pickers (**John Hickman**, **J.D. Maness**) on tracks produced by **Duke Davis** and engineered by **Bill Thomas**, assisted by **Scott Campbell**...

NORTHWEST

At **Dave Wellhausen Studios** in San Francisco, **Terry Garthwaite** produced an album on **Hunter Davis** for Redwood Records, engineered by **Leslie Ann Jones** and seconded by **Dave Wellhausen**. **Leslie Ann Jones** also engineered a demo of new songs with **Holly Near**... Sacramento's newest 24-track recording facility, **SwingStreet Studios**, has been operating in high-gear since its October opening. Initial sessions included **Michael Pinder** (original **Moody Blues**) in working on his debut solo album for **Wizard Records** with **Larry Lauzon** engineering; and **Charlie Peacock**, in doing overdubs for his second album for **A&M/Exit Records** with producer **Nigel Gray** and **Daryl Zachman** engineering... **Jay Thomas** with **The Cedar Walton Trio** was in **Triad Studios**, Redmond, WA, for a digital recording project; and the Alaskan band, **Crystal Vision**, completed an LP project; **Lary Nefzger** produced and engineered... **R.O. Studio** of Concord, CA, and **Eddie Money** have been hard at work this month working on new songs for **Eddie's** album with **Eddie** co-producing, and **Rick Henry** and **John Rowe** engineering... The "Old Pea-Picker" himself, **Tennessee Ernie Ford**, recorded a narration for an upcoming album at **Recording Etc.** in Palo Alto, CA. The song, on the **Statue of Liberty**, features **Ernie's** dramatic reading of the "Send me your tired, etc." welcome... **Michael Jackson** was in San Francisco's **Russian Hill Recording** doing some dialogue work on a new film for Disney, executive producer **George Lucas**. Produced by **Three DDD Productions**, the movie is called **Captain Eo & The Space Knights** and will be shown in 3D in a specially designed theater in Disneyland in the spring. **RHR's Jack Leahy** engineered the session... At **Studio D** in Sausalito, **The Uptones** were recording with **Ray Pablo Falconer** producing... At **Montage Recording Studio**, Newark, CA **Steve Webster** and his band, **Fast Freight**, were in doing basics for their upcoming project with **David Hartzheim** engineering... **Rob Mullins** worked on his second album mixing project at **Colorado Sound** in Westminster, CO. **Nite Street** will be officially released on March 1st... At **Triad Studios** in Redmond, WA, director



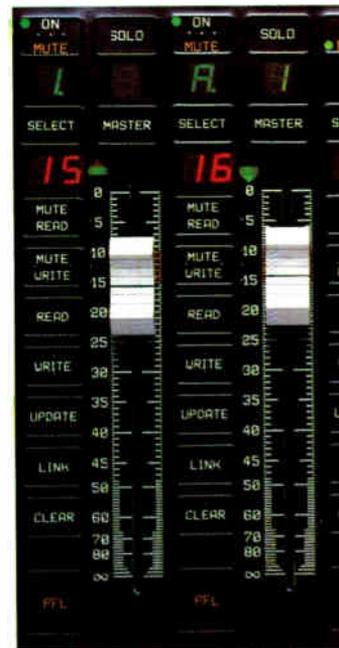
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John Anderson completed a film score; *Jay Thomas* with *The Cedar Walton Trio* was in tracking for an LP; and *Rainbow Planet* worked on their second cassette album project with *Jim Valley* producing. . . Rap-funk producer *Jay King* has been camped out at *Starlight Studio* in Richmond, CA, with engineer *Carl Herlofsson* recording 12-inch singles for *New Choice*, *The Active Boys*, *Frost* and *Timex Social Club* for his new Johnny Jay Records label. . .

SOUTHWEST

David Byrne of Talking Heads did the majority of his Dallas recording and overdubs for his new movie, *True Stories*, at *Studio Southwest*, totalling nearly 75 hours of work during his Dallas stay. Also, *Johnny Nash* finished his new album *Here Again* at Studio Southwest, with *Al Davies* producing. . . The Austin group, *B-Complex*, has been busy working on their new album at *Goodnight Dallas* for Trilogy Music. *Tom "Gordo" Gondolf* engineered the sessions with *Raymond Brown* producing. . . Activity at *Crystal Clear Sound* in Dallas included a 45 for James McAllister's *Silver Dollar Band* engineered by CCS chief engineer *Keith Rust*. . . *Digital Services Recording* of Houston had *Willie Nelson* and *Merle Haggard* in working on a major album project at Willie's *Pedernales Recording Studio* near Austin, Texas. Digital Services supplied all the equipment for this digital project, with tracking done on a Sony PCM-3324 multi-track, and mixing done on a Sony 1610 digital 2-track. *Larry Greenhill* of Pedernales engineered tracking and mixing, with *John Moran* of Digital Services as engineer. . . *ZZ Top* utilized *Dallas Sound Lab's Studio A* for four days mixing for their tour. The band's 200-show tour began in Canada in December. Engineers on the project were Dallas Sound Lab's *Rusty Smith*, *Ron Cote*, and *John Marshall*. . . Recent activity at *L.A.W. Recording Studios* (Las Vegas) included *T.G. Shepard*, *The Gatlin Brothers*, and *The Oak Ridge Boys*, cutting two songs each, live-to-2-track, for the Cerebral Palsy Telethon. Sessions were engineered by *Lee Watters*, assisted by *Holly Sharpe*. . . *The Mortal Micronotz* from Lawrence, KS, cut tracks at *United Recording Studios* in K.C. *Bill Rich* and *The Micronotz* produced, *Dan Billings* engineered. . . Producer *G. Brian Tankersley* of Myrrh Records was in at *Rivendell Recorders* (Pasadena, TX) mixing and overdubbing with keyboardist *John Schreiner* and newly signed artists *Bash n' the Code*. . .

NORTH CENTRAL

Atlantic Records recording artist *Mario* worked on his first album produced by *Eric Morgeson* and *Luis Resto* at *Studio A* in

Dearborn Heights, MI. *Morgeson* was behind the console. . . *Dave Bickler*, former lead singer of the group *Survivor*, has been working on a solo project at *Sound Summit Studio* in Lake Geneva, WI. *Phil Bonanno* is producing and engineering. . . Recording at *Le Studio* (Morin Heights, Quebec), was Capitol Records' artist *Luba*, who won this year's Juno award for Best Female Vocalist in Canada and L'Adisq award for Dance Single of the Year. Produced by *Pierre Bazinet* and engineered by *Paul Northfield*, the album should be out soon. . . Blues pianist *Lovie Lee* was at *Soto Sound* (Evanston, IL) recording "The Death of Muddy Waters." Legendary blues guitarist *Brewer Philips* was on hand along with *Maurice Vaughn*. The record will be released on the Blue on Blues label. *Jerry Soto* engineered the session. . . *Woody Brubaker* put the finishing touches on his first solo album at *Scharren Studios* in Holland, OH, with *Steve Scharren* as engineer. . . *Midnight Star* has been in Cincinnati's *5th Floor Productions* working on a new album for Solar Records. *Reggie Calloway* and *Midnight Star* are producing. *Robin Jenny* is engineering along with *Jim Krause* and *Gary Platt*. The assistant engineers are *Carol Burkart* and *Steve Moller*. . .

SOUTHEAST

At *Cheshire Sound Studios* in Atlanta, *Illusion* laid tracks for their upcoming project with *Jeff Glixman* producing and engineering, *Cheryl Bordagaray* assisting. . . Recent activity at *Ultrasonic Studios* in New Orleans *Doug Kershaw* and *Fats Domino* covering "Don't Mess with My Toot-Toot," produced by *Bob Vernon*, engineered by *Scott Goudeau*. . . *Pace Sound Co.* of New Orleans was busy recording the winter season of the Music City show for the Cox Cable TV network. The award-winning show is recorded on location using the Pace remote truck for broadcast in 30 states and four other countries. . . *Jerry Crutchfield* produced *Tanya Tucker* for Capitol Records with *Jim Cotton* and *George Clinton* engineering at the *Music Mill*, Nashville. . . *Bill Withers* was in *Crescendo Recorders* (Atlanta) recording his single, "You Just Can't Smile It Away" for WSB-TV's special feature on the life of Martin Luther King, Jr. *Fry Ham* did the engineering. . . Activity at *Hummingbird Recordings* in Melbourne, FL, included *No Dice* recording their first album for Whistlefield Record Company. The album was produced and engineered by Hummingbird owner *John Foley*. . . *The Killer Whales* finished their album and video at *Sandcastle Recording Studios* in Greenville, SC, with *Rick Sandidge* engineering the project. The project will be shipped to labels. . . At *Studio One* in Doraville, GA the latest *Swimming Pool Q's* record was completed for A&M. The album was produced by *Mike Howlett* and engineered by *Greg Quesnel*. . . The world's fastest talker, *John Moschitta, Jr.*, was at

Ron Rose Productions in Tampa to voice radio spots for *Papermint*, a locally distributed direct mail coupon book. . . *Strawberry Jamm Studios*, West Columbia, SC, now offers half-inch 30 ips mastering, having taken delivery of a new MCI/Sony IH-110 C 2-track machine from Studioworks in Charlotte, North Carolina. . .

STUDIO NEWS

Mastertouch Recording Studio announced that it will become Nashville's first all Sony-equipped, digital studio, with the purchase and installation of the Sony PCM-3324 24-channel digital recorder and the Sony MXP-3000 recording console with automation. . . *Studioline Cable Stereo*, a nationwide supplier of premium music programs to cable systems, has purchased 48 Studer A810 audio recorders for use in the company's main production/origination facility in Reston, VA. The Studer recorders will be used for production of program master tapes as well as for playback direct into the system. . . *Davroy Recording* of Marietta, GA, recently built a new control room designed by David Hobbs of Smyrna, GA. The room features a custom 24 x 4 x 2 Tapco Catalina Board and complete 8-track production facilities. All equipment was custom fitted by Roy Franco and David Hobbs. The room went on line in December, 1985. . . *Jay Barrows* has joined the staff at *Hummingbird Recordings* (Melbourne, FL) as sales and production director. Barrows will coordinate the sales of commercial jingles for business clients, both locally and nationally. . . *Studio 95* in Cincinnati, OH, has opened its new production facility located downtown in The Court Street Center. Studio 95's primary products are original music and lyric jingle packages, and sophisticated multi-track production of radio/TV commercials for direct clients, regional ad agencies, broadcast stations and its parent company W-Lite 95 Radio. Equipment includes an Auditronics 328 console, UREI 813, JBL and Fostex speakers, Otari 8-track with Autolocator, MCI 4-track, Studer and MCI 2-tracks, Nakamichi MR1 cassette, Yamaha REV7, Lexicon PCM60 digital delay/reverb, and plenty of outboard gear. . . A new addition to *Sheffield Studios* in Phoenix, MD, is the Kurzweil Advanced Sampling 250 Music System. Also recently added is the new Yamaha REV7 digital reverb. . . The newest addition to the *Institute of Audio Research* in NY is a brand new control room that the Institute unveiled this January. The room is designed along the lines of a surgeon's amphitheatre, with the centerpiece being a 36-in/24-out, MCI 536 automated console. Accompanying equipment includes an MCI 24-track tape machine, MCI, Ampex and Studer 2-track machines, Dolby noise reduction system and a host of other outboard gear. . .



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AUDIO-APPLICATIONS

"The total equipment cost for CD mastering is in excess of two million dollars, plus clean room construction cost. However, that hardship hasn't stemmed the flow of clients making the pilgrimage to Eindhoven..."

MILLION DOLLAR MASTERING

by Ken Pohlmann

When U.S. Digital Disc Corp. asked me for full engineering details and site criteria for their facility's Compact Disc mastering system, I hopped the next flight to Amsterdam, and then made my way to Eindhoven, corporate headquarters of N.V. Philips, technology manufacturing giant, CD co-inventor, and the world's only vendor of a complete turn-key CD mastering system. There, I determined the technological details, the bottom line cost, and even donned a white suit for a close look at the system in operation.

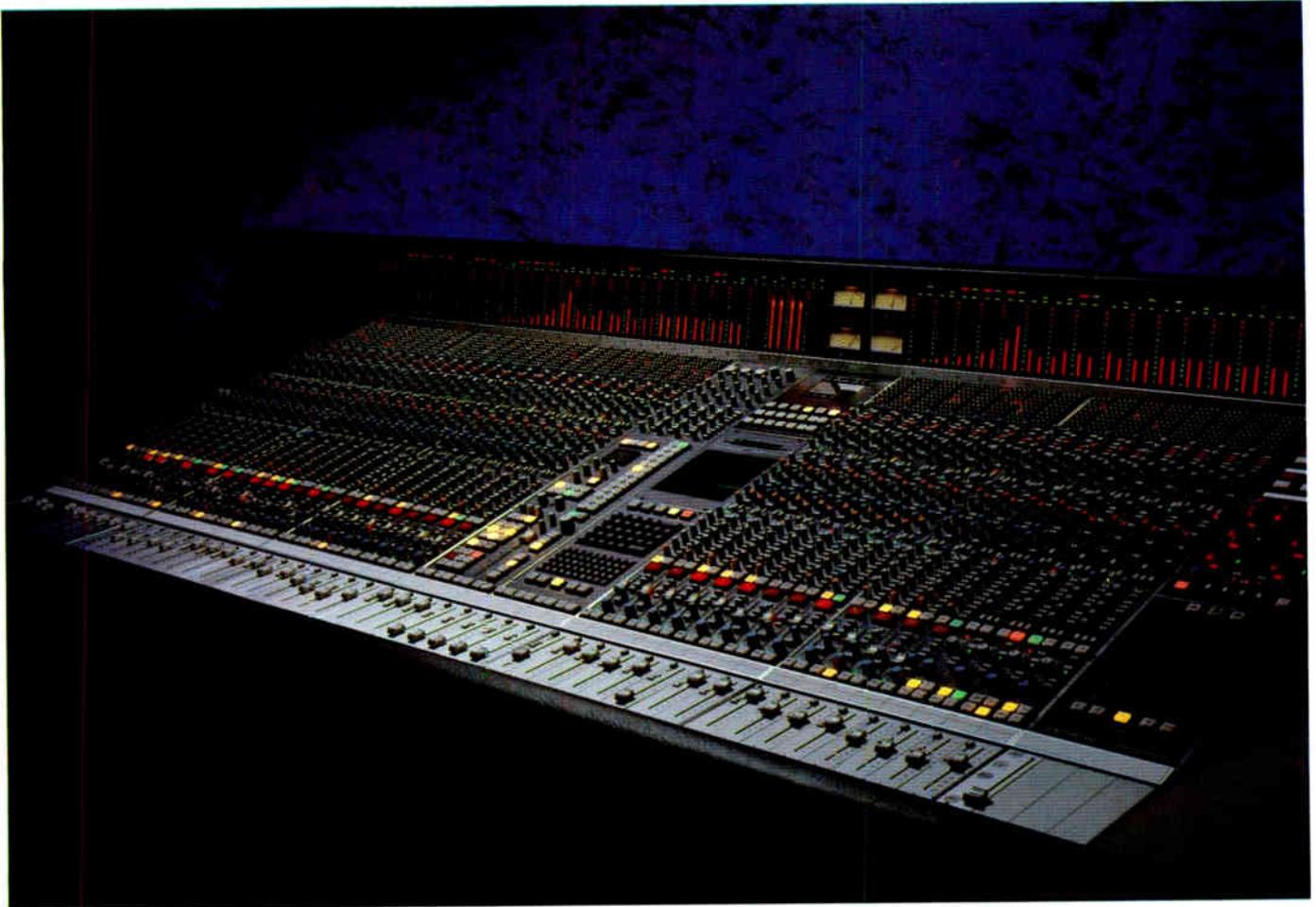
CD mastering begins with a simple piece of glass. A glass disk substrate about 240 millimeters in diameter and 5.4 millimeters thick comprised of simple float glass is washed, lapped, and polished. Resist master preparation is carried out in a clean room

with dust filtering class of 10 000, and class 100 hoods. An adhesive is applied, followed by a coat of photoresist applied by a spinning developer machine. After inspection and cleaning, the plate is tested for optical drop-outs with a laser; any burst drop-outs in reflected intensity will be cause for rejection of the plate. The plate is cured in an oven and stored with a shelf life of several weeks; it is ready for master cutting.

Disk mastering itself is accomplished with a largely automated laser "cutting" machine that exposes the photoresist on the master glass disk. The Philips cutting machine has a control rack consisting of a minicomputer with video terminal and floppy disk drive, U-matic video transport, PCM audio processor, and diagnostic equipment. The lathe uses a laser which is intensity modulated by an acousto-optic modulator to create the cutting signal corresponding to the data on the audio master tape; another laser which does not affect the master disk photoresist is used for focus and tracking. The master glass plate coated with photoresist is placed on the lathe, and exposed with the cutting laser to create the spiral track, creating the disk contents in real time as the master tape is played through the PCM processor. To guard against disk contamination, class 100 air filtering is used inside the lathe cutting bay. Although the optics are similar to those found inside consumer CD players, the mechanisms are built on a grander scale, especially in terms of isolation from vibration. The entire cutting process is accomplished automatically, under computer control.

After exposure in the master cutter, the glass master is developed by an automatic developing machine; during development, a laser monitors photoresist depth and stops development when proper engraving depth has been reached. That is, when the etching reaches the glass substrate, the pit depth thus depends on the thickness of the photoresist layer. In theory, the optimum signal from the finished CD results when the pit depth equals one-quarter the wavelength of the 790 nanometer laser used in CD players and the pit width dictates that the intensity of the light reflected from the pit bottom equals the intensity of the light reflected from the surface, thus

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Sanken Microphone Co., maker of the CU-41 two-way condenser microphone, famed among sound engineers throughout the world for the transparency of its recording qualities (which make it perfect for compact disk recording), is pleased to announce the release of four more of its high quality microphones to the international market. The microphones are:

CMS-6 MS Stereo Microphone A small, lightweight, hand-held microphone for high quality outdoor radio, TV and movie recording. Comes with portable battery power supply and switchable matrix box. Freq. response 50Hz to 18kHz, dynamic range 108dB, self noise less than 19dB.

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destructive interference causes an absence in reflected light wherever there is a pit, distinguishing it from the total reflection from the land surrounding the pits. Following engraving, the master plate is ready for matrixing and replication.

The developed master plate is transferred to an electroplating room; the plating process will result in metal "stampers." The master electroplating process imparts a silver coating on the glass master. This CD master disk can be played on a master player system to assess aural and measured quality; it also serves as a reference to evaluate the quality of the final production disks. The master disk is then used to galvanically generate a nickel father, and a number of positive mothers; each mother can then generate a number of negative nickel molds for replication.

The entire mastering process is an automatic, "hands-off" operation. The glass disk remains in a conditioned clean environment, moving from one process stage to the next in a sealed cartridge. The disk is automatically removed from the cartridge, and then returned, with each process step. This minimizes manual contact and air exposure, thus reducing chance for contamination of the disk.

Following mastering, injection molding is used to produce the finished commercial disks. A polycarbonate material is melted, then injected in the disk mold. After molding, a layer of aluminum is evaporated onto the disk surface to provide reflectivity; the evaporation is accomplished in a vacuum chamber. The aluminum layer is then covered by an acrylic layer with a spin coating machine, and it is cured with an ultra-violet light. This layer protects the aluminum layer from scratches and oxidation. The label is printed directly upon this layer. Following inspection, the disk is finished.

The master recording system is the centerpiece of any CD mastering operation. The Philips LHH 0400 system comprises a PQ subcode processor/editor, CD encoder, laser beam recorder, system controller, and accessories. The master tape carries all of the audio, subcode, and timecode information to be converted to a channel bit stream and output to the master disk. The PQ subcode processor/editor generates and edits this cue code; the subcode cues are related to the timecode from the master tape, which is decoded by a SMPTE reader. The subcode includes control data such as table of contents, time information, track numbers and indices, text information, pre-emphasis (on/off), digital copy (prohibited or permitted), number of audio channels (two

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or four), and catalogue number.

The CD encoder uses subcode and digital audio from the master tape to carry out multiplexing, CIRC encoding, and generates the EFM channel bit stream signal, in addition it outputs signals used for automatic quality control. It accepts five selectable digital audio inputs: parallel, serial MSB first, serial LSB first, digital sine, and digital silence. Information can be encoded from either two 16 bit parallel, or two serial data outputs. An 8 bit parallel interface is provided for the subcode, and 44.1 kHz synchronization signals.

The channel bit stream is input to the master recorder; it is applied to an acousto-optical modulator to control the output of the blue argon-ion cutting laser. A servo-controlled objective lens is used in a dual system focusing mechanism; a primary system uses an infra-red semiconductor in a skew-beam method and a secondary uses part of the reflected blue light. Focusing is possible when the light shutter is closed, or when drop-outs occur, which would normally disturb the reflected blue light. A focus monitor is used to confirm accuracy and recording spot quality. The spiral data track extending outward across the disk requires precise motion for both disk rotation and linear speed of the sledge carrying the focusing optics.

To obtain frictionless motion, air bearings are used for both mechanisms.

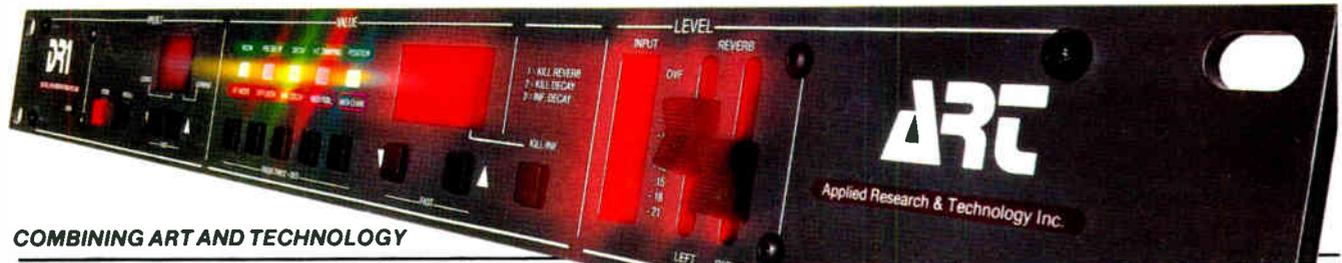
The system controller provides for automatic system operation and regulation of distributed microprocessors via an 8085 bus. Recording operations are stored on floppy disk. Disk cutting requires only a photoresist-prepared master disk, tape master, and system controller floppy disk. Recording parameters such as linear velocity, master identification number, and program length are entered via controller keyboard. Track pitch, focus offset, and recording intensity can be altered from program defaults if necessary. After start, the process is operated automatically. Video display shows indication of process status.

The equipment for an entire mastering system requires a modest-sized booklet for specification. The main menu items include resist master preparation system, master recording system, developer system, master disk player system, and disk master evaporation equipment. Other items from a long list include microscopes, ovens, chemical preparation equipment, test equipment, glassware, cleaning and protective materials, desks and hoods, audio monitoring equipment, and dust-free paper. Site requirements are modest, but carefully specified. Although internal vibration specifica-

tions are severe, the laser beam recorder is mounted on a granite baseplate with a pneumatic vibration isolation system so site vibration tolerances are reduced. The hooded lathe supplies class 100 environment, so installation in a class 100 000 room is permissible, of course, temperature and humidity must be controlled. Other considerations include clean electrical system, demineralized and hot water, compressed air, filtered air, nitrogen, and exhaust of contaminated air. Acceptable ambient air pollution levels must also be specified.

The facility could be housed in a clean room of 200 square meters; however, many disk manufacturers such as U.S. Digital Disc are specifying larger rooms, with an eye toward additional mastering equipment to accommodate production of audio disks as well as CD-ROM, and future formats encompassing both Constant Linear Velocity as well as Constant Angular Velocity disks.

The total equipment cost for CD mastering is in excess of two million dollars, plus clean room construction cost. However, that hardship hasn't stemmed the flow of clients making the pilgrimage to Eindhoven; the wait for mastering system delivery is as long as that of labels looking for mastering. ■



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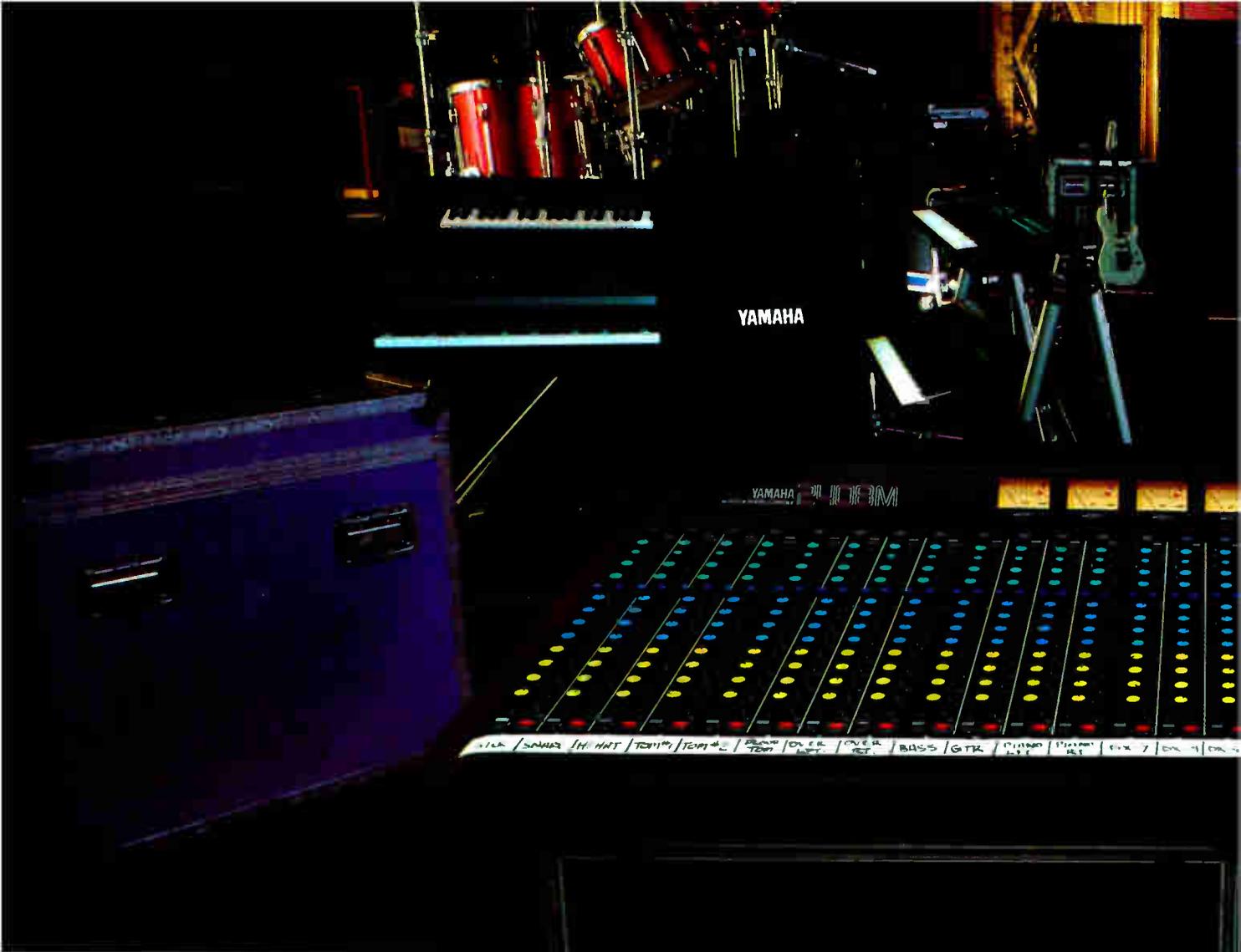
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Around the World

INTERNATIONAL RECORD LICENSING

in a Shrink Wrap

by Rosanne Soifer

International record licensing is a topic that's attracting considerable attention lately for a variety of reasons. One is the ever decreasing number of new acts that are signed by major labels, and thus have immediate access to major exposure. The second reason is that, broadly speaking, the current crop of independent labels remains creatively and economically underground, barely having an impact on top 40 mainstream music. (This represents quite a different picture from that of the rock and roll indies in the 1950s. Labels such as Chess, Specialty, Sun, and Cadence—whose success was founded mostly in regional and black music—regularly made the charts.)

What this all basically means is that independent records, especially those that are artist produced and financed, are usually doomed to survival via a life support system of college radio airplay and car trunk sales—unless the record can be licensed and sold overseas.

Licensing is the granting of rights to another party; for example, a right or permission to distribute a product you may or may not make. (Product licensing isn't just limited to the record business; it's quite common in the apparel industry as well.)

A panel on this topic, chaired by JEM Records Marty Scott, was presented at last fall's New Music Seminar 6 in New York, and was very well attended. It seemed that a popular misconception among music industry novices and pros alike was that an American record, whether on an indie or major label, is somehow delivered to Europe via a stork (probably wearing a satin jacket) and begins to miraculously generate both sales and airplay. Too bad it's not that simple. There are many

"A personal contact through someone you know is usually the best way of finding a trustworthy licensee."

business and legal components that must be examined before licensing is even considered. These (in part) include uses of the media, the characteristics of each country within a particular territory, money, and setting up a workable system of checks and balances.

To get more of a handle on it all, we spoke with Jeff Graubart, an entertainment lawyer with Strote, Graubart & Ashley of NYC and Beverly Hills. He is also counsel to both the New York and San Francisco chapters of NARAS.

Mix: Are there any characteristics common to all foreign licensing deals?

Graubart: Yes. A "generic" foreign deal is usually a three-year agreement in which the U.S. label agrees to provide the foreign company with all the masters of the U.S. product. The foreign company is responsible for the pressing fee, duplication, and new record jackets.

Mix: There are obviously big differ-

ences between the licensing of U.S. major labels and indie labels.

Graubart: Of course—and the important factor to remember is that the indie label, simply because it's an indie, doesn't have a whole foreign corporate network at its disposal, and must create its own. Let's say major label XYZ owns a master that they'd like to market overseas. They send a sample to their "foreign associate." For example, EMI (England) owns Capitol, so each is the other's foreign associate. If EMI isn't interested in Capitol's product, there is usually a "second option" company, possibly a strong indie that isn't in direct competition with either major. This process also works in reverse, and has done so at least once before—with The Beatles. They were on EMI in England; Capitol, the U.S. foreign associate, didn't want them, so EMI went to their second option company—VeeJay. Tollie was another label owned by VeeJay, and that's why The Beatles' first U.S. releases were on those labels.

Mix: What about money in a major label deal?

Graubart: The record royalty rate [at this writing] that the foreign company pays to the U.S. is usually between five and seven percent. The artist royalty varies; normally the artist agreement with the U.S. company is X percent and the foreign agreement is one-half of X percent. There's also the collateral that the foreign company has to pay into two separate funds administered by the American Federation of Musicians. .35 percent of the retail price goes to the Music Performance Trust Funds, and one-half of one percent of the retail sales goes to the Musicians Special Payments Fund.

Mix: Obviously the money in an indie

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deal is computed a lot less formally and on a much lower scale.

Graubart: The small indie label is venturing into basically uncharted waters. They often wind up working with a comparable sister label overseas. The retail royalty rate can vary between 12 and 18 percent.

Mix: We've all met people from indie labels at conventions looking for foreign record deals. What are some of the things they should take into account before signing any papers?

Graubart: The royalty rate, the length of the agreement, and the amount of the advance are very basic. Most people know enough to negotiate this beforehand. What else should they be aware of? The monetary rate of exchange is one. The rate that's in effect when the contract is signed should be applicable for the date you eventually get paid. The actual collection of overseas payments should be negotiated and paid for in U.S. dollars since substantial service charges from banks can eat up a hefty percentage of a royalty check. Are telexes legally binding? Yes they are, since they are used to confirm a verbal contract. If the record sells well and the act goes overseas, what about tour support? Is it recoupable?

Mix: There's probably a lot more detective work that has to be done by the U.S. indie on the potential foreign associate.

Graubart: Yes—just because a company rents a fancy booth at MIDEM doesn't really mean anything. A personal contact through someone you know is usually the best way of finding a trustworthy licensee.

Mix: Is there any kind of an organization here in the U.S. that monitors overseas record deals, comparable to the Harry Fox Agency? [This agency, a subsidiary of the National Music Publishers Association, functions as a watchdog agency for song publishers.]

Graubart: Not really. ASCAP and BMI monitor and collect monies on performance royalties from their overseas counterparts. [For further information, consult the BMI folder "BMI Around the World: The Foreign Licensing Story."] The U.S. indie should probably get a foreign sub-publisher or licensee to oversee the mechanical royalties. And again, it's important to have a trustworthy contact in the foreign territory to act as a go-between.

Mix: What about the licensing of peripheral products that are now becoming important parts of artist promotion, such as videos, T-shirts and buttons?

A popular misconception is that an American record is somehow delivered to Europe and begins to miraculously generate both sales and airplay.

Graubart: Video is now an important part of any act's contract. It used to be known as the sight and sound clause, but can be negotiated separately, and now often is. Capitol's 1960s definition of a record was: "any device by which sound may be recorded for later transmission to listeners, whether now known or unknown and howsoever used, whether embodying sound alone or sound synchronized with or accompanied by visual images of the artist." So you see someone was thinking about video clips even then. Motown's 1985 definition isn't much different. Other documents and contracts can go into videograms, video cassettes, Compact Discs, and picture disks. T-shirts and buttons are negotiated separately, territory by territory.

Mix: Are there any cases you know of where a record or an act that wasn't successful here has made it overseas?

Graubart: There are very few, but I guess the prime example was Jimi Hendrix, who went to England to become successful before becoming a superstar here. So do a lot of opera and jazz acts that don't do anything here, but sell wonderfully in Europe and Japan. In general, any potential foreign licen-

see is going to want to do business with you only if you have a previous track record.

Even if a U.S. indie company does have a track record, they are often unaware of the foreign market they are looking to crack, and are subject to conflicting reports and advice. Since each country is different, one school of thought seems to be to try for an overall licensing deal with one company in each market. Another says to do it on an artist by artist basis rather than an overall country by country. James Wiley, a British entertainment lawyer on the New Music Seminar 6 panel mentioned that the non-monetary factors in licensing are often what makes or breaks a deal. These include: guaranteed release for each territory with an option to license to a third party; control over what the licensee does to your product (e.g.: the right to compile and choose singles from an album); and the licensing of soundtrack rights, wherein you might have to go back to all of your original licensees to get the rights *back* from them.

Checking out a reliable overseas distributor or potential foreign associate seems to be done mainly by personal referral to this point. Responding to an ad placed by a foreign company looking to license or distribute U.S. product is risky, especially if there is no apparent local representative you can call or visit. Sending a tape blindly to an overseas address without any preliminary contact beforehand usually accomplishes as much as launching a note in a bottle, throwing it overboard, and hoping somebody finds it. (A look through the International Billboard Guide may at least give you an idea of which foreign labels chart with any frequency.)

Another piece of advice that seems to be heard frequently from U.S. labels that have made European deals is to insist on, and emphasize, the advance as well as a quarterly account of sales. Placing your publishing with a different company than the one you license your records to also provides sort of checks and balances on sales. An outside publisher will be able to monitor the sales of your record, and he will have a vested interest that is the same as yours. If the label you deal with also has the publishing, there is no way to check up on them.

If all of this sounds rather confusing and somewhat bleak to the small U.S. indie, it is. Possibly the U.S. indie companies should look to form some sort of agency or board to oversee licensing abroad. A constant monitoring of the market may not make anyone rich initially—but it might cut down on the number of ripoffs. ■

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World Radio History

INTERNATIONAL UPDATE!

Montreux AES Convention: Something for Everyone

The 80th Convention of the Audio Engineering Society will take place March 4 through 7, 1986, at the Congress Centre in Montreux, Switzerland. Due to the town's centralized European location and established reputation in the fields of television and broadcast, Society organizers expect a large participation in the event, as was the case when the convention was held there in 1982.

A comprehensive papers program has been planned, with sessions covering a wide variety of topics, including: Digital Audio Techniques, Digital

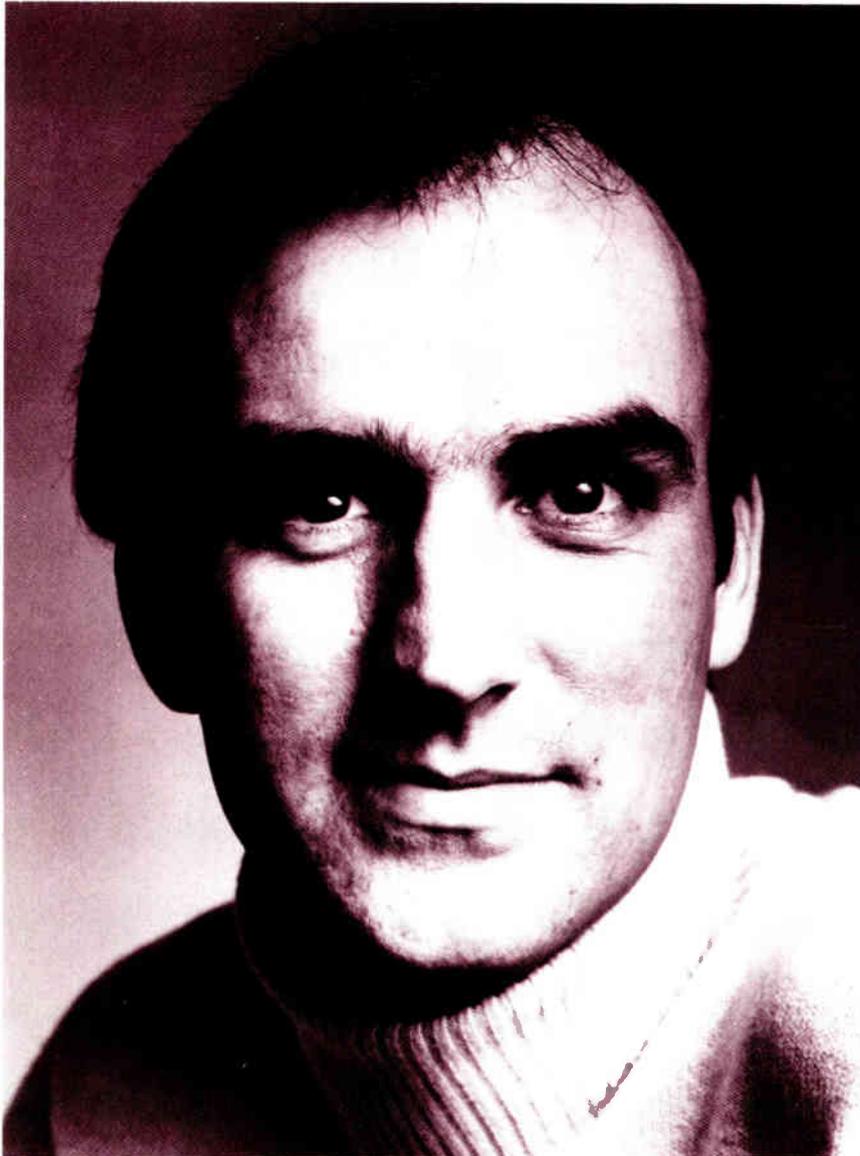
Standards, Acoustics and Computer Science, Studio Technology, Measurements and Instrumentation, Tape Duplication, Sound Reinforcement and Loudspeakers, Computer Music, and Audio/Video Interfacing. A tour of the Regensdorf Studer factory has been arranged for the day before the convention, and other technical tours (Nagra Kudelski plant, PTT satellite station, Romont organ factory, Roche organ museum, and the Centre Intl. Mechanique d'Arts museum in St. Croix) are slated for Wednesday, March 5.

Certainly one of the highlights of any AES show is the equipment exhibition, and the 80th Convention will

be no exception, as over 160 manufacturers representing 18 countries will be showing the latest in audio technology. Another of the not-to-be-missed attractions will be the festive awards banquet, held Thursday evening at the Chateau de Chillon castle.

All in all, the Montreux convention promises to be an informative and enlightening event, with something for everyone involved in professional audio. For last minute information, contact the U.S. AES office at (212) 611-8528, or telex the European AES branch in Brussels, Belgium: 63566 aeseur b. See you at the show!

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Producer Joe Wissert:

THE NEW WIZARD OF OZ

He's called 'The Wizard'—not so much because his name, Joe Wissert, sounds similar to the moniker he's been given—but more as a comparison with that magical figure in the adventures of Dorothy at the end of the Yellow Brick Road. The Wizard of Oz was the man behind the curtain, making the extension of his persona for the masses an illusion through the manipulation of buttons, gadgets and sound effects.

But Joe cringes at the comparison. Having moved to Australia from a staggering career in his American homeland, he has settled into a new life in this relaxed country he now calls home. Though his talents are in constant demand, he downplays his accomplishments overseas, opting to discover new talent and apply his delicate touches to bring out the songs rather than merely the sounds.

But after only a year here, he has already made his mark. His production of the acclaimed Gang Gang has the honor of being the first CD for a debut Australian album

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Lemo Builds New Swiss Factory

Lemo S.A., one of the world's leading manufacturers of cylindrical quick connect-disconnect electronic connectors, has announced the construction of a new factory in Ecublens, Switzerland. Due to be completed in the fall of 1986, the new facility will quadruple the present production and office space currently located in Morges, Switzerland. At an investment of 26 million Swiss francs, the factory will offer over 100,000 square feet of production and office space.

Founded in 1946 by Leon Mouttet, Lemo is known for its push-pull connectors, which provide secure electronic connections by means of a unique locking mechanism. The connectors come in over 35,000 models and are used in such areas as medical instrumentation, telecommunications, aerospace equipment, data processing, robotics, aviation and space research, as well as audio/video applications.

Tape One Gets Second DSP

Following several delays, a second and larger Neve Digital Signal Process mastering console is now fully operational at London's Tape One, making the company the first in the world to have an all-digital CD and disk mastering facility.

The first session to take place in the new Tom Hidley-designed room at Tape One's Windmill Street complex was for the A&M Records act, Swimming Pool Q's. Producer Mike Howlett used the DSP to prepare the finished digital production master for a later disk cutting date. Howlett and engineer Dennis Blackham were delighted with the console's flexible operational design and smooth digital equalizers. All information from the session was stored on floppy disk for future use, should any minor changes be required at a later date.

In addition to the Neve DSP, the



SSL founder and managing director Colin Sanders and SSL Far East managing director Bingo Tso conclude arrangements for the Hong Kong regional office.

room also features a Neumann VMS-80 lathe, Sony PCM-1610 and PCM-701 digital processors, Mitsubishi X-80 digital 2-track, and a Studer A820 analog recorder.

Sony Digital Sessions in Zagreb

Sony Broadcast Ltd. recently visited Zagreb, Yugoslavia, at the request of Jugoton, a principle record company, and assisted in staging the first digital audio recording session in Yugoslavia. Recorded in a modern church on the outskirts of Zagreb using the PCM-1610, DAE-1100, BVU-800 DA and DDU-1510 equipment, the session primarily was arranged to give Jugoton and major broadcasters first hand experience with digital audio techniques.

During the four days, a number of al-

bums were recorded. Amongst these, digital records were made of the world famous "Zagreb Soloists" featuring Goran Konchar (solo violinist) playing Johann Sebastian Bach's "Y Soye." The sessions also included digital mastering of the "Zagreb String Quartet" playing Bach's "Die Kunst Der Fuff" and a Yugoslav pop group playing "Pami Valjak." Although purely an experimental recording session, it is expected that some of the material will be released as albums and possibly on Compact Disc during 1986.

SSL Opens Far East Office

Solid State Logic has opened a regional headquarters in Kowloon, Hong Kong, affirming its commitment to the Far East recording and broadcast industries. The office will serve SSL clients in China, Singapore, the Philippines, Malaysia, Indonesia and Thailand. There are currently six staff members, all of whom are multi-lingual, operating under the direction of SSL Far East's managing director, Mr. Bingo Tso.

Tso, a former Hong Kong-based record producer for Polydor, EMI and WEA, has served as an SSL consultant in the region for the last two years. He explains that a primary reason for opening the office is the emerging Chinese recording industry, which is now producing a wide variety of music ranging from classical to Chinese folk and pop.

"We wouldn't have thought about trying to sell SSL in China two years

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Sony Broadcast sales manager Chris Hollebhone explains the workings of the PCM-1610 digital processor to Jugoton engineers.

MASTER OF SOUND

JAN HAMMER

Jan Hammer, composer and producer of the music for television's MIAMI VICE and the hit album MIAMI VICE, masters his music on AGFA PEM 469.

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ago," Tso notes, "but because of the recent modernization there it has become a very big market," Tso says, adding, "The Chinese are purchasing for the long term, and they want equipment that can serve them for a long time." Three SL 4000 E Series Master Studio systems were installed at the China Record Company (CRC) studios in Beijing, Guangzhou and Shanghai last year, and a fourth has been ordered by CRC.

Solid State Logic Far East is headquartered at Austin Tower, Suite 301, 22 Austin Avenue, Tsimshatsui, Kowloon, Hong Kong. Telephone (852 3) 721-2162; Facsimile (852 3) 723-5465; Telex: 47580 SSLFE.

Tina Turner at Mayfair being interviewed by Paula Yates for the Tube. This interview won The Gold Award (New York International Film and TV Festival).



MAYFAIR STUDIOS PROFILE

by Richard Dean

Most record buyers probably don't realize that one of the most popular recent "American" albums, Tina Turner's *Private Dancer*, was actually recorded in London, at Mayfair Studios. That probably comes as no surprise to anyone who has followed that studio, however. Mayfair has been churning out hits for years, by everyone from Midge Ure's early band, Slik, to Gary Glitter and even the Bay City Rollers. In the past year alone, three U.S. chart toppers were born at Mayfair: Turner's "What's Love Got to Do With It," Tears for Fears' "Everybody Wants to Rule the World," and the Marilyn Martin-Phil Collins duet, "Separate Lives." Not bad for a studio that was originally opened in 1964 by an 81-year-old lover of jazz and church music.

In those days, Mayfair was locat-

First International Music and Media Convention Announced

The first annual International Music & Media Convention (IMMC), a joint venture of European Music Report and the Golden Rose of Montreux, will be held in Montreux, Switzerland, from May 7 through 10, during the opening days of the Golden Rose television festival. The IMMC will feature the first pan-European conference for radio and television executives, programmers, producers, deejays and veejays, as well as a marketplace and video festival, in addition to other activities of interest to all those involved in music and the media.

Two of the four days of the event will

ed on South Moulton Street; today, the comfortable facility can be found in London's fashionable Chalk Farm district. Since 1977, it's been owned by John and Kate Hudson. John had come to the studio as an engineer in 1969 (after a two-year stint at the BBC) and then carved out a successful career as a freelancer who frequently used Mayfair as his base of operations. Stories abound about how Kate signed for the Chalk Farm real estate before she and John had the money for the property secured, and of how the old company chairman helped them finance the new studio; indeed, the Hudsons still think it's remarkable that they even found a building that had been approved to become a recording studio—an endeavor normally viewed by city planners as being about as desirable as constructing a lunatic asylum.

In their current operating arrangement, Kate handles all the business side, including computerized daily budget monitoring or outset planning, and John is in charge of engineering, installation and maintenance. "The role of engineer and studio manager represents two very different ways of thinking, and the same person cannot be both at the same time," comments John, in words worthy of granite.

Mayfair has two main suites, each designed in-house, or in other words, by John. Studio 1 has a 56 square meter recording area with a live end/ dead end acoustic, and a relatively large 42 square meter control room. The marginally smaller Studio 2 suite is designated primarily for remixing and overdubbing, and the studio is one of the few with two resident Sony 3324 digital multi-tracks. As well as be-

be devoted to a series of conference panels, with simultaneous translation, to discuss topics related to music in the international media, including music programming, station management, international broadcasting rights, games, and syndication. The music video festival, both clip and long-form, with a distinguished international jury, will be an integral part of the event, with awards presented during an international live rock telecast. Another feature of the International Music and Media Convention will be a music-in-media marketplace, where producers and distributors of music programming for radio, television, and home video will be able to meet with program users. ■

ing synched together to record 48-track, these are also used for electronic editing, the video technique that John sees as the future in sound editing.

"You can't splice back in digital," he says. "You have to make a copy, which, if you're going to have to do it anyway, may as well be a fresh edit master with no cuts to the original." Each suite has its own SSL console—the top of the line 48-channel 6048E series with Total Recall—and John simply uses locations on the integral Adams-Smith synchronizer to specify edit points, although Sony is supposed to be bringing out a full video-style controller in the near future. 48-track sessions are edited in the same way, one reel at a time, and one or both of the machines can be wheeled between the two control rooms. Two 3324s generate quite a bit of noise, not to mention heat, so the suites have their own sliding-glass equipment areas, where the relatively cool and silent original Studer analog machines now also reside.

"Digital recording is the future," claims John, "with as much importance as stereo was to mono." As he sees it, the mainly classical musicians who claim that they don't like "the digital sound" have simply never heard themselves live before. "While we were recording *Private Dancer*, Terry Britten, the producer, coughed at the start of one of the tracks," he says. "It stayed there for quite a while, and every time it came up everybody in the control room would look up, expecting to find him in the studio! It got wiped eventually."

The multi-tracks can also be synched up to U-Matic video for mixing to picture, a PCM Fl digital sound master (U-Matic again rather than Betamax) or 1610. Despite the

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I just think more people
ought to know how good
Soundtracs gear is . . ."

Tom Robinson



"I did a lot of research before buying a mixing console for Turbot studios. Ideally I'd have liked an SSL or a Harrison I suppose, but frankly, they were out of my price range.

Among the producers & engineers I asked, however, the general opinion was that — if it lived up to its claims — one of the new Soundtracs desks would be excellent value for the money I had.

Well it did, and it was: it's clean, versatile and easily good enough to turn out professional masters. A few minor niggles perhaps, but what the hell. I work with the engineer from a top London studio and he loves it.

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World Radio History



Lexicon 224XL

by Larry Oppenheimer

"It's a floor wax!"
 "No, it's a dessert topping!"
 "Wait. You're both right: new 'Shimmer' is both a floor wax *and* a dessert topping."
 "Mmmm, it's delicious."
 "...and look at that shine!"
 —Gilda Radner, Dan Aykroyd, and Chevy Chase on *Saturday Night Live*

Modern life is filled with wonderful inventions that can serve more than one purpose. How about watches with built-in calculators? And let's not forget the inimitable Swiss Army knife. In fact, this trend is not even anything new; the motto for the original Hoover vacuum cleaner was "It beats as it sweeps as it cleans." Yes, everywhere you look the move towards multifunction devices is visible. Now, you, too, the musician/producer/recording engineer can join in the fun. Sure, I know, you're used to a reverb being just a reverb and a pitch-shifter only a pitch-shifter, but now all that is changed. Reverbs can also be pitch-shifters, delay units, vocoders, samplers, and many other things that defy two-word description. To what do we owe this new and colorful advance in signal processing? I'll give you a hint: it has nine letters and starts with "c."

SOFTWARE-BASED EFFECTS PROCESSORS: DIGITAL TOFU?

Our story to this point

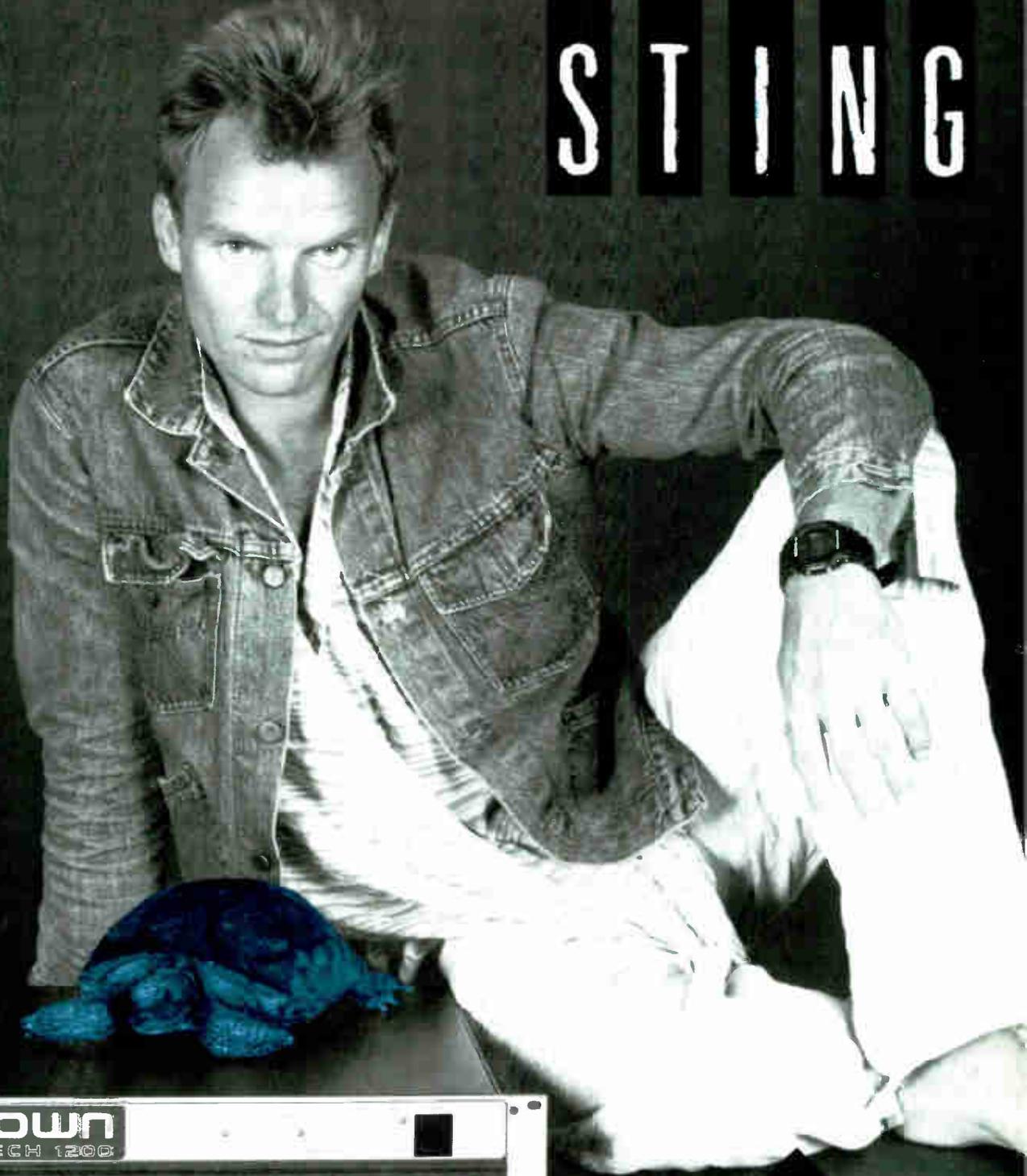
The first commercially available audio digital signal processing (DSP) was simple delay, introduced about 1971. A few years later, pitch-shifting arrived and, in the mid- to late-'70s, digital reverberation. A brief look at how these three applications are accomplished clearly demonstrates the exponentially increasing power of available digital processors.

Delay is the simplest of these effects to realize, being a straightforward, purely hardware-based task. In a digital delay, an input signal is digitized, written into a bank of RAM (random access memory), and then read back out at some later time. The maximum delay is determined by the sampling rate and the amount of available memory. Pitch-shifting gets a little more complicated, as it involves the same steps, except that the signal is read out of memory at a different rate than it is written in, resulting in a disconti-

nuity in the reproduced waveform.—a glitch—when the read and write memory pointers collide. How that unavoidable glitch is disguised is the key to pitch-shifting with this technique. Early pitch-shifters generally used relatively crude methods in this area.

Digital reverberation is yet more difficult. Digital reverb is now achieved by creating a network of digital filters that mimics some key aspects of the intricate acoustic process that is reverberation. (For more information on digital reverberation, see my series of articles starting in the May, 1985 issue of *Mix Magazine*, and in the February and March 1986 issues of *Electronic Musician*.) Digital filters, however, are created by performing mathematical manipulations, thus dictating that this type of processor must not only be able to store and retrieve samples, as in a delay, but multiply and add them as well. The hardware architecture of a delay does not require a

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microprocessor unless programmability is desired, but a reverb needs to have a high speed math processor to produce the reverb and a control processor to monitor the front panel controls for changes, and make the appropriate adjustments to the math processor's program. Gosh, things are getting pretty complicated in the hardware.

More to the point, however, is that a math processor does not inherently create reverb as a delay inherently performs delay, any more than a cassette deck inherently makes music. It is software that decides whether this machine will make reverberation or some other effect: software for the math processor to create the filter network,

and software for the control processor to respond to the user. The machines that most typify this approach are: the Lexicon 224XL and PCM70, Eventide SP-2016, and the Publison Infernal Machine 90. There are, of course, less expensive units that take a similar approach, such as the ART DR-1 or the Yamaha REV7, but these devices are not as powerful or representative of the approach we are discussing here. The evolution of these wonder boxes has been fast and furious, but for their designers it has been a challenging plunge into an unexplored territory.

Once upon a time . . .

Eventide, Lexicon, and Publison had

all released digital signal processors by 1980, but none of them really performed more than one or two functions. Of the multifunction units named above, the most impact to this point has probably been from Lexicon's 224XL and Eventide's SP-2016. Although these units, both introduced around 1982, have much in common, they came about in totally different ways. Gary Hall, currently with Martin Audio/Video in New York, was in Lexicon's engineering department in the late '70s and early '80s, and was largely responsible for their expansion into software-based effects. Indeed, Lexicon 224 inventor David Griesinger credits Hall completely with the concepts for the 224X's effects programs. Although the original 224 eventually included a simple chorusing program, Hall recounts that the formation of the 224X as an effects device, in addition to its reverb capabilities, was gradual: "In 1978 and '79, Lexicon was developing the 224 (digital reverb) for market, and while that was going on I was spending some time after work fooling around in the sound room (an on-site facility for evaluating and developing equipment) with delay line programs and resonances and a number of other things, but I never reduced them to a controllable form; they were just lone experiments. The 224's bandwidth of 8 kHz made it seem like not such a good idea to pursue these experiments for release on the machine in that form. Plus, the software on the machine had not been set up with the idea of controlling effects; it was laid out with reverb in mind.

"A couple of years later, the market had developed to the point that it seemed desirable to Lexicon to do a significant redesign of the 224, mainly to bring it to a higher bandwidth. It struck me that we now had the bandwidth to make effects that sounded respectably good for the professional market. Likewise, around that time, Eventide demonstrated the SP-2016 at the Audio Engineering Society convention, which I saw and said, 'Good job, guys, that's my kind of concept.' I got together with David Griesinger, and we talked about the possibilities and desirability of incorporating effects programs into the 224X. I managed to convince him that it was a good idea, but I didn't manage to convince the upper management of Lexicon that it was a good idea. We finally compromised on it not being a harmful idea, and David and I got a green light to exercise our imaginations a little bit. We decided that because the 224X had six sliders on it, the effects programs would have six voices. It was also an appropriate number from

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the standpoint of the software: it could handle six comfortably, where 12 would be too many, and two or three was much fewer than it was capable of.

"David, being a classical recording engineer and not having an orientation towards the use of effects, asked me to formulate ideas of what the programs should do. We came up with three ideas: a chorusing program, in which each one of those six delays would be routed to a software-defined chorusing section with random modulation; a resonant chords program in which the delay taps were routed to resonators that were individually tunable; and a band delay program, in which each delay tap was routed to a simple digital equalizer function.

"We got our programs refined and really, really liked them. We found they would do things we didn't suspect they would do, and proved, in my opinion, to be very powerful tools for creative signal processing. The 224X went on to be very successful, both as a reverb and as an effects device."

The high cost of the 224X (currently \$12,500) often meant that it was purchased primarily as a reverb, the effects taking a back seat. In 1985, Lexicon liberated the effects programs by putting them into a cheaper, more compact package: the PCM70, throwing in three reverb programs (in the back seat) to boot.

In contrast, Anthony Agnello recalls that the SP-2016, for which he was

primarily responsible, was developed quite specifically to be a general-purpose device: "When Eventide first started out (on this project), we were interested in reverberation, and I was playing around with Schroeder. (Bell Laboratories acoustician Manfred Schroeder did the earliest research on digital reverberation, publishing several algorithms that became the basis of virtually all work in digital reverberation that followed.) After setting up one digital reverb experiment in the early '70s where we used discrete delay lines, we built a box in 1979 that was a fairly general-purpose signal processor, but it was very limited hardware-wise. I had taken a course at Polytech in New York on digital processing of speech, so I knew about linear prediction and digital filters, and I wanted to explore those things, since I was in a position where I could build a machine to explore some of that in real time. It became obvious to me that what I wanted was a general-purpose signal processor."

Unfortunately, for many of the applications that interested Agnello, it was necessary to do even faster and more precise calculations than are required for reverb. It was not until TRW introduced a 16-bit multiplier on a single chip that Agnello considered his idea to be commercially feasible. Feasible does not mean easy, however, and numerous stumbling blocks had to be overcome before the SP-2016 was born. Even when it was finally released, only a small number were shipped in the beginning. In fact, the 2016 (in this writer's opinion) did not really come into its prime until the 1984 release of the Generation 2 software package, which introduced refined versions of the early programs, plus a whole raft of new effects.

When these machines appeared in the early '80s, it was not immediately obvious to many people just how powerful they really were. Although the 224X sold well from the time of its release, it often took a lengthy demonstration to show that it was more than a 15 kHz version of the 224 selling for \$3,000 more. Hall remembers an early, and very satisfying example:

"Right at the time that the 224X was being released to market, I got a call from people associated with Todd Rundgren asking about purchasing a 224. I told them, 'Listen, you should do yourself a favor and not buy a 224 at this time because the 224X is coming and it's really going to fit in with your ideas.' They said, 'OK, how can we look at it?' and I kind of scratched my head, saying, 'Gee, the dealers don't have them yet. The only way I can think of right away is to come over and show it to you,'—they were

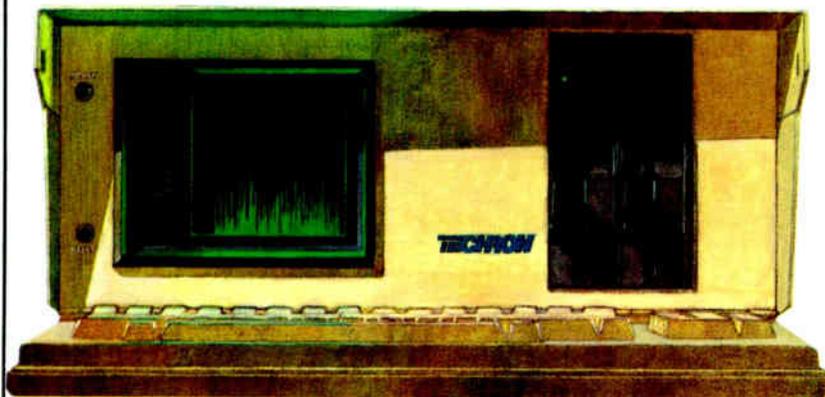
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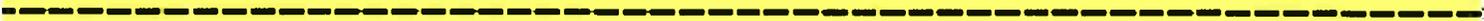
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a few hours away from the Lexicon factory in Massachusetts. You (Larry Oppenheimer) and I went there on a weekend with the 224X and brought it to Todd's personal use studio. We set it up and had what I thought was one of the most enjoyable demos of my life. It started out with Rundgren being very impressed and pleased by the reverberation sounds, and then as we proceeded into the effects and called up all of these multiple parameters and demonstrated the numerous channels of delay in the programs and how they could be combined and controlled, it was a jaw-dropping effect that got stronger and stronger until they said, 'Oh my god, when can I get my hands on this?' That gave me a good cue that we had done something right." (Author's note: This account is not an exaggeration. My recollection is that the demo started out with Rundgren, then beginning sessions for Utopia's *Swing to the Right* album, lying down at the back of the control room, and finished with Utopia synthesist Roger Powell and him hunched over the 224X and calling for a fresh reel of 2-inch tape. A great number of 224X demos from that period followed this pattern. This kind of reaction is still frequently the case when someone is first faced with the reality of a processor that can produce effects they never even imagined.)

A general description

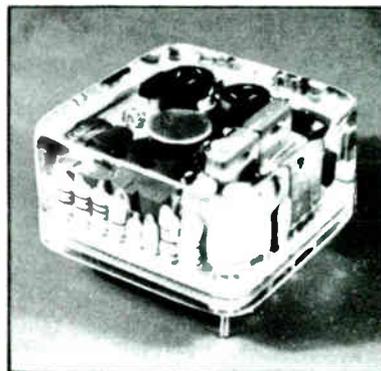
Let's take a moment to make some statements about what typifies the instruments that we are calling "software-based effects processors." Basically, we are referring to real time digital signal processors which are specifically designed as general-purpose devices (with the exception of the 224X) whose function at any given time is primarily software-defined. Those 25 cent phrases—"real time," "general-purpose," and "software-defined"—are the real keys here.

As mentioned, the internal hardware is based around a multiprocessor system with one or more mathematical engines for computation, and one or more control processors for user manipulation of the device. Of course, there must also be controls through which the user operates the machine. As we shall see, the limitations of these hardware features dictate the limits of the machine's capabilities. (For more on DSP architecture, see *Mix*, September, 1984 and June, 1985.)

In terms of software, mathematical manipulation is used to achieve the majority of effects, which, at this point, are almost exclusively done in the time domain. Remember how simple it is to achieve delay? Well, delay is a time

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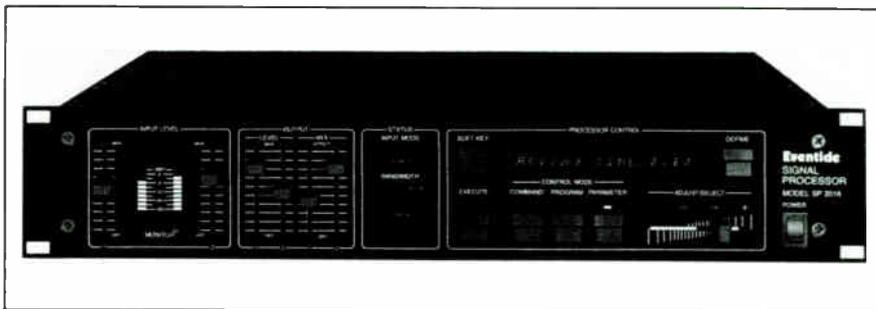
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Eventide SP 2016

domain phenomenon, and clever manipulation of delays can create many different kinds of effects. Even digital filtering, typically considered a frequency domain effect, is done with delays. (Actually, time domain and frequency domain are simply two different ways of looking at the same thing. At this time, it is easier with real time digital signal processing to view things primarily in the time domain.) Using combinations of various digital filters, straight delay and gain control, some of the effects available in current processors include: simple echo, reverb, chorusing, flanging, vocoding, multi-band delay, time compression/expansion, sampling with triggered repeats, multitap delay, resonant filters, reverb effects (gated and reverse), and scrambled splicing.

Digital tofu

The real strength in these units lies in the fact that their function at any given time is defined in software. There are two essential strengths in this approach. The first is the chameleon quality that such a device takes on. One box can serve a number of different purposes, in some cases more than one at the same time.

The Infernal Machine 90 is the only device discussed here that is specifically designed to operate in discrete stereo at all times. It can generate a different effect for each of its two channels: reverb (with stereo outputs) on one channel and pitch-shifting on the other, sampling on one channel and time compression on the other, etc. The 224X has a number of "split" programs that allow two different reverbs to operate independently on its two channels, plus one that provides chorusing on one channel and reverb on the other (very useful for single-box vocal processing). Even without simultaneous processing, though, the fact that a unit like the 2016 can at one moment be a superb reverb, the next a high quality vocoder, sampler, or time scrambler, means that the buyer of a high priced device like this is getting a lot of "bang for the buck." Furthermore, using one device for

numerous tasks creates some degree of operational consistency: there are less boxes to learn to use. Some users, however, find this same concept disconcerting; many want to buy a reverb and have it be simply a reverb, or a vocoder be a vocoder.

The other important strength is updatability. As time goes on, a designer may improve and refine an older program or generate new ones altogether. The most dramatic example of this is probably the SP-2016. The Generation 2 software package showed that the machine was open-ended and would continue to develop as time goes on. Ex-Eventide engineer Stephen Hoge has even formed a company, First Order Effects, specifically to develop new and custom software for the 2016.

One large reason that the 2016 may continue to have a bright future in spite of the appearance of much lower cost units such as the PCM70 (the 2016 retails at about \$7,000, while the 70 is about \$2,300) is the existence of SPUDSystem. SPUDSystem (Signal Processor User Development System) is a computer program that can run on an IBM-PC or Hewlett-Packard computer interfaced to the 2016, which allows a designer or sophisticated user to write his own code for the 2016 in a specially constructed high-level language. In actuality, SPUDSystem is used in-house at Eventide to develop effects, and its release is a landmark gesture that allows, for the first time, someone outside of the manufacturer to create effects for a commercially available device. First Order Effects may well be the first of a new breed of third party software developers creating effects for these machines.

Of course, the 2016 is not the only unit to receive dramatic updates. The 224X has gone through several software versions that improved old programs and added new ones, and the Infernal Machine, just released in 1985, is already receiving a major update: multi-sampling. The IM-90 is now the only one of these processors having the capability to record a number of different samples into memory and then play them back under MIDI con-

trol. With memory options that extend the IM-90's delay to 20 seconds per channel at 20 kHz bandwidth, this is a potent sampling tool.

Some limitations and design issues

It is possible, given sufficient time and effort, to develop software to create virtually any effect imaginable. Unfortunately, the hardware to realize these programs could get prohibitively expensive. Hardware limitations, then, become the limiting factor to a machine's capabilities. Space prohibits a detailed discussion of these limitations here, but it is worth pointing out one or two to give you the idea.

Now that digital audio has been advanced to the point where high quality 16-bit conversion is available at a reasonable price, conversion fidelity is not quite the problem it once was. The basic issues now are: speed, memory, flexibility, math accuracy, and the user control. Speed is crucial in these devices because all of the processing in a given program must be completed within one sample period. The length of the sample period, combined with the speed of the math processor, dictates how many steps can be in the processor's program, an average number being about 120. This is not a very long program, so several techniques



Publison Infernal Machine 90

are used to get the most out of these few steps.

The use of parallelism (several operations going on simultaneously) is crucial. Pipelining, wherein a multiplication is broken into several steps with interleaved processing of successive samples, is one method that is often used. Very long microinstruction words for the math processor, on the order of 30 or 40 bits, are also employed.

Accuracy of the math processor becomes an issue when trying to do sophisticated applications that call for high-order digital filters. Some units, like the 224X, provide for the capabil-

ity to operate in a mode which yields higher math precision than normal at the expense of some speed.

Quantity and speed of memory is another crucial point. A limited amount of memory means a limited amount of delay, and difficulty in obtaining effects like swept delays (as used in chorusing or flanging) which require fine resolution in delay time. Read and write access time becomes important when a memory must be accessed numerous times each sample period.

Flexibility encompasses a number of different factors, such as communication between the control processor



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and the math processor. For an effect like vocoding, the control processor must be able to look into the math processor in order to do the required amplitude detection. Some port or means of access between the two processors must be present to do that. In fact, the characteristics of the control processor play a large part in determining how much flexibility a designer has.

Last, but certainly not least, is user control. This is a major issue that has no single "right" solution. What kind of tactile controller is comfortable for a user? How much detailed control does a user need in a program? The

up to 50 delay taps; does a user need to be able to set the level and delay time of each tap individually? What kind of display is needed? Agnello agonized over these questions quite a bit during the 2016's design process, finally concluding that a well-designed program could intelligently combine a number of parameters into a few controls. The 2016 has one slider and a few buttons that perform all parameter manipulation through software redefinition of their functions.

Griesinger and Hall evolved the concept of paging, which is similar to the 2016's "soft" slider except that there were six parameters simultaneously

became clear, however, that with six "soft" controls more display was needed to adequately show their functions than the single three-character one on the original 224/224X control head. Thus, Lexicon released the LARC head for the 224X, but it was too costly and complex for the PCM70. The compromise was to use a small set of controls that were software-defined, but had some consistency of function: the soft knob to adjust parameters, the number keys to select factory presets or user memories, etc. The page concept, based on having six sliders, was converted to a row-and-column matrix.

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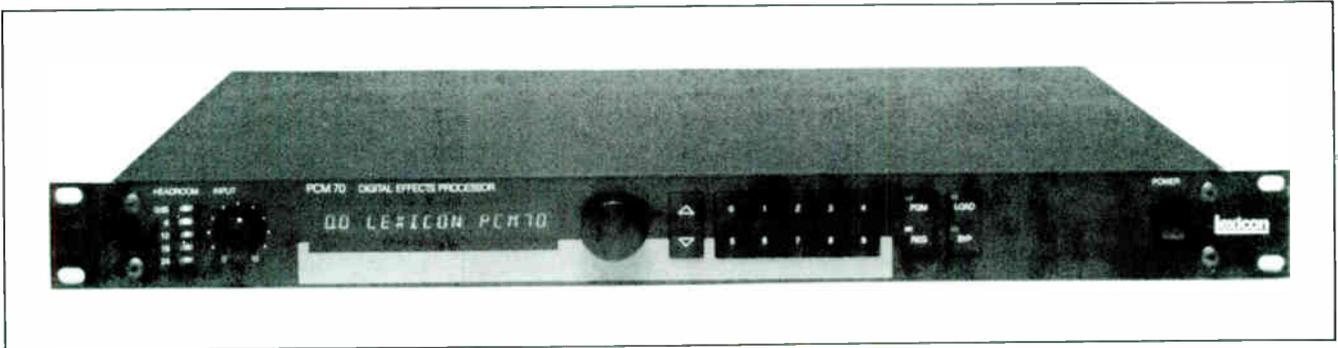
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"With the spread of more powerful processing hardware, we can expect to see more sophisticated applications."

An important new trend in processors is external control, typically through MIDI. Although a number of digital reverbs and delays offer MIDI, most only allow remote preset selection. The PCM70, however, has broken new ground by offering dynamic parameter control through MIDI. Lexicon very intelligently implemented this feature using standard MIDI controller codes, so that parameter manipulation can be performed from any MIDI instrument's controllers, and recorded into standard MIDI sequencers or synched to SMPTE (using a SMPTE-to-MIDI box). The possibilities of this approach are fantastic and exciting, to say the least. MIDI will soon be available for the 2016. A MIDI retrofit is even available for 224XLs, made by



Lexicon PCM70 Digital Effects Processor

Clarity, of Garrison, NY.

The IM-90 also offers MIDI with particular emphasis on MIDI control of sampled sounds. With the new multi-sampling option for the IM-90, this MIDI control feature will perhaps allow the IM-90 to replace yet one more piece of gear in studios: the sampling keyboard.

A look at the crystal ball

What is in the future for software-based effects processing? Bigger and better things, to be sure. In terms of products appearing soon, there are several to look forward to. DCS Audio

Products (of New York City) have announced a machine that will provide four channels of simultaneous processing that can be concatenated, allowing several effects to be put on one sound. Additionally, Alesis has shown a machine called the AI, which also looks very promising, as it has a powerful and fast hardware design.

In the longer run, it is likely that this kind of processing will begin to be rolled together with mixing functions into a workstation. Companies now making processors might switch to making OEM versions of their processors for consoles, or expand into making

the whole workstation, as Lexicon is doing. As more workstations appear, we may also see more effects companies that exclusively produce software for them.

With the spread of more powerful processing hardware, we can expect to see more sophisticated applications which have traditionally been available only on very large systems or out of real time. Perhaps some FFT-based effects like phase vocoding, or maybe sophisticated parametric equalization. Or possibly just a low-cholesterol, high-protein digital bean curd simulation. ■

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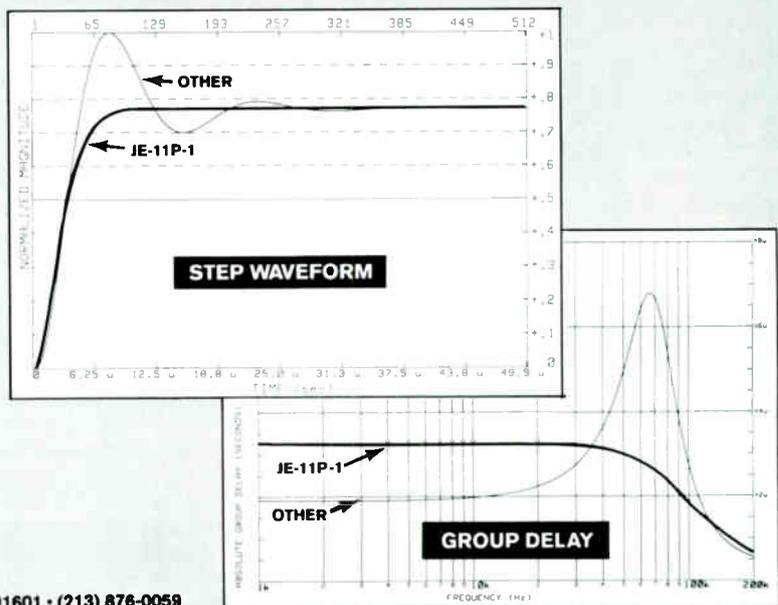
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ROBBIE ROBERTSON'S

MUSICAL VISIONS



by Mr. Bonzai

Remember the classic photo of The Band? Unlike most glossy shots of '60s groups, these five presented themselves as stonefaced mountain men makin' serious music. If any hippies staggered into their rustic Woodstock hideaway, well, there might be trouble waiting.

The first time I met Robbie Robertson was a fan's nightmare. Having become seriously festive at a studio party, I sidled up to introduce myself to him, thinking he was Bryan Ferry. Robertson was congenial, but as I collapsed into my embarrassed socks I despaired of ever lunching with this modern masterpiece maker.

A year later, my partner and I found ourselves seated next to Robertson, his wife and their son in a Santa Monica sushi bar. I asked Keiko to take a chance and reintroduce us—a bold move for a Japanese woman, but she has unusual spunk.

The night before this interview, Keiko and I had dinner with a photograph. Like Robert DeNiro's character in *The King of Comedy*, we yakked away with the cardboard Robbie, creating an image—warming up for the real thing. We reminisced about his days as lead guitarist and songwriter with The Band, chatted about his role as producer and his on-camera identity in *The Last Waltz*, and inquired about his writing, his film roles and his soundtracks.

Then we drove to Robertson's re-

coding studio/office to meet the man. An independent soul with curiosity and integrity, Robbie Robertson is an artist who lives well with his past and has a natural knack for revealing the evolving spirit of the individual in America. He has many stories to tell.

Bonzai: What's on the fire now?

Robertson: Well, a while back I came up with a story and then I wrote a bunch of songs based on it. I collaborated with a screenwriter, just to see if it was the right move. Now we've nailed down the way the story should be translated to film and we're closing a deal.

My plan was to write the songs, do a solo album, have a movie inspired by the album, and then have a soundtrack album—like a cast album—come out of the movie. It's a big project, with lots of different music. I have to cover producing, acting, writing the music and choosing the right musicians for the job. To make the album first makes sense to me—it's a very challenging project.

There's also a thing I'm working on with Godley and Creme, from a script written by Zalman King, someone I've worked with in the past. Godley and Creme are interested in the project as a transition from music video to feature films. It's an extremely imaginative, extraordinary vehicle, with music like nothing else around. The plan is for Trevor Horn and myself to put together the music for the film.

Bonzai: What makes the music so unusual?

Robertson: The time period that the story takes place in calls for a new acoustic attitude in music. The story is based on a surreal image of the last days of John Wesley Harding, just before he was killed. It's difficult to describe, but he is in a saloon where all kinds of people come through, with their music. There are Indians, early Mexican mariachi-type, Chinese, and Black people—an American melting pot of music. Harding is in the bar getting drunk,

knowing he is going to die. The music affects him, and we're treating that as part of the story. In a way, I see it as the early birth of rock and roll, where someone would say, "Take some of this," and "Don't do that," and "Mix it with this rhythm." The many types of music and sounds keep adding up in an evolutionary way to form something in the way rock and roll evolved. It's a powerful dramatic script, too.

Bonzai: Why did you set up shop here at the Village Recorder?

Robertson: Well, a year ago I decided I wanted a place to do my homework—a think tank and songwriting workshop. It's a technique that I feel more and more producers and artists will be using in the future. I got the idea from working in films, where you are provided with a facility to do your pre-production and work out ideas with the people you'll be utilizing on the project. I chose the Village because the people here are like family to me and provide me with the right environment—and my solitude. Besides being incredibly progressive and well-equipped, there's a great feeling at this studio because of the people working here.

Bonzai: Can you recall some of the early musical experiences that may have given a direction to your life?

Robertson: [long pause] I remember from a very early age the music that my mother was particularly interested in—something that came just after the Big Band era. She liked boogie-woogie. It sounds silly now, but at one time it was like outrageous pop music. One of the first things that affected me was the feel of boogie-woogie. It caught my attention.

I think my first direct contact with instruments and music came from my mother's Indian relatives. They all played something, and when the uncles and cousins visited, one guy played a mandolin and another played guitar, et cetera. They could all do

something—it had a country, folk music kind of flavor. When I saw them, I wanted to be able to do it too. What's the trick, I thought.

Then rock and roll came along and pushed another button. I learned to play a bit of guitar, and rock and roll became a fever. It wasn't a matter of choice anymore; it was, "This is all I know and this is all I understand. I don't know where I'm going, I don't know about jobs, I don't know how to go to school." I became obsessed.

Bonzai: Did you have a particular teacher?

Robertson: There were various people around—I took a little bit from one guy, a little bit from another. I was serious, and told people that I was leaving to go into music. The reaction was, "You'll end up working in the gas station down the street, so why even bother talking about it?" I couldn't understand why nobody was curious about what was on the other side of the hill, or why my dreams were so unimaginable to them.

I went on a personal mission to get good. I started writing songs, playing and stealing as much as I could from everything in reach. By the time I was 15, I wrote some songs that were recorded, and by 16, I was on the road professionally with Ronnie Hawkins and the Hawks, doing Alan Freed tours and playing at clubs all over the country, and at colleges, hanging out with Carl Perkins and Bo Diddley.

Bonzai: Sounds like you grew up fast.

Robertson: Yes, I guess I missed a segment of normal childhood. When I was about 20, I woke up one day and said, "Gee, I didn't get to go to the prom; I didn't get to do all the things that normal kids do." And then I became obsessed with reading. I had a thirst for education. From the age of 16, I had been on the road, going to bed at dawn. I didn't have much time to think about the new book on Hemingway that I had missed. Things built up into kind of a volcanic frustration, and then I couldn't stop reading.

Bonzai: Was this a foundation for screenwriting? Not many songwriters make that transition—

Robertson: It definitely affected me—I got infatuated with storytelling. Writing songs and writing screenplays have nothing to do with one another in my mind. It has to do with the kind of visuals you deal with in writing—whether they're expandable or not. All of a sudden it goes from being a little spot to being black and white, and then color, and the voices appear, and the sounds come and the language grows.

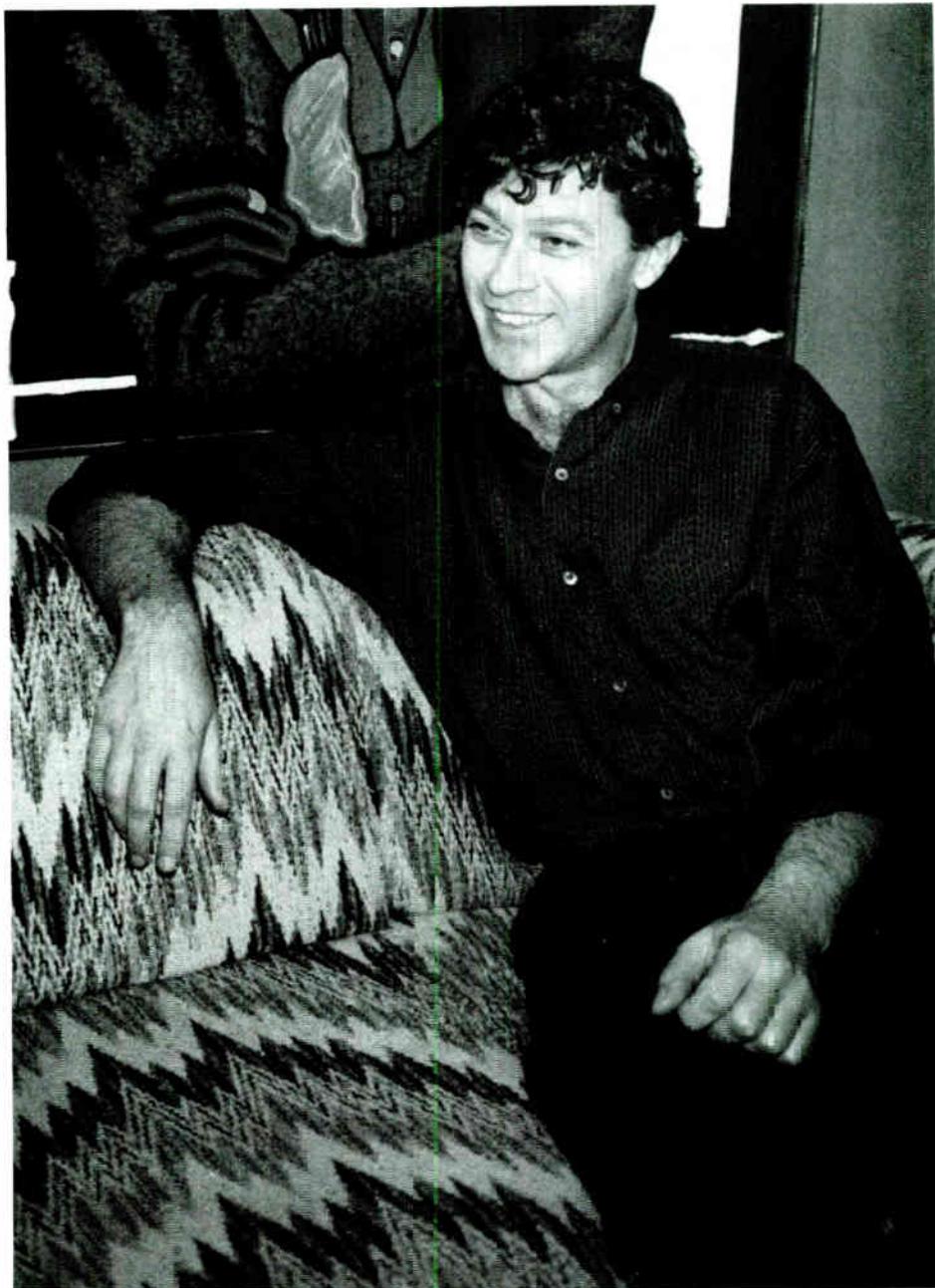


PHOTO: MR. BONZAI

Bonzai: What contribution did your mother and father make to the person you are today?

Robertson: That sounds like a genetic question. I am more aware of the surface. My mother was born and raised on an Indian reservation in Canada above Lake Erie. Her tribe was part of the Iroquois nation. When she was 18 years old she came to Toronto to live with an aunt. Her parents had died and I guess she had no reason to stay on the reservation. She wanted to step out into the world, and in Toronto she met my father.

He gambled for a living. He was kind of a hot shot in that period, the '40s. He was a Jewish guy, and it wasn't an unusual lifestyle. His father had gambled every day of his life, playing cards with the intellectuals. It was a

strange way of life. The mother did everything: she raised the kids and earned the money, and she taught the kids that they were very special in certain ways. She convinced my father and one of his brothers that they were gifted with memories greater than anyone had ever had.

This was just after the depression and she was in the bootlegging business. She had the kids do the deliveries, and they had to remember all the addresses—she wouldn't let them write anything down. My father had to use his memory. So when he was old enough to play cards, he didn't say, "I hope lady luck's with me today"—he played by memory, just a young kid dealing with mathematics. He did much better than people who were hoping for their number to come in.

He was doing very well, and he saw my mother as this young Hiawatha girl and said, "I've never seen anything like this before." Probably to a lot of people's dismay, they ended up together.

Bonzai: Jewish and Indian—a strange combination.

Robertson: Yes, it was embarrassing for a long time in my life. I would mention it and people would say it was the most ridiculous thing they'd ever heard.

Bonzai: Are they still living?

Robertson: My mother is. My real father was killed when I was two years old. I grew up with my stepfather, James Robertson, who actually raised me in my early childhood.

Bonzai: I remember reading a comment you once made about a character named "Cowboy Dan: he had a touch of danger in his shadow." You seem to have a dark side to your personality, almost a gypsy image. Why is that?

Robertson: It probably appeals to me. I like certain moods, like *film noir* images. I don't like it all just "dipsy-doodah-day." That's boring to me. When I was a kid, I liked powerful dramatic films much more than comedies. The drama stayed with me. I just forgot one thing and remembered the other.

Cowboy Dan Johnson was a guy that worked for Martin Scorsese and myself. One night he just died—bingo—it was shocking. We were working on *The King of Comedy*, and I wrote a song for him: "Between Trains." I just learned that someone is doing a special on the veterans of the Vietnam War and they want to use the song.

Bonzai: You worked with such diverse artists when you produced the soundtrack for *King of Comedy*—Van Morrison, B.B. King, Talking Heads, Rickie Lee Jones, The Pretenders. Why did you choose them?

Robertson: I tried to figure out what was really called for. The movie had nothing to do with their music, but the idea appealed to Martin. He didn't want music that sounded like it came from the *Tonight Show*—"Let's walk into the outside world and hear what people are actually listening to."

Bonzai: Did the experience make you want to produce a lot of diverse artists?

Robertson: It was appealing, but I just don't have the time. I'm deep in the water now with my album. I've been writing for a while, and the plan is to start recording in the spring. I'd start tomorrow, but the producer won't be free until then.

"I missed a segment of normal childhood.

By 16, I was on the road with Ronnie Hawkins and the Hawks, doing Alan Freed tours and playing at clubs all over the country."

Bonzai: So you're turning the producing over to someone else?

Robertson: Chris Hughes, a drummer from England. He produced the early Adam Ant records, and played drums. He produced a Tears for Fears album as well. I met with a whole bunch of guys, and he really struck me as the one who could handle what I'm thinking about. He's a musician, he's very talented, and I like him. He's the one who struck the bell for me.

Bonzai: When do you start shooting the film?

Robertson: I'd like to get my album done, then bingo—the film starts, and then we do the soundtrack. It's a music story—a dramatic film with music as an integral part, something that I've tried to make extremely realistic. It starts out focusing on one character and then develops into a story about two people. I will play one of these characters.

Bonzai: Is it autobiographical?

Robertson: No, it's not that kind of story. It's so hard to think of ideas that will work musically on film that aren't schmaltzy. Most musical films are not famous for their storylines. I have something that has some interesting drama, that works for me.

Bonzai: It looks like you have a very faint cross-shaped scar below your eye—

Robertson: It's from a tattoo that I started to make one time and then chickened out. (laughs)

Bonzai: You and your music have had a big effect in Japan, and Keiko was curious about your image in *The Last Waltz*. Her impressions come from a different culture, but she sees you as one of the major figures of the '60s—a person who is depended on by those of us who were so affected by your music.

Keiko: You said in the film, "I got tired." You looked thin; you looked like you were running away from your music life. Now you look very relaxed, like a child. What makes your heart quiet?

Robertson: An interesting, soulful observation. You see, there was an anxiousness getting out of that thing and getting to where I am now. It's like shedding an old skin. You have to do something, move in a direction that you feel good about. For me, it took a long time to shed that skin and to get over the emotional attachment with periods and people—not that you ever really get over it. You become more relaxed with the changes. You realize that something was great and that you're no longer involved in the turbulence. You can look at it, instead of just feeling it.

For me, it wasn't as easy as I thought it would be. I just thought that I could change channels. It wasn't like suffering through something and saying, "Oh, god, I'm getting out of this and getting it out of my system." It was very clean, but it put me in a fog. I had to see my way through it before I felt aggressive about doing anything. I always felt capable, but I didn't have the edge. I didn't have the feeling that has always made me do things—"This is gonna work, this is gonna be special, this is gonna be hard and powerful." I felt competent, but I didn't have the fire.

Some time passed and all of a sudden I got angry. I felt aggressive in my gut. I felt like getting on the train and blowing out a lot of smoke, and breaking some glasses and some rules. You mention the '60s—the music really meant something and was effective in people's lives. I have to feel that way or my work is not going to do anything for anybody.

Bonzai: Do you have a long-range plan for your life?

Robertson: I start making long-range plans whenever I'm not deeply involved with what I'm doing. Maybe with a little more maturity I'll be able to make long-range plans. I guess I'm not mature enough to say in 20 years I'd like to be playing Las Vegas with Billy Joel (laughs). I'll probably always have this hunger to write and perform music and create stories and films and produce. It's kind of a natural link in

my life, but I don't know if there's a long-range plan.

Bonzai: Do you stay in touch with Bob Dylan?

Robertson: I haven't talked with him in a long time. We were very close for a long time, but there's stuff that he needs to do and there's stuff that I need to do.

Bonzai: How about The Band?

Robertson: We talk from time to time, but it's not comfortable for me now to pull up to these red lights of the past. We talk, but we don't spend a lot of time together—and it's not because of any loss of love or appreciation. I appreciate them very dearly and will never forget, and I'm sure we're not done with each other.

Keiko: How do you like Japan?

Robertson: I like it a lot. The people there were fabulous to me. I had no idea that anybody would even know what I had done—but they know details about me that I couldn't possibly remember. I happen to be a big fan of Kitaro, a Japanese musician—just got six of his albums.

Keiko: He lives in the mountains. He cuts noisy things in a quiet place.

Robertson: He strikes me as a spiritual guy, and his music is beautiful to me. I think I envy someone who says, "I'm going to the mountains, I'll probably make a lot of money, I'm going to do exactly what I want and don't bother me." It works—nobody bothers him; he does amazing things, and he gets away with it. Very admirable.

You know, there's a record store in Tokyo—best record store in the world. I was looking for an album for a couple of years, *The Immortal Otis Redding*, and finally I met someone who said they could find it for me. It's a Japanese pressing and it came from this record store. It seems a little indecent that we have to go to Japan to get an album by Otis Redding.

The Japanese have a fascinating mentality. The Samurai make me think of the American Indians—dealing with vengeance and honor. After the Indians, what honor do we have here? They had such a feeling for the land, and they had it all to themselves. The Indians were fools for honor, and they lost because everything was so honorable to them. And the serenity and peace and spiritualism died with them. I think the sensibility is directly related to the Orient. When I went to Japan, it made me think of the honor of the Indians. But the Japanese have learned to move it into progress. They figured out how to keep it so that it still works for them. ■

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by Linda Jacobson

Okay, music trivia fans—what do these tunes have in common?

- the catchy, silly pop songs “Mother-In-Law” and “Ooh Poo Pah Doo”
- “Java,” the instrumental that brought fame to trumpeter Al Hirt
- “Whipped Cream,” the Herb Alpert cut that became the theme song of TV’s *Dating Game*
- Glen Campbell’s rendition of country/pop tune “Southern Nights”
- Dr. John’s funky “Right Place, Wrong Time”
- Labelle’s disco come-on, “Lady Marmalade”

Answer? Each one was produced, written, and/or arranged by a multifaceted performer who’s helped keep alive the sound of New Orleans, influencing the development and trends of pop, R&B, and reggae... Allen Toussaint.

This Crescent City native was playing professionally in the clubs and studios before he reached 20. Now 47, Toussaint has composed over 600 pop, R&B, and country titles, which have been recorded or performed by a wide range of artists—the Pointer Sisters, Rolling Stones, Manhattan Transfer, Otis Redding, The Band, and Devo—to name just a few.

Toussaint’s first cuts as producer can be found on New Orleans-based Minit Records, 1960 vintage, but his production career didn’t take off until one of his credits, Lee Dorsey singing “Ya Ya,” reached a #7 chart position. Since then, Allen has worked with dozens of renowned musicians—and as many different styles—from Dr. John to Etta James, Joe Cocker to Nona Hendryx, John Mayall to Thin Lizzy.

New Orleans’ first 24-track studio opened in 1973, and it’s the only one where Allen works: the highly-acclaimed, very homey Sea-Saint Studios, where president/chief producer

—PAGE 46

The “Saint” of Crescent City: ALLEN TOUSSAINT

PHOTO: LINDA JACOBSON

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“These days, sessions are so expensive and time is of the essence, so many times the sessions aren’t just as outright fun as they used to be.”

—FROM PAGE 44, TOUSSAINT

is Toussaint, vice-president is his long-time partner, studio co-founder Marshall Sehorn, and first engineer is Allen’s son Clarence (who’s known as Reggie).

Sea-Saint has played recording host to Art and Aaron Neville, New Edition, Ramsey Lewis, Paul McCartney & Wings (the LP *Venus & Mars*), Jean Knight (the LP *My Toot Toot*), plus scores of other national and local artists, from classical to rock, signed and unsigned. Film soundtracks are handled too—23-year-old Reggie, who made his way up from studio gofer to house engineer, did the audio dubbing on Clint Eastwood’s movie *Tightrope*.

Sea-Saint recordings originate from one large studio and control room, where Reggie’s work focuses on a 32-in and -out Harrison console, Linn-Drums and the Emulator II, and lots of digital processing gear, limiters, reverberators, and synthesizers. Studio VP Marshall Sehorn says that they intend to build a digital recording room in the not-so-distant future; Reggie can’t wait to get his hands on a 32-track DASH machine. Right now he uses Studer A-80 and pre-Sony MCI recorders in his father’s productions, which these days involve much jingle-writing and audio-overdubbing for national TV and radio commercials.

The Toussaint tour itinerary is busi-

er than ever, Allen having recently discovered a “new-found enjoyment of the live audience.” He’s writing, performing, and recording theme tunes for non-profit organizations, including the SPCA and United Way; he makes appearances as pianist for just about any community program that asks him. Last fall, Allen directed 50 New Orleans musicians in a Sea-Saint recording of a new song he produced and arranged, “Give Today for Tomorrow.” Profits go to help the African hungry and homeless. In ’85, Allen also completed an album of his own (self-produced), which was mixed down at Sea-Saint in late November.

As a producer, Toussaint’s trademarks are a distinctive balance of spare rhythms, intricacy, a good beat, and memorable hook lines. Horns frequently punctuate the lyric rather than keeping up a steady rocking flow—similar to the way he talks, hands and arms punctuating each thought. Serious, soft-spoken, given to exclaiming “heavens!” when surprised, Allen recently discussed with *Mix* his humanist approach to production, New Orleans music, and what changes he’s seen in himself and in the recording industry over the past quarter-century.

Mix: How do you define the New Orleans sound?

Toussaint: Our music here is strongly influenced by the spirit of Mardi Gras and that type of freedom, the strut that goes with that looseness. It’s still tied to the street parade feeling, not as strongly as it used to be. But there’s always an undercurrent of that second-line beat. As sophisticated as we grow, there’s still an underlying feeling there—we used to call it “ism.”

We held on to the more authentic sound of instruments a bit longer than some other genres. We used the piano much longer than many other areas of the country that went to electronic keyboards. We held onto the upright bass after everyone had moved onto the electric bass. Things like that. Traditional sounds.

Mix: Your recent projects have featured a lot of synthesizer and drum machine sounds, keyboards—not the traditional acoustic sounds.

Toussaint: We’re into the other keyboards nowadays. Love ‘em. I’d love to have a Fairlight—you can live without it, but you’d rather live with it. I like the DX7 because it’s so accessible, everything is a fingertip away. I like the Prophet 10 still, even though it’s an old analog machine, but you can modify such small increments, use knobs as opposed to just buttons.

Mix: So are you working with syn-

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thesizers, rather than other people and acoustic instruments, for your string, horn, and percussion sounds?

Toussaint: Lately, yes. For the last year-and-a-half I've been using the synthesizer a lot. But I've been using it for the *sound* of the synthesizer itself, rather than for making string sounds out of the synthesizer. Synthesizers are full of effects, modulations that you can do to the sound and waves, total portamento—and for piano players that's just lovely, because we were never able to get it in portamento before. With pianos, you can't squeeze the strings. But with synthesizers, we can go to the moon and back.

Mix: Speaking of high technology, both Marshall and Reggie said that you plan to go to digital recording in the next year.

Toussaint: They care more about that than I do; it doesn't matter to me. They can take as long as they like to get digital recording. That process of how quiet things are in the back—we run at 30 ips, and that's pretty quiet. Beyond that, it's for someone who, when they listen, they listen to scrutinize how technically quiet it is. That's not how I listen, I listen to hear how good the music is.

[As he picks an air guitar, Allen explains that the producer's key to recording good music is knowing how to play the diplomat.] You've got to bring out the best of everyone involved at one time. That takes a lot of doing, but when it does happen, the magic happens. What matters is that you bring out the groove. Be in tune. Full of spirit, full of feeling.

If it comes to dimming the lights, I'll do it. To keep a good feeling in the studio is important. Sometimes you may have to reinforce someone's self-esteem that seems to have fallen short. If they feel they're just so-so, even if it's just today, you must not allow that to continue. You must make them feel terrific. Because they probably are.

Mix: Technology may have changed in the 25 years you've been producing, but people haven't...

Toussaint: I didn't know some of these things that long ago. I used to plan how the music was supposed to go, and when someone would make a mistake, I had an "Oh, how could you?" attitude. And if they made a mistake twice, it was "Off with their head!" I had an attitude of reprimand if someone would not do it as well as I thought it should be done. I was just concerned about saving the music. I didn't know that if you save the person, then you save the music.

I wasn't open-minded about things that I hadn't pre-planned, but I lived



Sea-Saint, the 24-track recording studio run by Allen Toussaint and Marshall Sehorn in New Orleans.

PHOTO: LINDA JACOBSON

dap, having a good time, standing up with their handkerchieves and waving... and you could hear some of that, you could feel something special was going on. That used to happen more with the unit session than it does these days. These days, with the multi-track, sessions are so expensive and time is of the essence, so many times the sessions aren't just as outright *fun* as they used to be. But it's still good, in fact with the equipment we have these days, these are the best recording days ever.

Mix: With all your tools—equipment and technique—what part of producing do you find tough?

Toussaint: I don't accept any of it as "tough." The most important part of producing is the responsibility that you accept for hits and misses. You must be willing to accept the responsibility for misses, and not just excuse yourself every time there's a miss that it was the lack of promotion... I think we must always be soul-searching, evaluating our work—because when someone comes to you to be recorded, or someone's sent to you, they want a hit. They have put that part of their career in your hands, you owe them the very best you can conjure up from your entire life up to that moment. ■

to learn that many of the things in a recording session that were little mistakes many years ago, now are little blessings.

Mix: So you've changed as much as the music industry has.

Toussaint: Oh, there have been major changes in music, of course. I must say that many recording sessions in the old days were better, because things were looser. When a guy was soloing in the old days, the other guys would stand up and snap their fingers, quietly, and when the guy was through soloing, while we were recording the musicians would be giving each other



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Unsung Genius of the Electronics Industry

A.D. Blumlein



by David Huber

On June 7th, 1942, British electronics suffered a cruel blow when a small party of top engineers perished in a light airplane crash during wartime. They had been testing a prototype of airborne radar H2S in flight when their aircraft crashed on landing; there were no survivors. Among those killed were G.S. Hensby, Sqdn. Ldr. R.J. Sanson, Pilot Officer C.E. Vincent, C.O. Brown, F. Blythen and Alan Dower Blumlein.

Of course the crash was kept quiet. British radar techniques, far in advance of those of the axis powers, had been one of the foremost factors in saving Britain during the dark days of 1940. It was essential to keep up the pace of development and stop any suggestion of a setback from reaching enemy intelligence. So only the bare fact of Blumlein's death was announced, with no detail at all.

This article is a delayed obituary of Blumlein, but it really is more than that, for the passage of over 40 years

allows us to place this remarkable man and his accomplishments in a better perspective. There may be a few readers who are familiar with his work and honor his memory, but there are far too many who have heard little or nothing about this man who has had a profound effect upon many of the early developments in telephone transmission, audio, television and radar. This is partly due to the fact that he seldom published in trade journals and partly because of his strong preference for staying out of the public eye; he usually refused to be photographed.

In order to fully appreciate the range of his contributions, we must refer to his patents, of which just a few of the 128 total are listed in Table I. There can be little doubt, in retrospect, that the electrical and sound profession should reserve a place of honor for A.D. Blumlein.

Telephone Engineering

At the age of 20 in 1924, shortly after taking his degree, Blumlein joined

International Western Electric and began his career by working on interference and development tests for inter-city telephone lines in continental Europe. At the time, he was reported to be occasionally rude, displaying little patience for those who, for personal reasons, would not put in the same long hours as he. Over the course of time, however, he lost some of his aggressiveness and acquired a certain amount of tact.

In September of 1926, he was placed in charge of a group to find a remedy for crosstalk in telephone loading coils. In accurately showing how this problem might be overcome, he invented a new type of AC bridge for use as an investigation tool—one which still enjoys a wide variety of applications today.

Gramophone Recording

In 1929, Isaac Shoenberg, general manager of the Columbia Gramophone Co. (shortly to become a part of the large EMI concern), was looking for an engineer to redesign its recording system, at the same time that Blumlein was searching for a new job position. This redesign was needed to circumvent a Western Electric disk cutting patent, under which heavy royalties were being levied on every record sold.

Upon accepting this new post, he met with the first of a number of engineers and scientists with whom he would collaborate in later years. The new disk recording system developed by this team was an outstanding success. It differed from the old system in that instead of employing heavy mechanical damping to eliminate the main resonances in the cutting head, it had reduced it to manageable proportions by means of electromagnetic

Some Blumlein Patents

350954, March 1930

362477, July 1930

369063, May 1931

394325, December 1931

425553, September 1933

429054, February 1934

446661, August 1934

449533, October 1934

456444, February 1935

579154, March 1940

Cutting head for gramophone recording, mechanical arrangement of moving parts. Constant impedance variable attenuation network.

Moving-coil microphone, with electromagnetic damping of main resonance. Stereophonic recording and reproduction.

Negative-feedback power amplifier. Stereophonic sound, two channels obtained from sum and difference outputs of pressure and velocity microphone.

An important patent for the Emitron television camera.

Deflection coil yoke for cathode-ray tube. Arrays of microphones with outputs mixed to give various polar diagrams.

Radar with continuous transmission switched between two frequencies (the return echo of frequency A is heterodyned with frequency B at the receiver over a period which depends on the delay of the echo).

damping and then compensated for what remained by electrical filters.

About this time, he became highly interested in stereophonic (he called it "binaural") sound and went on to evolve the first complete theory of two-channel sound reproduction using loudspeakers. Blumlein believed that a major factor in the location of a sound source in stereo was in the time of arrival at the two ears for low frequencies and in the intensity differences for higher frequencies (the basis of most modern stereo systems).

In extending further his application of this phase/amplitude combination, he developed a complex lateral and vertical method for cutting two channels of sound onto a single record groove through rotation of the cutting plane by 45°. This method has gone on to form the basis of the universally adopted 45/45 stereo groove system.

In 1931, Blumlein filed the historic British Patent No. 394, 325, listing 70 claims over 22 pages, covering two-channel stereo for disk recording and motion pictures. When the Audio Engineering Society devoted an issue of its journal to stereophony in 1958, it published his main patent on the 45/45 stereo modulated groove in full, stating in an editorial note that—"It is of historic importance in the development of stereophony. . ."

Blumlein's contributions to audio were not only limited to improvements in disk recording, but also included improvements in stereo miking techniques, both in X-Y and M-S modes. His crossed figure-eight stereo arrangement was employed by Decca London in the '50s to produce recordings with outstanding results, even by today's standards. He was also instrumental in the practical development of the moving coil microphone, as well as in studies which led to the derived microphone polar patterns of our day. In testimonial, the Journal of the Audio Engineering Society additionally stated: "Blumlein described almost everything about stereophony long before the time was ripe, much to the 'annoyance' of those who were [later] there, when things could be realized."

If this were not enough, in the 1930s, Blumlein turned his research towards the development of television, which led to many improvements relating to the television camera and transmission.

Clearly, Alan Dower Blumlein made a lasting impression upon modern communications. This man, who "was a perfectionist in everything, [and for whom] no detail was too small. . ." would have desired no better a memorial than to have his designs embodied, not in paper or a report, but in a successful piece of working equipment. And that has come to pass. ■



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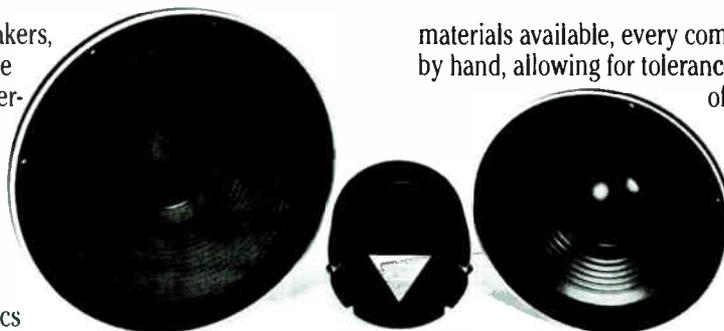
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SOUND ON STAGE

by Mike Stande

Catch a Rising Star

M.D. SYSTEMS AND FREDDIE JACKSON

In the rough-and-tumble entertainment business, a new performer has to have something special to be noticed in the crowd of aspiring stars. The same is true in the competitive concert sound business: it takes more than a sound system to become successful. An aspiring new sound company, like a new recording artist, has to look for a gap in the marketplace, and then try to fill it.

One of last year's surprise success stories was Freddie Jackson. This young R & B singer has such a distinctive voice that his debut album (*Rock Me Tonight*) went platinum soon after its release in 1985. Jackson, once a background vocalist for Melba Moore's



PHOTO: BRIAN HAGIWARA

(Right) Freddie Jackson and (below) M.D. Systems owner, John McBride



PHOTO: MIKE STANDE

show, toured throughout 1985 with Moore and recently began contemplating headline appearances to support his successful LP.

M.D. Systems is one of the many regional sound reinforcement companies hired to provide concert audio services for Moore's and Jackson's 1985 shows. The artist's management noticed a marked improvement in the show's sound when passing through Wichita, Kansas, where M.D. Systems is based. A quick decision was made to hire one of the sound company's engineers to mix the show, and soon equipment was being rented. Almost overnight, M.D. Systems was being considered for an entire string of West Coast dates, with a longer tour in the works.

"We knew it was only a matter of time until someone noticed us out here," noted M.D. Systems owner John

McBride of Wichita. "We have what is probably the most advanced concert sound system in this part of the country, but the touring business that originates in Kansas is very limited. We have been focusing on regional one-nighters for a wide variety of acts, including Three Dog Night, the Happy Together tour featuring the Turtles, and many others. National touring is where we are headed."

McBride, the sole proprietor of M.D. Systems, took out a \$6,000 loan five years ago to start building a basic system after deciding that his job as a chemist was not as exciting as live sound. "I put together a couple of club rental systems, and started learning what it takes to make things sound good," recalls McBride.

"By 1984, I had a large concert system that was unequalled in this state. Since then, we have been making



A Tecron TEF System 10 analyzer helped design MD Systems' JBL vocal monitors. Two E-140 woofers are coupled with a 2385 horn and 2445 driver.

constant improvements. Doing shows for a talented artist like Freddie Jackson is just what we have been preparing for."

In addition to smaller bobtail trucks used to transport club systems and band gear for regional acts, M.D. Systems recently invested in a diesel semi truck with a 40-foot drop frame electronics van. "Geographically speaking, it has been difficult to build the business," explained McBride. "However, our high standards of quality, our reputation for excellent service, and our ability to supply whatever equipment might be needed for a show, even if it means obtaining Gamble or Midas consoles, have made us grow rapidly."

McBride and his associates realized that their initial choice of electronics and loudspeaker components would make or break the company's efforts. "Finding out what works best, and staying on top of the latest audio technology, is very important when you are staking everything you own on a concert system," McBride counsels. "We compared a variety of different loudspeakers with the help of Brock Jabara, an electrical engineer with Superior Sound here in Wichita. With the help of Brock's TEF System 10 computerized measuring system, we were able to quickly see how different components compared with each other. Using our ears as well as the test gear helped us reach decisions about transducer selection and cabinet design."

McBride chose to go with an interesting hybrid system that is based on direct-radiating vented enclosures loaded with JBL 2240H 18-inch speakers. Community Light & Sound's M-4 large-diameter drivers carry the mid-

range frequencies. JBL 2445J compression drivers mounted on Constant Directivity flat-front horns complete the package.

"We feel that each M-4 unit replaces at least eight 12-inch speakers," McBride says. "We started by designing a double 18-inch bass box that has a 3dB-down point of 35Hz. Our crossover points are set at 315Hz and 989Hz on Sundholm model 402 crossovers. The M-4's are extremely efficient, and reduce the overall bulk of the speaker system."

Carver's magnetic-field power amplifiers were chosen to push the new speaker system. Packaged four to a rack, the 21-pound units are very compact. "We modified the input sensitivity to best suit our needs," explains McBride. "We have measured 525 watts at 8 ohms using music program material."

Stage monitor cabinets, also developed with the help of the TEF System 10, come in various shapes and sizes. The standard front-line vocal monitor houses a pair of 15-inch JBL E-140 loudspeakers and a JBL 2445 driver mounted on a 2385 60 by 40 horn.

"With stage monitors, we always try to imagine what is more than we need to do the job," states McBride. "Extra cabinets, heavy-duty drum fill enclosures with 18-inch speakers, and a real time analyzer at the monitor mix position are all part of what we carry to every show."

The company's main concert system features a Pulsar mixing console with a 48-input mainframe. Compressor-limiters from dbx, White filter sets, a Sundholm electronic crossover and a custom line-driver system featuring Deane Jensen transformers complete the front end signal path. The Rane

CD48 crossover alignment delay is used to optimize the time relationship of the mid and high frequency passbands with the low frequencies.

"Steve Hogan with Deane Jensen transformers has been most helpful in assisting us with the design of a line driver system," McBride says. "This simple circuit provides input and output balancing, using a 990B op amp. It enables us to drive the system to full capacity down more than 200-feet of multi-pair cable without signal loss."

After working a regional one-nighter with Freddie Jackson, M.D. Systems engineer Greg Delancey was chosen to travel with the group as house mixer. "Freddie's show is really dynamic," enthuses Delancey. "For a new artist, he is really a professional."

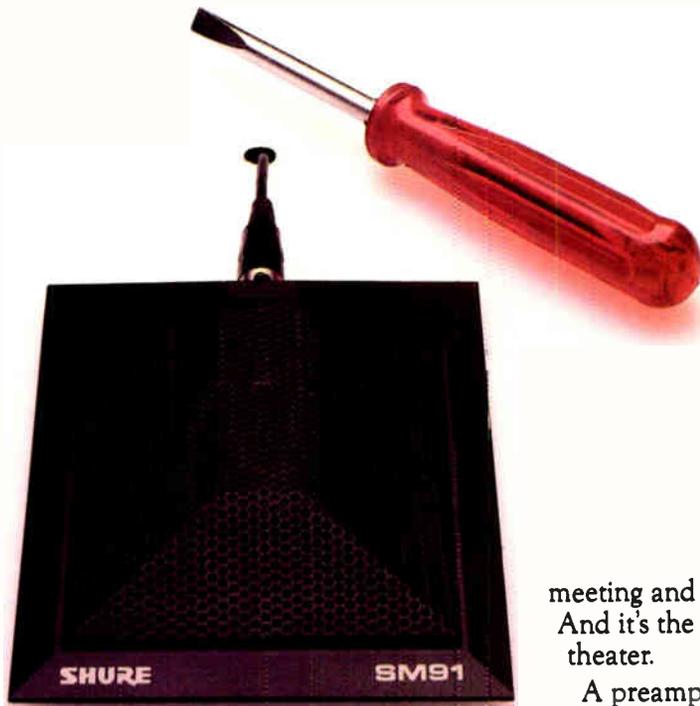
After working several shows with Jackson, Delancey had M.D. Systems fly out an electronics rack loaded with several favorite signal processing devices to meet him on the road, including a Harmonizer 949H, Ursa Major Star Gate digital reverb device, and a Lexicon 200. "It has been very interesting to be out on the road using a variety of other sound companies," notes Delancey. "Every system is different in each city. Sometimes it's great, and sometimes it's really bad. Getting our own system out here for each concert will make a big difference in the show's consistency."

For a new artist to be able to afford the luxury of carrying a full sound and lighting production package, the dollars have to be there. That means either shows that are guaranteed to be profitable due to a successful chart-topping record, or tour support funding from the record company. The days of record label financial support for touring are now history for the most part.

When a new act does start selling out headline shows, a touring sound system is one of the first things on the shopping list. Few acts enjoy the prospect of relying on "pickup" sound in different parts of the country. Typically, a touring act goes with a sound system—and sound crew—that they are already familiar with from good efforts in the past.

If Freddie Jackson continues his meteoric rise, chances are good that audiences who have already picked up on this entertainer's talent will be able to say that they caught a rising star. Chances are also good that M.D. Systems will be piling up speaker stacks at many of those shows. Some of the nation's busiest and most prestigious concert sound companies began in just the same way: being in the right place at the right time with a certain sound that an up-and-coming artist needed on stage each night. ■

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BREAKING SOUND BARRIERS

by Bruce Nazarian

This month, as promised, we'll take a look at some of the more advanced SMPTE synchronizing techniques. Using SMPTE for MIDI synchronization opens up many new techniques not previously possible.

especially if you're overdubbing one track at a time. Having the ability to specify the time code OFFSET value for the start of clock generation means that to advance or retard the "feel" of any particular track, you need only advance or retard the offset point at which the clock box starts running.

value frame by frame until we lock the bass part right on the beat. Since one frame of time code (at 30 fps) is about 33 ms, this is probably too much time shift to solve this problem. We'll need the sub-frame editing accuracy that our clock box gives us. In this case, we are using a Roland SBX-80 Sync Box to control the sequencers. The SBX allows us to divide each frame down into 80 "bits" (numbered 0 through 79... it's a computer, remember?). Our original offset was 01:00:00:00, so first we'll try backing up the offset point by one frame, to 00:59:59:29. (Zero hours, 59 minutes, 59 seconds, 29 frames). With "bits" now in the display, we have possible values ranging from 00:59:59:29:00 to 00:59:59:29:79. Somewhere in this range our bass part should lock right in the pocket. In some other case, the required offset may be more than one frame, but the sub-frame calculation is basically the same: retard the offset until you are ahead of the beat, then add back the sub-frames, or bits until it locks. Believe me, this works every time! One small note: once you have calculated this offset, log it on the track sheet for future use. You should have already logged the original offset point, as well as the tempo programmed into the clock box. If you are already ahead of the beat, just reverse this technique to push back the offset value, and the sequencers will start a little bit later than originally programmed.

—PAGE 56

THE SMPTE-MIDI CONNECTION

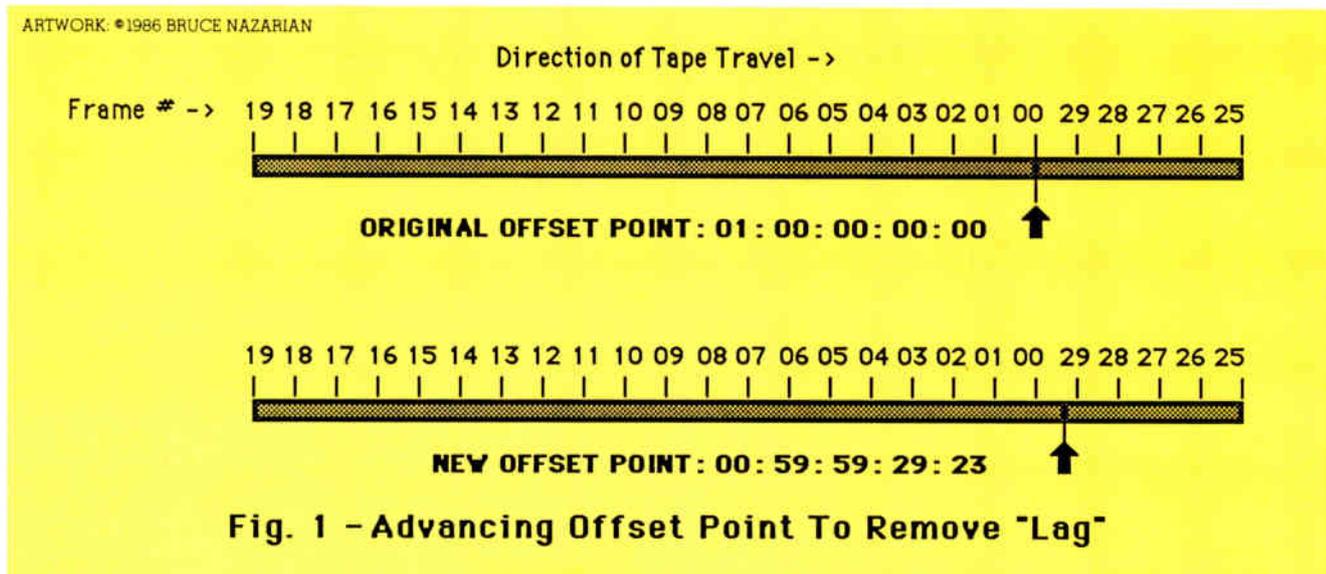
PART-3

Solving Sequencer Lag and Lead

One of the biggest problems that has plagued sequencer users in the past has been processor delay. Processor delay is that gremlin that makes one sequencer run fast, while one runs a little slow. In past issues, we've shown you several ways to get around these problems, none of which are extremely elegant solutions. SMPTE makes processor delay an easy problem to solve,

(Fig. 1) Let me give you a more specific example:

Assume we have a drum track already laid down on tape, but for some reason the bass part sounds like it is playing a bit "late." What we need to do is find a way to "time shift" the bass part forward. The easiest way to do this is to start the sequencer just a tiny bit sooner than it was originally programmed. (This part gets tricky, so stay with me.) What we'll need to do is back up our offset





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Record/Function switches for each track allow effortless, one-button punch-ins. Input Enable allows instant talkback during rewinds. With the MS-16, you're free to concentrate on the project at hand... rather than on your tape machine.

The MS-16 takes the grief out of locking up with other audio and video machines as well. The 38-pin standard SMPTE/EBU interface affords speedy, single-cable connection with most popular synchronizers and editing systems. And the MS-16's new Omega Drive transport stands up to continual shuttling while handling tape with kid-glove kindness.

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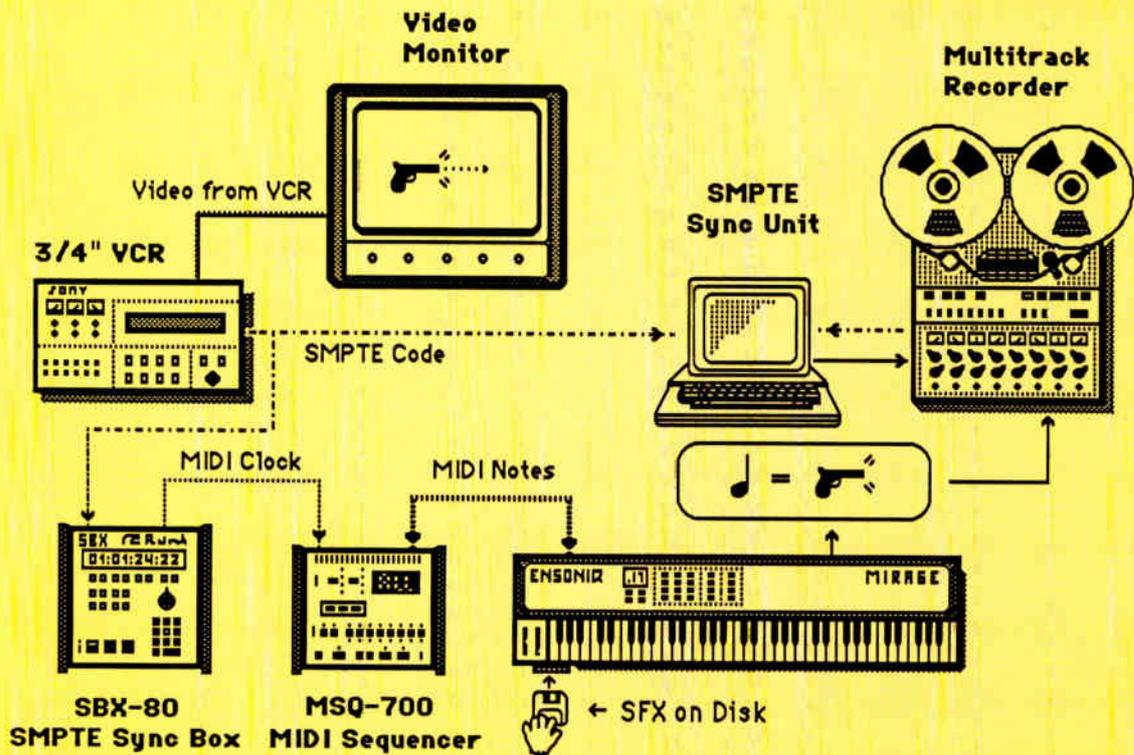


Fig. 2 - Digitized Sound Effects/Video Sync System

—FROM PAGE 54, IN-SYNC

Tempo Swing

One of the nicest things that you can hear from a client is "Gee, that track really feels great!" It's nice to be able to capture a human feel in a computer-generated track. Tempo swing is one more SMPTE technique that can help in getting that feel.

Programmers who have analyzed a lot of drum tracks know that there is a certain, almost imperceptible "shift" in the rhythmic flow of a human drummer as he plays through a song. Choruses may drive a little harder than verses, and the bridge of a song may "lay back" a little more than either the verse or chorus. With a unit like the SBX-80, and the capability of programming the tempo for each beat of each bar, programmers finally have a clock box that is clever enough to duplicate the natural swing of a human drummer. Try experimenting with "dragging" the backbeats (2s and 4s) on the snare track and see how it lays back the feel of the track. It's easily enough done. Just edit the tempo program at the proper measures to slow down the first and third beats by one or two BPM. This should add some extra "air" before 2 and 4, pulling the groove back a little. Don't forget that you will have to speed up some other beats by a like amount to avoid inducing a cumulative timing error that will even-

tually throw off the whole track. If you do create a track with a timing map that is anything other than straight bars of identical tempo, make sure you save it (on cassette if it's an SBX-80) or make a writer record of the tempo changes, preferably stored with the track sheet. It's all too easy to forget what tempo you were clocking while you were in the heat of the session.

A Digital Effects System

If you're one of those people who smacks their lips at the thought of owning and using a Fairlight CMI or Synclavier to synchronize sound effects to time code, but you don't have the cash to swing it, there's hope! Using one of the many affordable MIDI-interfaced digital sampling units (Mirage, Kurzweil, Emulator II, or Akai sampler), a MIDI sequencer and our trusty clock box, you have the basis of a digital sound effects system, capable of synchronizing sound effects for video with sub-frame accuracy. (Fig. 2 shows the system.) It's pretty easy to use, too. Simply find the appropriate sound effect in your existing effects library, sample it into your MIDI-driven sampler, then program the MIDI sequencer to play the key that generates the sound effect you want. Set the clock box offset to coincide with the desired "hit" point from the picture, feed the clock box the SMPTE from your video-

tape, and WHAM! Instant sound effects! I have used this system on numerous occasions to create frame-accurate sound effect "hits" for industrial videos and commercials, and it really speeds things up. If you have a unit with a lengthy sample time (like the Emulator II's 17 seconds of sample memory) you can even sample the required background music and lay it in place without ever having to lay it off to 2-track tape and fly it back in. As in any of these applications, the only limitation to what you can do is what you can think up to do!

A Side Note...

I am sure that there are probably hundreds of interesting tips and techniques that many of our "In Sync" readers have developed. If you'd like to share an interesting solution to a sticky problem, or just some common sense, pass 'em along! Feel free to write to me, in care of *Mix* magazine. As the cards and letters roll in, I'll include the best tips in each month's *Mix*.

Multi-track Magic

Next month, we'll explore some ways in which SMPTE and sequencers can be used to effectively double the number of tracks you have available on your multi-track recorder. Don't miss it. ■

 Roland

Reverb, truly realized. Consider this: assemble every conceivable parameter of natural and plate reverberation, incorporate the possibilities of non-linear (gated) reverberation, augment these with a parametric equalizer, use a 16-bit A/D/A converter and a 28-bit parallel-operation signal processor. Put all of that under computer control for one-button convenience, and complete the picture with MIDI control for (no button) convenience. Roland has not only considered these ideas, we have realized them, in the SRV-2000 MIDI Digital Reverb. Roland Corp. US, 7200 Dominion Circle, Los Angeles, CA 90040.

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Introducing the Tapeless

No Tape to Wind... I

Recently, at the AES Convention in October, New England Digital made history by premiering the first tapeless recording system.

Using a combination of 16-bit polyphonic voice samples, FM synthesized timbres, and "live" instruments and vocals recorded direct-to-disk, a complete multi-track recording was made. In other words, the functionality of a modern studio at a fraction of the cost, and **it's all digital!**

The Direct-to-Disk™ multi-track system provides a non-tape contiguous recording medium, fully expandable from four to sixteen tracks, featuring full 96 dB signal-to-noise ratio.

Depending on the size and number of hard disk (80 and 140 megabyte Winchester) drives per system, each track will record a minimum of ten minutes to a maximum of *one full hour!*

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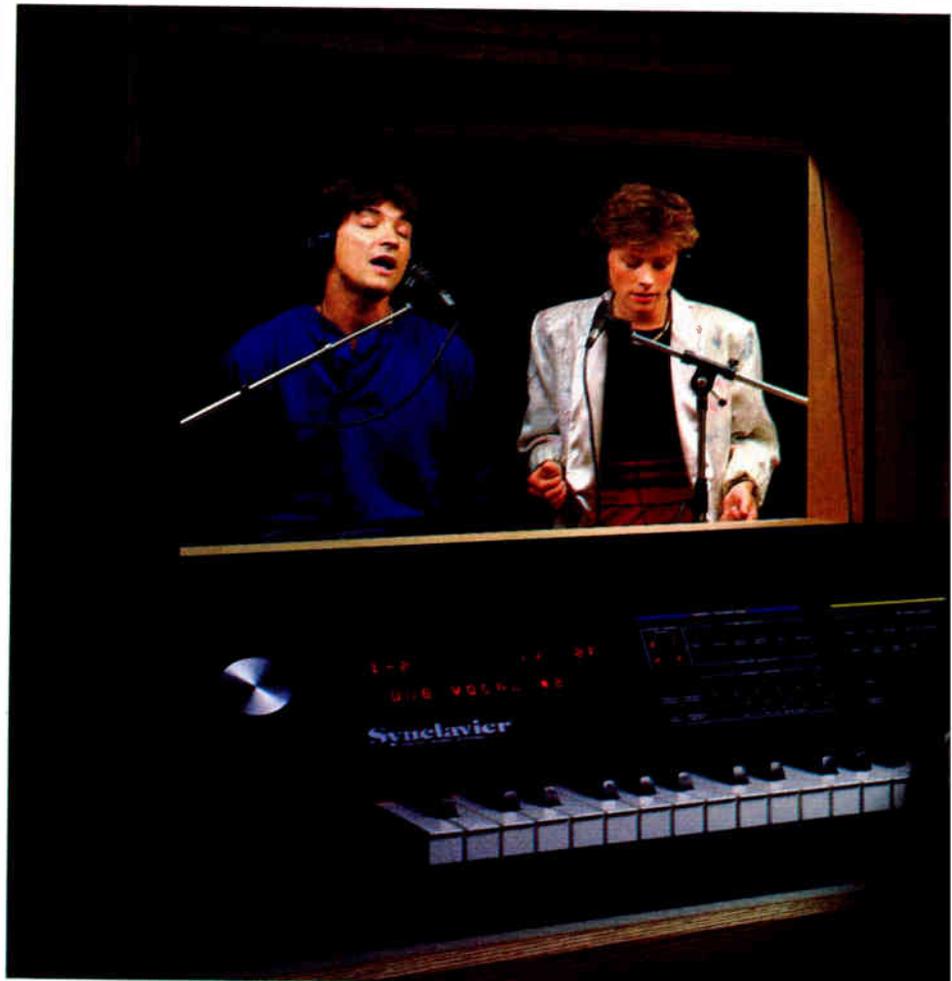
Initial system software features will offer *variable length cross fade splicing, automatic punch-in, fast-forward, and SMPTE-based editing.*

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- **Polyphonic Sampling** - The first 16-bit polyphonic sampling system is still the best. The system can support up to 32 fully polyphonic voices and 32 megabytes of RAM. The polyphonic option offers 96 dB signal-to-noise ratio and a sampling rate of up to 100 kHz.
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If you're interested in relaxing in your home or studio and learning the basics of the Synclavier system, you can now purchase three video cassettes which guide you through its basic features and operations. Send your check for \$175 per set of three (not sold separately). Complete printed documentation is also available for \$200 for each set of manuals.

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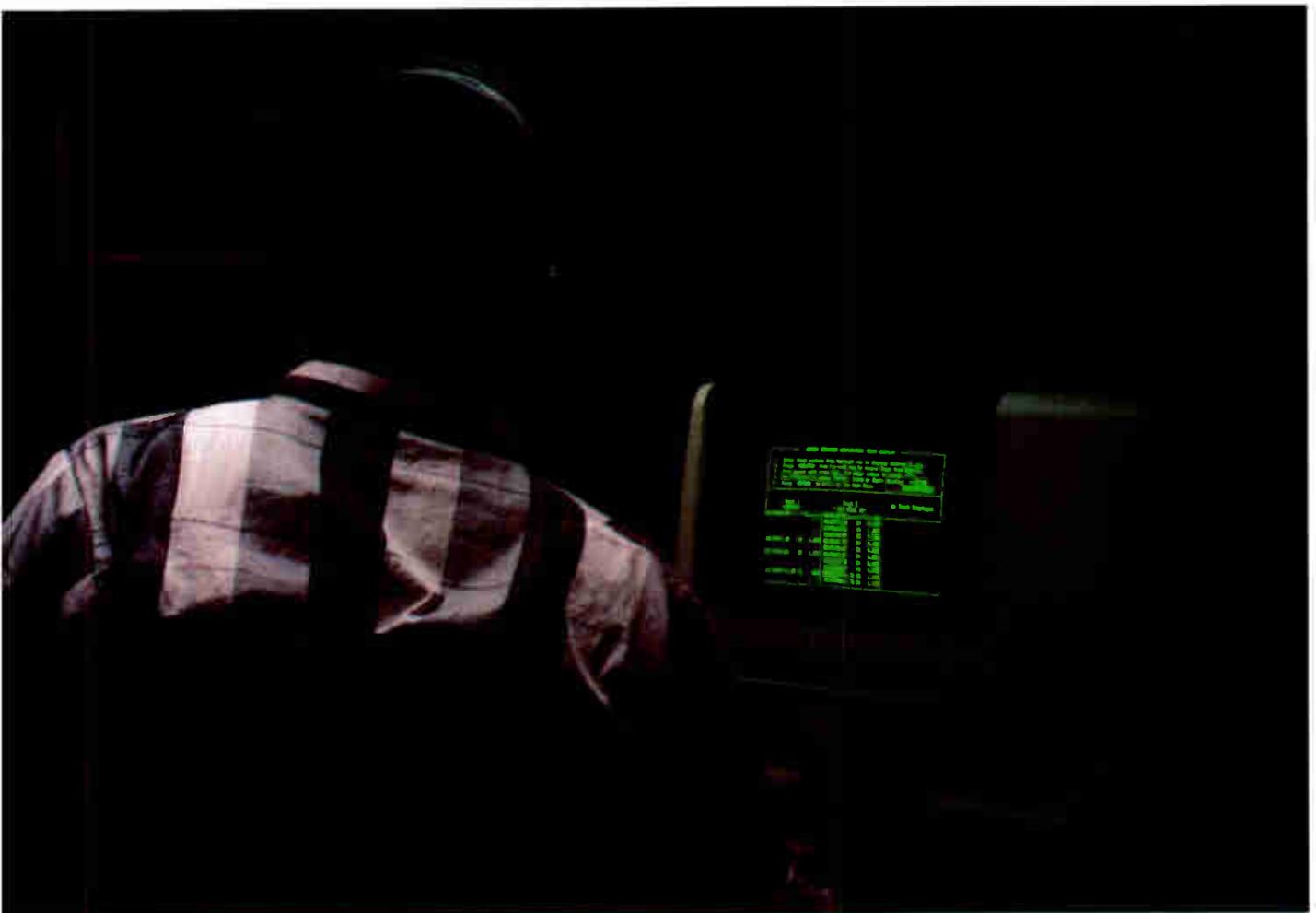
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—FROM PAGE 26, MAYFAIR

1610's enhanced error correction, John doesn't see much difference between them in terms of quality. "The main advantage is editing on the 1610," he says. Whichever is used—1610 costs clients more to hire than the 3324s—they earn their keep not only for the familiar 12-inch single stretch, but as a backing track master for future vocal remixes.

"Most clients who book a remix are primarily concerned with the vocals," says John, "and to have a master of the backing mix saves us all a lot of time." Although the Total Recall and mix automation on the SSLs would assist the process of remixing from scratch, this wouldn't take account of the configuration and set-positions of Mayfair's extensive range of outboard equipment.

Synchronization is, of course, at the heart of video dubbing, and there are important lessons to be learned in this increasingly relevant area. One is that if, for instance, a normal analog multi-track is being mixed to digital cassette (for eventual layback onto the VT master's edgetracks), then simply copying SMPTE timecode across at the same time won't work, because it has no relation to the framing on the PCM machine. The answer is to pre-stripe or timecode the digital cassette and then slave the analog to this during the mix.

The final, and perhaps most far-reaching studio link, is between timecode and MIDI (Musical Instrument Digital Interface). Although Mayfair has not gone the way of other studios by buying a complete range of MIDI instruments, Mayfair has bought the ubiquitous SRC Friend Chip to hook into external MIDI systems.

"Musical instruments go in and out of fashion, so although we've got a Yamaha DX7, we basically leave instrumentation up to the client," says John. "Fortunately, there are two hire shops within 200 yards so we can get things quickly." This even applies to a drum machine at present, which many studios already count among their standard equipment. But John has nevertheless had his Bosendorfer grand fitted with velocity-sensitive MIDI sensors which, as a brief playback from multi-track demonstrated, can produce an interesting effect when used to trigger a MIDI instrument like the DX7. As far as that goes, which is a long way yet, Mayfair's Yamaha REV7 also raises the possibility of reverb effects controlled via MIDI from a client program.

Other outboards include the obligatory Quantec Room Simulator, a trusted LA2A Teletronix compressor which "you can't buy now," and a similarly revered rack of ten Amek EQ channels, which date back to the old Amek desk that was once in Studio 1 but has now been retired to work with young songs in the Studio 3 demo room. "I prefer them to the SSL EQs," says John, adding that he often uses them to side-chain the dynamics included on the SSL channels.

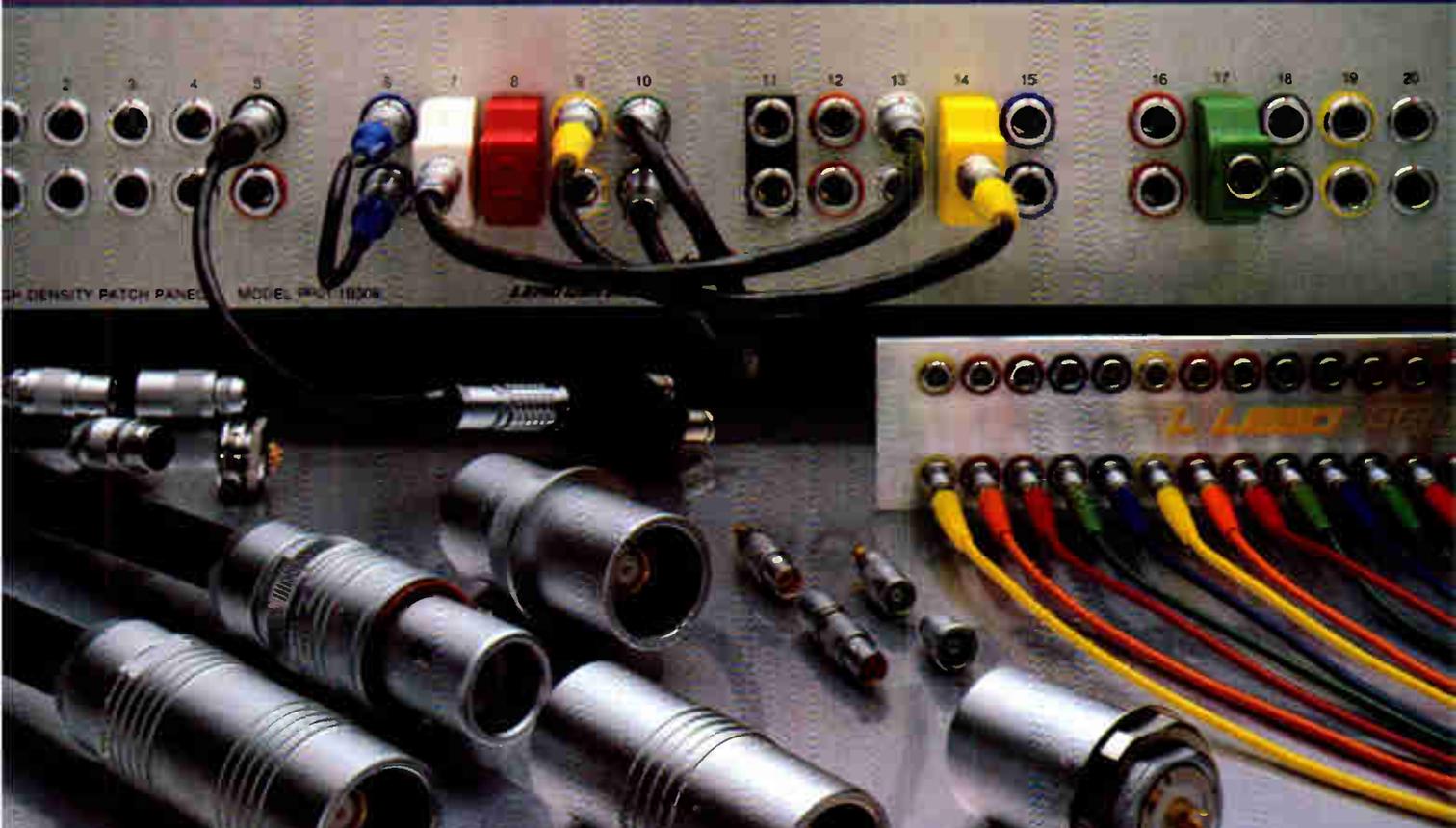
John's philosophy is that, since the company exists solely to provide a recording service, staff training is vitally important. He prefers not to employ people from other studios because of the risk of ingrained bad habits, and "the tape ops here are properly taught to become assistant engineers.

"When times were hard, some studios cut back on staff and didn't bother properly training those they had," he says. "Consequently, there's a sort of middle level of staff who were made redundant and now call themselves 'freelance engineers,' when they don't really know what they're doing. We sometimes see them in here." How do the record companies or producers get taken in? "Some of them are desperate, and some of them don't know any better.

"In any event, our people have to be very diplomatic, even to the point of quietly turning up a fader the freelance engineer has forgotten or never knew about in the first place. You can't say, 'You're gating track seven's side-chain with timecode, you dummy' or something like that. We always have a qualified engineer available on every session, and as he sits on the left of the desk, the assistant engineer not only controls the autolocate and synchronizer, but has a duplicate SSL computer control panel too."

So what of the future? "We've been looking at a site in Tahiti for some time now," says Australian-born Kate, "and it could be happening soon. It's a beautiful island out there and we're convinced it would make an ideal recording location. Everything's very different, it really is another world. I remember the first time we went there I forgot that when you say to somebody that you like something of theirs, like a necklace or whatever, their first reaction is to give it to you." Interesting. "I really like your SSL 6048E series console John," I hinted. Alas, my ploy failed miserably. But not without a smile from this likeable couple. ■

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World Radio History

“As the Disk Turns”

by Craig Anderton

This month's column opens with a public service announcement for Mirage owners. Those with instruments prior to serial number 14731 can upgrade to the specs of the updated Mirage (including about 12 dB better signal-to-noise ratio) by having an Update Kit installed at any authorized Ensoniq Repair Station. The cost, which includes a new EPROM and operating system diskette, is \$19.95 plus installation.

Speaking of updates, if you want some new drum sounds for your Oberheim DMX, DX, LinnDrum, Linn 9000, JLC Soundchest, SCI Drumtraks, and Simmons SDS-7/SDS-1 drum computers (with E-mu SP-12 sounds due soon), check out Drumware's latest chips. A demo tape is available for \$4.00 (refundable with purchase) from Drumware, 12077 Wilshire Blvd., Suite 515, Los Angeles, CA 90025.

So much for updates—let's get on to the latest installment of my favorite soap opera, *As the Disk Turns*. Recent developments have been interesting; Commodore has sold over 60,000 Amigas, which means that corporate expectations have been met—despite the dearth of software. Atari is expanding into mass market distribution, so eventually a 520ST computer and monitor could end up costing somewhere in the under-\$600 range. With a claimed installed base of over 100,000 users, built-in MIDI port, and music software promised in time for the Winter NAMM show, we could have a real winner here for musicians on a budget. Commodore, which continues to take the high road and emphasize the sheer

computing horsepower of the Amiga, will strike back with a rack-mount model for musicians. Meanwhile, Apple—which went through its own traumas in 1985—will be introducing a color Macintosh with 1 Megabyte of memory and a double-sided, faster, quieter disk drive. Yet perhaps of even more importance is the rapidly declining price of hard disk drives for the Mac; I've heard of 20 Megabyte models due out soon for under \$1,000. Meanwhile, IBM-compatible software continues to pick up steam due to the continuing price erosion of PC compatible systems.

I realize I talk about computers a lot in this column, so my apologies if you're up to here with the latest news about who has what software and what updates are planned. But the concept of computers being the "wave of the future" in music is no hype: I'd have to go back to the multi-track tape recorder to think of a more universally-applicable musical device. If you don't have a computer now, you surely will before too long.

The industry's other main squeeze, sampling, has a good shot at becoming the dominant form of synthesis in 1986, surpassing analog synthesis and possibly even FM in popularity. The reasons are simple enough: decreasing costs, increasing choices, and hit singles/albums that use sampled sounds. Some more reasons: Sequential's rack-mount Prophet-2000, Ensoniq's rack-mount Mirage, E-mu's Emulator II, with hard disc, Akai's Super-Sampler, and whatever Casio, Roland, Korg, and (maybe) Yamaha will be introducing to us within the next few weeks. Also, Digidesign's Sound Designer program for the Macintosh, which greatly simplifies the programming of sampling instruments, will soon be available for the Prophet-2000 (\$495) and Mirage (\$395). These versions are similar to Digidesign's Sound Designer program for the Emulator II and include such features as crossfade looping and digital EQ. With sampling programs available for the Apple, Amiga, Commodore-64, and Macintosh, sampling is going to be everywhere. Now, all we need are some people with the vision to use it creatively. . . . where's the next generation of Trevor Horns?

Also expect guitar synthesis to really come into its own soon. Octave-Plateau's controller should be shipping

by the time you read this, but they and SynthAxe are not the only company who have decided to forego pitch-to-voltage conversion as the way to match guitarists to the rest of the world. The Photon pickup system uses an infra-red light pickup to convert the string frequency, with 16-bit accuracy, into MIDI data. It also uses a new interface designed specifically for stringed instruments called M-Net. M-Net is claimed to be 16 times faster than MIDI, has 96 instead of 16 available channels, and uses SMPTE as its standard time code. I haven't seen one yet, but you can bet I'll be first in line at NAMM.

Ibanez has gone guitar-MIDI with a splash, introducing not only a guitar controller but also the DUE400 multi-effects processor (compressor, fuzz, echo, and flanger/chorus) with 128 MIDI-accessible patch locations. And . . . you can control the DUE400, and your other MIDI gear that responds to program changes, with the MIU8 splitter and IFC60 intelligent foot controller (these are conceptually similar to the Peavey footswitches that send out MIDI program select data). Finally, the EPP-400 MIDI-controlled effects switching system is a great idea. It provides five effects loops (three in stereo) and 128 programmable preset locations controlling loop on/off and loop sequence. All I can say is—it's about time! Guitarists have suffered long enough with overpriced, manufacturer-specific switching systems. MIDI opens up the potential for signal processors to be seamlessly integrated into the mainstream of your act, without undue attention or fuss. . . . and I'm ready. The concept of being able to synchronize sound changes to a particular drum riff or sequence sure beats the idea of having to stomp on footswitches all the time. It also means that guitarists who favor wireless won't have to constantly return to "home base" when they change sounds.

Next week, it's off to the Winter 1986 NAMM show. I'm predicting that this convention will more than make up for the listless June 1985 show; expect to see the start of a major turnaround in the music industry as computers change from a novelty item to a way of life. Just remember. . . metal strings and the piano used to be high technology once, and now we take them for granted. Computers will become just as second-nature to the musician, perhaps even sooner than we think. ■



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There's always been more than a touch of country in the Nitty Gritty Dirt Band's sound, but for most of their 20-year career they've duked it out in the pop arena.

The beats have grown heavier, the tech's gotten higher, the haircuts have gotten sillier, and these days the Hot 100 isn't too receptive to clear harmonies, unadulterated guitar sounds, plain-spoken songs, and (gasp) banjos and fiddles.

So the Dirt Band (as they still call themselves even though they're the Nitty Gritty Dirt Band when formally introduced) has lit out for the sunnier reaches of country—a territory that for this revitalized outfit includes frequent excursions to the very top of the charts. *Twenty Years of Dirt: The Best of the Nitty Gritty Dirt Band*, due out in April on Warner Bros. Records, shows the strong thread of American string-band music that runs through the NGDB's entire career, irrespective of changing pop styles.

"A lot of the same people that were listening to us 15, 20 years ago are now listening to country radio," says bassist/songwriter/vocalist Jimmy Ibbotson, "because rock radio is a little confusing to them. They're old hippies, and once you give a hippie an acre of land, he'll vote for Reagan and listen to country music," he adds with a laugh.

Despite the shift in category, guitarist/songwriter/vocalist Hanna says, "Nothing's really changed that much. The only thing I miss is playing to more people. However," he adds with a smile, "the last couple of years we were a pop band we played to a lot fewer people than we're playing to now."

Things didn't always look so rosy. Around the start of this decade, in fact, the NGDB had just about run out of gas. The early '70s popularity of country-rock had bitten the dust. Ibbotson, whose boundless energy had been the focal point of many a performance, had been out of the group for several years. They'd shortened their name in a failed effort to freshen up their image. They hadn't had a radio hit since "Mr. Bojangles" in 1970, and they hadn't scored big in the LP department since 1972's landmark country album, *Will the Circle Be Unbroken*.

"We went through a real slack period between about '73 and '80, working on the strength of 'Mr. Bojangles' for a while," Hanna admits. "There'd been a few minor hits. We gave it our best shot lots of times. After *Will the Circle Be Unbroken*, we put out a live album which did well, but then we put our hearts and souls into an album called *Dream* and it stiffed quite badly. Then

THE NITTY GRITTY DIRT BAND "RETURNS" TO THE COUNTRY

by Moira McCormick and David Gans



PHOTO: ALAN MESSER

Left to Right: John McEuen, Jeff Hanna, Jimmy Ibbotson, Jimmie Fadden, and Bob Carpenter.

we made another album that stiffed. We didn't have anything people really related to, unless they were real solid Dirt Band fans."

Bored and going through the motions, Hanna recalls band members "feeling like, 'This is a joke.' It was a better way to make a living than the alternatives, but it wasn't a whole lot of fun."

Their luck appeared to turn in 1980, when two singles from *An American Dream*—Rodney Crowell's title song and "Make a Little Magic"—hit the Top 40, with "Dream" going as high as #13. Both singles also hit the country charts—without promotion, says Hanna, "because at that time, our record company did not see fit to really service country radio with our records."

Courting the pop market obviously wasn't the way for these spiritual sons of Nashville to go, and it became apparent that some major changes were

called for. The band's longtime manager, Bill McEuen (brother of multi-instrumentalist John), had been focusing his energies more and more on his stable of promising young comedians, so the Dirt Band went with Chuck Morris of Denver's Feyline Productions. "He felt we could fit right in with contemporary country music," says Ibbotson, "so he sent us to Nashville to record with Norbert Putnam, Jimmy Buffett's producer.

"We went there with the idea of getting a Nashville producer and getting everything right for country radio," adds Ibbotson, but "the first thing Putnam said to us when we went to work with him was, 'You guys aren't gonna get played on country radio.'"

Putnam had the Dirt Band record another pop album—"except for one cut called 'Dance Little Jean' that he hated and didn't overproduce," says

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Ibbotson. "And that one turned out to be a Top Ten country song. So we knew we *did* have country potential, and we are definitely going after that side of the dial now."

"One of the things that's pitched at us a lot these days is, 'Gee, you guys have "gone country" '—which is hilarious, because there's bluegrass on the very first, antique Nitty Gritty Dirt Band album [released in 1968]," notes Hanna.

Ibbotson says the Dirt Band has been welcomed with open arms by the country community, a marked change from the somewhat "antagonistic" attitudes leveled at them in the early '70s when that long-haired "rock and roll" band recorded *Will the Circle Be Unbroken*, a three-record tribute to country and bluegrass music featuring some of the greatest living American musicians—Mother Maybelle Carter, Earl Scruggs, Doc Watson, Roy Acuff, Merle Travis, Jimmy Martin, and others. "Roy Acuff, for instance, was really scared that we were gonna change his sound or ask him to do something distasteful, or that we were going to have Communists around the studio," Ibbotson recalls. "But as it turned out, we were all interested in one thing: crisp, clean recordings of great songs.

"I think that was when we broke through the barrier—the 'Corn Curtain,' " he smiles.

The Dirt Band's commitment to country was finally given the appropriate voice by Nashville producers Paul Worley and Marshall Morgan on *Plain Dirt Fashion*, released in 1983. It was their first effort for Warner Bros. Records, after a career-long relationship with a company that had gone through myriad changes of name, ownership and management. "We had done 16 years at United Artists/Liberty/Capitol-EMI—in the neighborhood of seven record company presidents," Hanna explains. "We thought at some point they were just gonna get a velcro strip for the parking spaces."

Every new label president inherited the Dirt Band. "Except for a couple of guys—Al Bennett, who signed us originally, Bud Dane, and Artie Mogull, who re-signed us for our last deal, I think—none of the others had the enthusiasm for us that goes along with signing an act," Hanna adds. "So with Ibbotson back in the band, a new manager, booking agent and record company, it was new-new-new!"

Plain Dirt Fashion actually began as a Liberty project, but "Capitol admitted that being our last album, it might just sit there," Hanna explains. "Warner Bros. was quite enthusiastic because of 'Shot Full of Love' and 'Dance Little Jean' [both from 1983's *Let's Go*] so by mutual agreement of

the two labels, we got a transfusion into our 'new' career about a year early."

The album yielded a trio of chart-topping country hits, including Rodney Crowell's "Long Hard Road (A

Sharecropper's Dream)," which hit #1.

"For the first time, we know what our market is," says Ibbotson. "It's a really relaxing feeling to go to bed at night and not have to worry that some-



Marshall Morgan (L) and Paul Worley

Behind the Board for the Dirt Band:

Paul Worley & Marshall Morgan

by Robyn Flans

The Nitty Gritty Dirt Band joined forces with Paul Worley and Marshall Morgan in 1983 to remix "Dance Little Jean," the second single from the album *Let's Go*. The track was "Marshallized," says band member Jeff Hanna, "meaning he went for more acoustic instruments and a little purer approach to the vocals." Specifics of production aside, the move couldn't have been a better one for the Nitty Gritty Dirt Band; their two Worley/Morgan-produced albums have earned the band a comfortable niche in country music.

"Dance Little Jean" hit number 9 on the charts, and Worley and Morgan were then asked to record the band's Christmas single, "Colorado Christmas." "We did it in about two days," Worley recalls. "The music was so effortless and magical that we were all amazed. They thought

we were geniuses, and we thought they were geniuses. We all thought we were *all* geniuses" Worley, Morgan and the Dirt Band now have two albums under their belts, two number one singles ("Long Hard Road" and "Modern Day Romance") and several more that have hit the Top Ten.

"We were looking for someone different after recording with Norbert Putnam and Richard Landis [*Let's Go*]," explains John McEuen. "They're both great producers, but we wanted somebody who was a little more into country than either of those guys is. We wanted to get into a situation with some guys who were a little lesser known, maybe a little hungrier, and more like our peers."

"Paul and Marshall are like two guys in the Dirt Band, but they're objective," adds Jeff Hanna. "Paul's a great musician and Marshall's a brilliant engineer; they both have really good taste, and they coached us through some really good performances, instrumentally and vocally."

"People automatically assume that Marshall does all the engineering and is responsible for the sound and that I do all the music and am responsible for the licks," says Worley. "It's not true. We both understand the whole business of making records, so there are times when

—PAGE 70

body's going to say the song you're writing is 'too country.' "

Part and parcel of the "return" to country is an escape from the gigantism of rock tours. "Back in the mid-'70s, we actually had, at one point, a bus and a semi full of gear," Hanna notes. "We carried our own PA, and

Ibby and I had these huge Peavey stacks behind us that weren't even turned on. I had five or six guitars, a guitar roadie, the whole nine yards.

"It's partly for economic reasons that we don't carry more equipment, although we have learned that we don't need it. Sometimes it's hard to play

acoustic and electric guitar through the same amp, but we do manage with what we have."

Ibbotson adds, "It's done a lot for the family feeling of the tour. All eight or nine of us, depending on whether we have a merchandiser along, are under the same roof. We go every-

Partners, Brothers, Friends— and Parents

A Musician Wrestles with Road Realities

John McEuen, the good-natured multi-stringsman of the Nitty Gritty Dirt Band, was in the bar of the Oakland Holiday Inn a few minutes before last call, chatting with a couple of visitors. He mentioned being hungry, and when a man that thin says he wants to eat he ought to be allowed to eat.

The options were slim. McEuen chose Denny's over Jack-in-the-Box, since the latter would have neither bran muffins nor raisin bran. McEuen excused himself to stash his

banjo and garment bag in his room.

Some minutes later, the bar closed and we moved to the lobby. McEuen arrived after another moderately lengthy interval, decidedly less talkative and looking considerably more tired than he had a few minutes before. We headed for Denny's, three uneasy people trying to make small talk and killing time with largely unsuccessful jokes about the menu.

Half an hour later, still not served and still not served and still not served—though our menus had been folded in front of us for some time—the hostess seated another party at the table next to ours and turned away from us without so much as a "be right with you." We left.

Jack-in-the-Box still not a valid option, McEuen suggested a 24-hour market we'd passed on the way. At least they'd have fruit juice

and cereal. He picked up a few things and we headed back to the Holiday Inn, somewhat more relaxed by our shared ordeal.

Then we noticed a police car in front of the coffee shop in the hotel next door, and cops sitting in a booth. Open for business!

Here, fed at last, McEuen opened up a little. I had given up the idea of a taped interview when we first hit Denny's—John just didn't seem in the mood. But here, over raisin bran with a side of toast and Constant Comment tea, he was pleasant, funny, and forthcoming.

McEuen had made a phone call to his family in Colorado. He was trying to decide whether he could go home for a few hours the next day while the band was en route from Oakland to Dallas. "We change planes in Denver, you see, and... I could at least put the kids to bed."

This was September, and the tour was scheduled to run through October. McEuen had been on the road since May. The band had ten days off a few weeks before, but McEuen had spent nine of them in Nashville starting his solo album. "Kay says she feels like a single mother," he said.

"When I left on this trip, I remember saying to [one of his six children], 'This is an important one, because Mommy's going to be gone some of the time, too. You know what to do'—laundry and stuff—but he gave me that look and I knew what it meant. It said, 'What is it?' and he started to cry.

"But Daddy, I don't want you to go away," he said.

"Like it's my choice," said McEuen with a sigh of resignation. This is a loving parent who makes his living as a traveling musician. One gets the feeling sometimes he'd rather be a homebody, just for a while.

The road takes its toll, and sometimes the road follows you home. McEuen recalled taking his family to a pancake house near his home and running into Willie Nelson. "He was off the road for three days—he didn't know I knew that, but I knew—and here he was in the *pancake house*, gettin' a cup of coffee."

—D.G.

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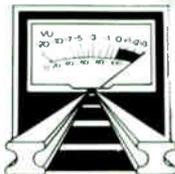
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where together."

"By and large, country music is a whole lot less formulated and fickle," Hanna continues. "Guys like George Strait and Ricky Skaggs do real well with traditional acoustic stuff... It doesn't have to be a big production number to work."

The "family feeling" couldn't be stronger today, as evidenced by the title track of *Partners, Brothers and Friends*. The factors that drove Ibbotson out of the band in 1976 have rearranged themselves to everyone's satisfaction. "I thought my writing was more important than anything else, and I wanted to get out and record my own songs," he recalls. "Well, I got a chance to cut a couple albums on my own, and nobody heard them. Nothing happened; I couldn't do a thing without my buddies."

"There are functions we perform in each other's careers that we didn't even know existed. I just went out and fell flat on my face without 'em."

Ibbotson does feel his solo stint helped sharpen his performing skills in addition to giving him a perspective on the business that had been sorely lacking. "I got in the Dirt Band pretty easy," he notes, "and I thought everything was easy. In fact, it's a lot of hard work. I didn't have perseverance

in the studio; I'd think I was finished recording and walk out of the studio hoping the producers would take care of everything. Well, it doesn't work that way. And there are aspects of marketing and business that I had no idea had to be taken care of. I couldn't keep a band together; I kept going bankrupt, losing PAs and trucks—I was a mess.

"I was starting to draw crowds in Aspen, though, and John McEuen and Jeff Hanna individually started coming in to visit and sit down with me to harmonize or play along, and we remembered that we enjoyed that a lot. They got together and thought, 'Well, if Ibbotson's not such a jerk anymore, we could use him onstage.'"

Ibbotson and Hanna still play at a small bar in Aspen between tours—"Just for fun and pin money and keepin' our chops together," says Hanna. "We can do just about anything we want. We've been doin' 'Cadillac Ranch' for a couple of years, along with a song of Jimmy's called 'High Horse.' We tried 'em out for the ski bums and they went over real well, so when we reached the six- or seven-song juncture on the album, we gave our producers a little concert in the studio and they loved those songs." That's how The Boss's tune ended up

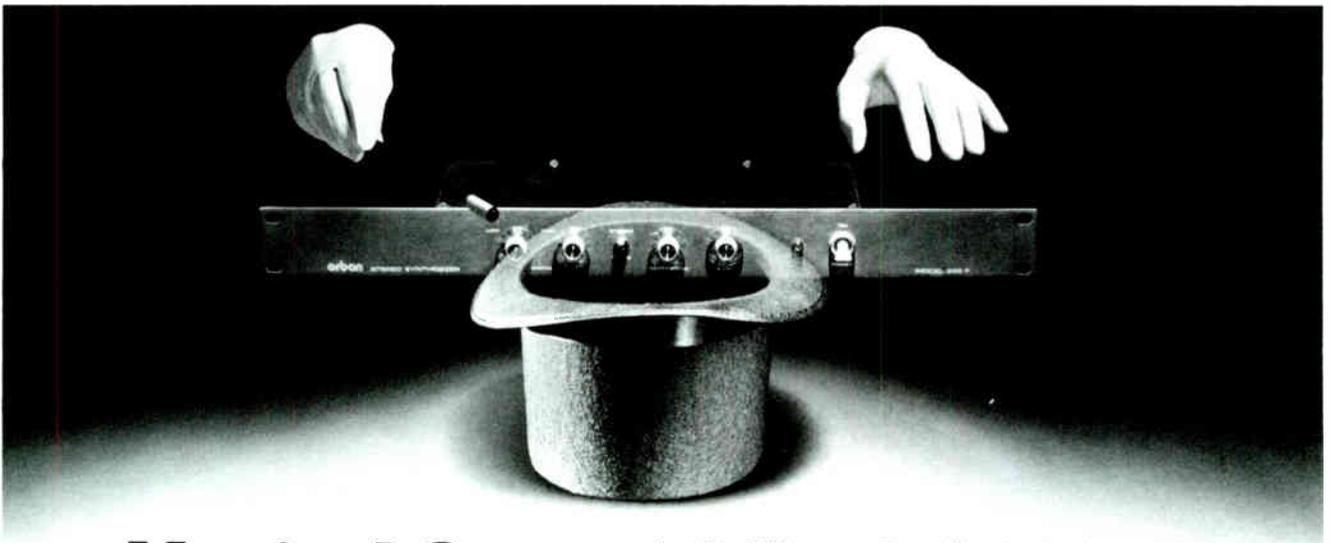
on *Plain Dirt Fashion*.

"Normally, a Nashville producer would shy away from a Bruce Springsteen song, but they were cool," adds Ibbotson.

Plain Dirt Fashion also included "Two Out of Three Ain't Bad," an operatically grandiose Meat Loaf record (written and produced by Jim Steinman) that somehow fits in the Dirt Band oeuvre without upsetting the "country" feel. "Chuck Morris and a guy at Warner Bros., Nick Hunter, had the idea that 'Two Out of Three' is a great country song," Hanna explains, "but it was a little long. They found a version that a guy named Bobby Borchers had done live at the Palomino [in L.A.]. He had done a nifty job of editing, and it worked out pretty good."

"We're really proud of the fact that the music we're playing now is pretty much the same stuff we were doing in the late '60s and '70s—songs that rely on a story, with simple folk melodies played on wooden acoustic instruments. It was called country-rock in the '70s, and now it's mainstream country."

"Without country radio," Ibbotson reflects, "we'd have no radio at all. We're just as grateful as can be that someone likes us enough to put us at the top of the charts." ■



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—FROM PAGE 67, WORLEY

Marshall takes over the creative, and there are times when I sit down and run the console. We complement each other, especially in the case of the Nitty Gritty Dirt Band.

"Here are five people who have been making records for 20 years, so everybody in the group has got a valid opinion. [A single producer] would have to be one hell of a person to field all that information and still maintain a thread of control. Two of us doing it really makes it possible at all—and they *still* wear us out!"

Morgan learned a lot about dealing with a group from working as production manager for the Eagles from 1973 to 1975. While he coordinated their tours, he was able to observe producer/engineer Bill Szymczyk in the studio. "They called him 'The Coach.' Just by watching, I feel I learned a lot from him about the motivational factors and the psychology of being a record producer," says Morgan. "I got a lot of inspiration from seeing what he was able to do with them."

When Morgan returned to Nashville in 1976, he went to work at Quadrafonic Studios with Gene Eichelberger, who gave him his first recording job. From there he moved to the Studio by the Pond, where he worked with Kyle Lehning and engineered England Dan and John Ford Coley's hits.

Morgan made the foray into country three years later, when Jim Ed Norman was the new kid in town. The two had met when Norman was doing some string arrangements for the Eagles. When he learned that Norman was going to be recording Mickey Gilley, Morgan "just called him and said, 'Remember me?' and told him he should come over and record with me and let me put together a rhythm section for him." Together they assembled a string of hits for Gilley, Johnny Lee, Janie Fricke and Anne Murray. Norman was the producer, Morgan was the engineer—and Paul Worley was part of that rhythm section.

Even when he was knocking around in rock bands, Worley knew he wanted to be a producer. He and Morgan knew each other from a band Worley played guitar in and for which Morgan acted as manager and soundman. When Morgan headed for California late in 1972, Worley began a long-time association with Audio Media Studios.

"When Marshall moved to L.A., it crossed my mind that I might never see him again. All my rock

and roll bands had faded or dissolved, so Paul Whitehead, Jack Jackson, Pat Patrick and Doug Yoder, who owned this little studio in a little house, hired me to be staff carpenter, guitar player, jingle singer and engineer. It was 50 bucks a week and all the tape I could eat, and I stayed on staff for about five years.

"I was real glad when Marshall came back, though, and we got started working together as quick as we could." Their first production client, Gary Morris, earned a string of hits: "Headed for a Heartache,"



"With the Dirt Band, there are many divergent viewpoints, but all of them are valid in their own way."

"Don't Look Back," "Velvet Chains," "The Love She Found in Me" and "Dreams Die Hard."

"It's a lot easier to work with a single artist than with a band. Of course, that depends on the artist," Morgan laughs. "Some of them can be enough to make up for five people. With the Dirt Band, there are many divergent viewpoints, but all of them are valid in their own way. Paul and I have a great deal of respect for them as musicians and as people with commercial ears. Jeff has produced their hits before, so we have to take into account everything that everybody thinks."

"It's not possible for everyone to get his way, so Paul and I sort of wind up being arbiters, the ones who sift through all the opinions and—hopefully—come up with the best choice. But there's a tremendous amount of input coming to us, which is what we like even with the single artists. We like artists who have that kind of musical vision about what they want to be and say."

Even from the outset, in choosing material, conflicting opinions can cause difficulties. "Neither Marshall nor I thought 'High Horse' would be a good single," Worley admits. "When we cut it, it became

musically real exciting and we liked it, but even then we thought it was off the wall. But the group really believed in that one and the record company said, 'Okay, go for it.' It turned out to be a really good record for us."

Another song the band was enthused about but which the producers weren't convinced was right for them, "Blue Ridge Mountain Girl," never made it to vinyl after both lead singers took a pass at the vocals. "We had to go as far as cutting the track for them to hear for themselves that we were right," says Morgan. "Then they agreed. Sometimes it's necessary to go that far to see if the song is going to hold up."

"It works both ways. There may be something Paul and I like that they don't like initially, so we'll cut a track. It usually ends up being real obvious, one way or the other. We try not to waste too much time and money doing that, but sometimes it's necessary."

For the next album, they plan to cut 13 or 14 songs to get ten keepers. "The hardest thing about producing records is finding top-quality songs," Morgan asserts. "They're very much in demand, and they go quickly. I look for songs for all my artists year-round; it's really a songwriter's market at the moment."

Morgan is reluctant to get too technical, since that simply is not his approach to producing. "This may seem strange for an engineer, but I'm of the opinion that the most important thing for a hit record is the song and the vocal performance. I think you can record it in a garage and it can be a hit. I would qualify that by saying that I don't think country records should sound bad, and I think we must make them as competitive as possible. But to me, technology is not the bottom line. I definitely enjoy what it has to offer, but I come from the background of being a musician, and the most important thing to me is what's being played and sung—not how it's being recorded. I can't pick anything apart. I can't tell you, 'Oh, yeah, we did this song and we hooked up three drum machines and MIDI'd it all together and turned it inside out—I just don't do things like that. I put musicians in a room and try to record them so it sounds as good as it can possibly sound. My 'style' is that the music takes precedence over technology; I just make it sound good at the time, and that's the end of that. It's not a matter of what equipment you use, it's what you do with it." ■

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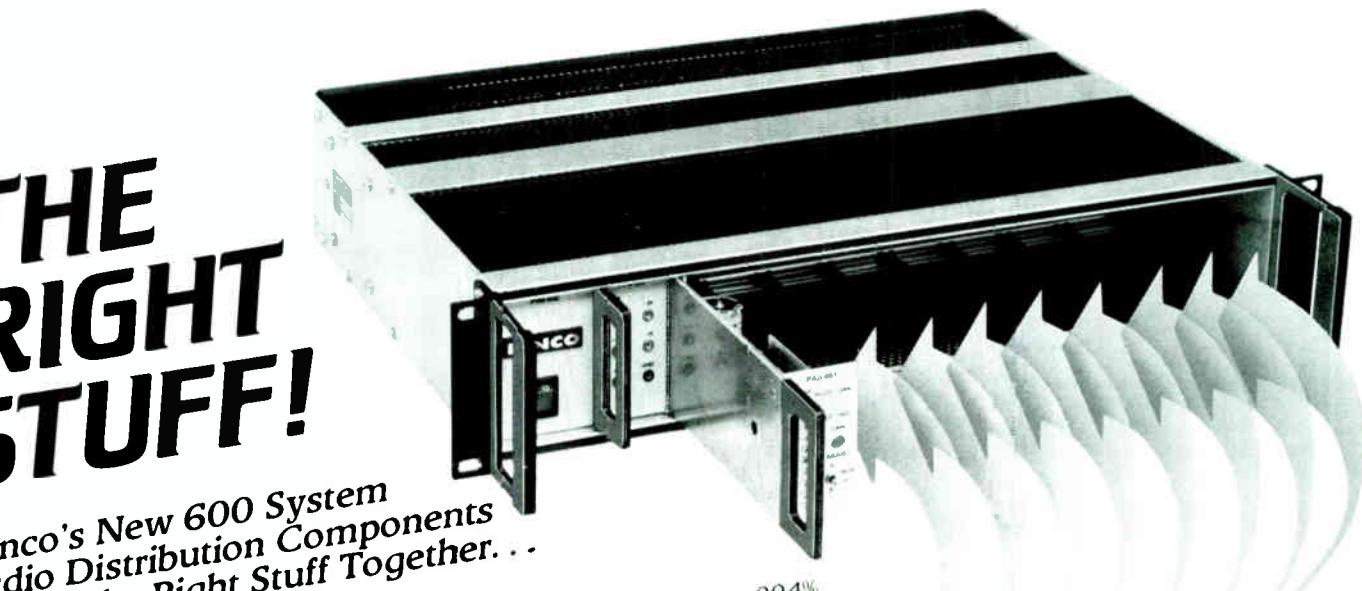
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World Radio History



They Call Them Mister Mister These Days

by Dan Daley

Richard Page, bassist and lead vocalist with Mr. Mister, stepped wearily into the hotel elevator. A moment before the doors slid shut, a hefty fellow with shoulder-length blond hair jumped in and, in a thick British accent, addressed Page: "Are you with the band?"

Without bothering to inquire which band he meant, Page simply nodded affirmatively. His fellow vertical traveler replied, "Heard you were here. I'm with a band, too—Asia. Doing some press in town." He then gripped Page's hand firmly and added, "I've got to tell you, though, I think that song is absolutely great."

Richard Page took John Wetton's compliment with a laissez-faire grace bespeaking quiet self-assurance. The song referred to was, of course, "Broken Wings," from the band's second LP, *Welcome to the Real World*. At the time of the elevator encounter, it was number one on the charts, abetted by a vivid and memorable video whose MTV rotation was as hot as Page's hometown of Phoenix in the summertime.

Mr. Mister was in New York City to perform on *Saturday Night Live* on only three days' notice after having just finished seven weeks of opening dates for Tina Turner. "Sorry if I seem rushed," Page apologized a moment later. "I have an appointment to see a doctor about my throat. It's a bit burnt out."

Page joined the other members of the quartet in a room overlooking noisy 52nd Street: soft-spoken Steve George, keyboards and vocals; the ebullient guitarist, Steve Farris; and drummer Pat Mastelotto. All four are music business veterans with extensive live and studio credits.

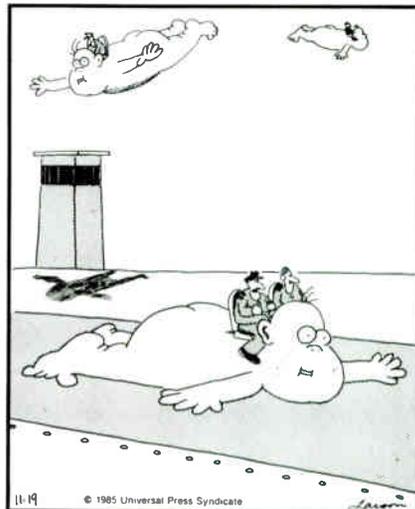
Page and George met in Phoenix, where the latter's family had moved from Illinois to mitigate the effects of George's childhood asthma. The two found a musical affinity and spent part of their youth playing in local bands before moving to Los Angeles in 1975. Both achieved a measure of success writing and singing backgrounds for acts including Al Jarreau, Donna Summer, and Rick Springfield. Then came their own effort, a band called Pages, but three albums on Epic and then Capitol didn't exactly ignite the music world.

Their growing prowess kept the pair working in the L.A. studios, but Page and George never relinquished the idea of being artists as well as session players. Three years ago they met up with Steve Farris, a transplanted Nebraska who had toured with Eddie Money, and California native Pat Mastelotto, and Mr. Mister was born.

"A lot of session players find it hard to leave that kind of money behind to do a band thing," says Farris. "And I'll still do sessions because it's another creative outlet for me. But it all depends on how much time we have. I think the rest of the band feels the same way. If things keep going like this, well..."

Things are going rather well for Mr. Mister. The stark images portrayed in the "Broken Wings" video made it a staple on MTV. It was done entirely in black and white—a calculated risk,

THE FAR SIDE By GARY LARSON



"Fuel ... check. Lights ... check. Oil pressure ... check. We've got clearance. OK, Jack—let's get this baby off the ground."

according to Page. "The script had a kind of ethereal quality to it. Nothing flashy or bright. I liked the idea of using black and white as a contrast. When I see something in black and white on TV, my attention becomes more focused on it, probably because you're inundated with color on television."

The band's label, RCA, was less than thrilled with the idea at first. "They said it was such a great video; why did we have to go and do it in black and white?" However, the approach has paid off, and in December the band began work on their next video, for "Kyrie."

Welcome to the Real World has a richly textured, almost orchestral feel to it, the result of a combination of production values and what Farris calls "a sense of presentation" in the arrangements and the solos. "The solos have to be a part of the musical dynamic," he says. "They can't be there gratuitously." One good example from the record is "Is It Love": the instrumental alternates keyboard swells and effects with Farris' unique approach to the tremolo bar—a technique he has been perfecting ever since he first heard Jimi Hendrix and Jeff Beck. ("Before the Floyd Rose tremolo system came along, I had to learn how to play

out of tune all the time," Farris recalls.)

The aural textures that characterize *Welcome to the Real World* come in large part from the album's co-producer, Paul DeVilliers, who began his career as a session guitarist in his native South Africa and honed his production chops in Toronto, Canada. DeVilliers was mixing concert sound for Yes when he met Mr. Mister in L.A. in 1984.

"We were looking for someone who wasn't jaded in the Hollywood fashion," says Page. "We wanted somebody who had raw ability and great sounds who was able and willing to work with the band."

"We were looking for someone to grow with us," Farris amplifies, "someone who was a little bit hungry, like we are. We were sick of playing it safe. This guy was fresh, eager, and not L.A.'d out. It felt right."

Though he had never met them before, DeVilliers was familiar with Page's records. When he heard the new material, he says, "I got the feeling that the band wanted a live sound, something that was quite believable. So it became a matter of following the energies that were coming from the individual players."

Band and co-producer tried the live recording concept at first, but they eventually scrapped it in favor of a

more layered approach. "You can achieve a live feel and sound without actually playing live in the studio," DeVilliers observes. "I think we got a lot of that on the record."

DeVilliers' role was to bring an objective ear into the proceedings. "My influences are the early English bands and progressive bands like Genesis and Yes. I like to inject a bit of color and drama into things—things that people don't expect."

Mr. Mister has high expectations for the future. They all have their session chops to fall back on, but, as Steve Farris observes, "The big difference with this band is the commitment we've made to it. We each have commitments to ourselves individually, but we have an even stronger one to the band." ■

Keeping It in the Grooves with Lonnie Mack

by Bill Milkowski

Political pundits will long remember 1985 as the Year of the Summit: Ronnie Meets Gorby in Geneva. But New York blues fans will fondly recall a summit

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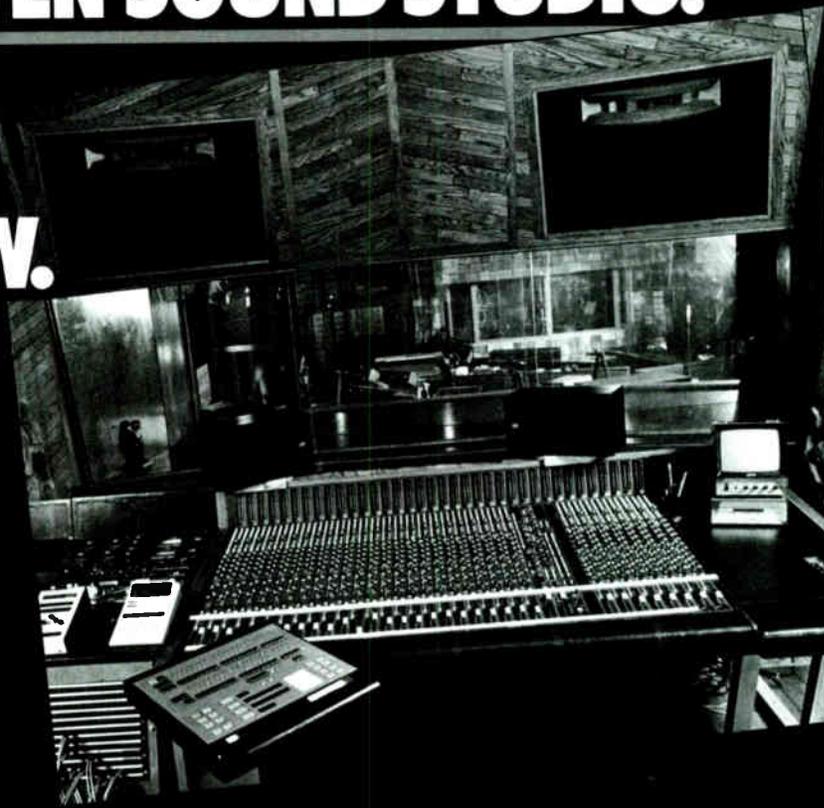
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Lonnie Mack

meeting of an entirely different kind: Lonnie Meets Roy and Albert at Carnegie.

It was billed by Alligator Records as "American Guitar Heroes, Part I": Albert Collins, Lonnie Mack and Roy Buchanan. Each played a solo set, and then the three paraded, axes in hand, onto the Carnegie Hall stage for a rousing encore of the Bobby Bland hit "Further On Down the Road."

Alligator threw a post-concert party at the S.I.R. rehearsal studio, where musicians, friends and press people popped in to pay their respects to the guests of honor. Burritos, nachos and plenty of guacamole were had by all, tequila and beer chasers were *de rigeur*, and of course, there was jamming—lots of it. By 2 a.m., Alligator's Bruce Iglauer announced to the 200 or so scribes, industry types, fellow musicians and hangers-on, "Congratulations! You have just consumed enough alcohol for a party of 1,000 people!"

Truly this was the perfect environment in which to fully appreciate the roadhouse raucousness of Messrs. Mack, Collins and Buchanan. Sure, the Carnegie concert was a historic event. But at this rowdy after-hours jam session, these gentlemen of the blues got down and dirty. Maybe it was seeing them up close—like five feet in front of your nose—where you

PHOTO: LONE STAR SILVER

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could really get a good view of Roy's right hand, Lonnie's wang-bar technique, and Albert's incredible string bends. Maybe it was the illustrious artists sitting in that spurred them on. Maybe it was all that tequila. Whatever it was, this post-concert bash surpassed the concert, in my humble and somewhat inebriated opinion, for sheer no-holds-barred, unpredictable yet still-in-the-groove intensity.

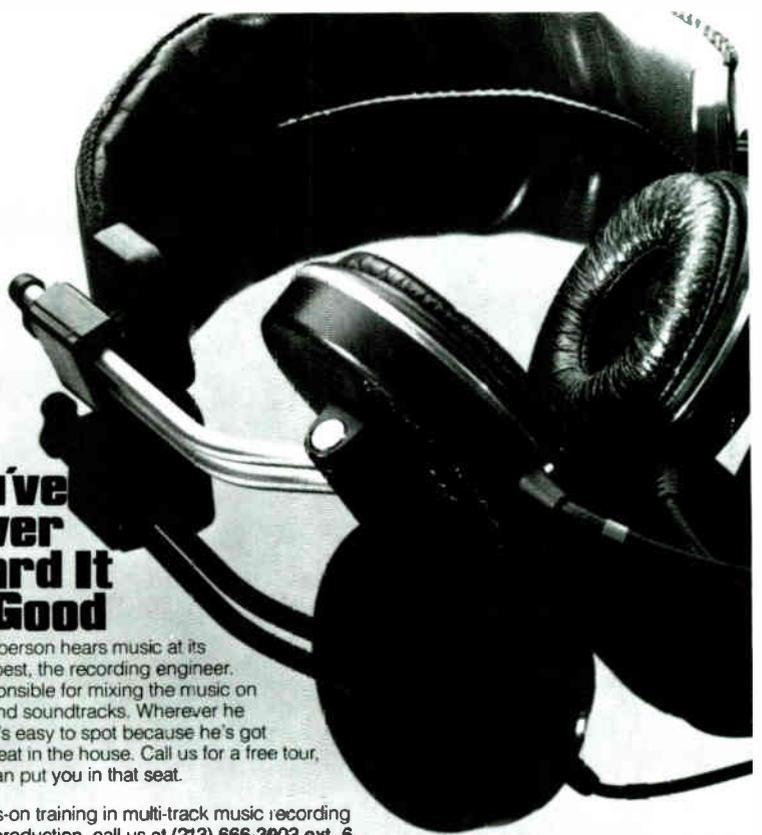
Bluesman Johnny Copeland sang along with Albert Collins on one tune, and John Hammond, Jr. blew some mean blues harp, but the weirdest grouping of the evening had to be a sprawling jam in the wee hours that saw Albert Collins, rock guitarist Eddie Martinez, keyboardist Paul (*Late Night with David Letterman*) Shaffer, bassist Jaco Pastorius and drummer Casey Jones sharing the stage. That one could've gone in any direction, but given the theme of the evening they stuck to a slightly embellished but low-down 12-bar.

Lonnie Mack bailed out at around 4 a.m. and headed back to his hotel. The next day he would be called on to play some acoustic blues and rap with Roy and Albert for the filmmakers who had shot the Carnegie Hall concert. They wanted these three electric guitarists to play some rural, acoustic blues and talk about how they first heard each other's music and where and when they first met each other. It was a nice idea, but you really don't want to make too many demands on a bluesman on a Saturday afternoon following an all-night jam—especially a bluesman with a hangover, which Lonnie had. But film they did, and it came off well.

During that session I learned that Lonnie and Roy Buchanan had never met face to face, though they had long admired each other's music. Albert and Lonnie had met in Texas long ago—they weren't too sure just when. Bluesmen aren't much into time or dates or figures—they just play the blues night after night in one roadhouse or another until all the days seem a blur in the memory. So don't ask Lonnie just when he met Albert, or how many Doors sessions he played bass on while employed by Elektra Records as an A&R man during the late '60s and early '70s, or precisely when he decided that the music business was a lot of bullshit and that he wanted out.

He never really retired, as *Billboard* reported in the early '70s. There was no period of introspective self-exile. Nothing of the kind. Lonnie kept playing, as he had always done and will continue to do.

"I just wasn't out there really hookin'



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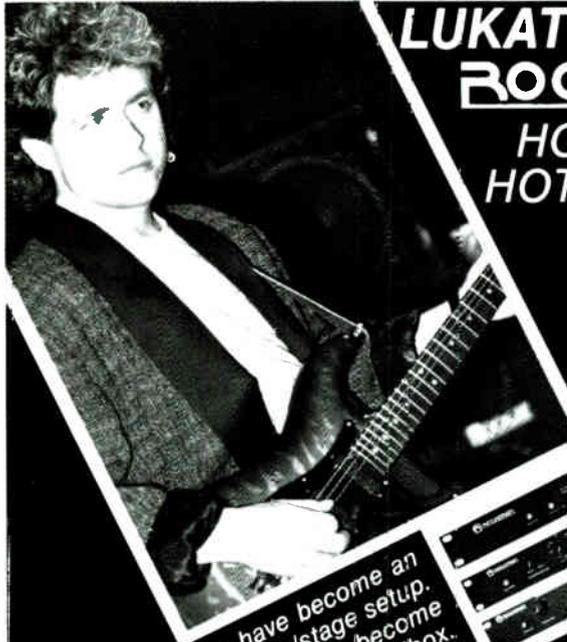
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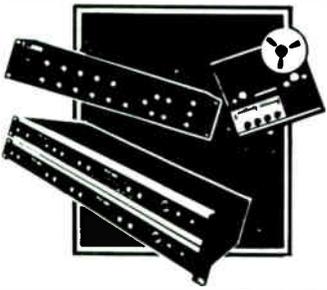
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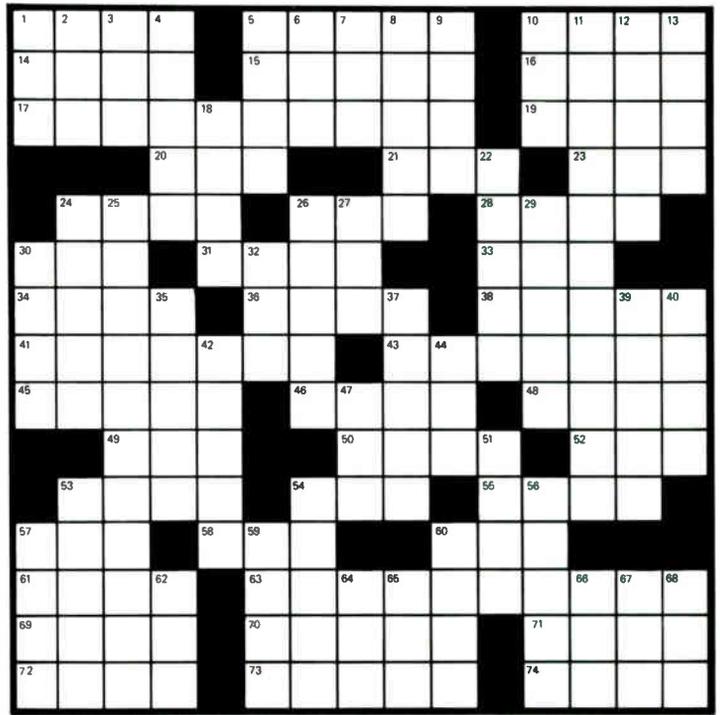
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MIX WORDS

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"SPEAK INTO THE..."

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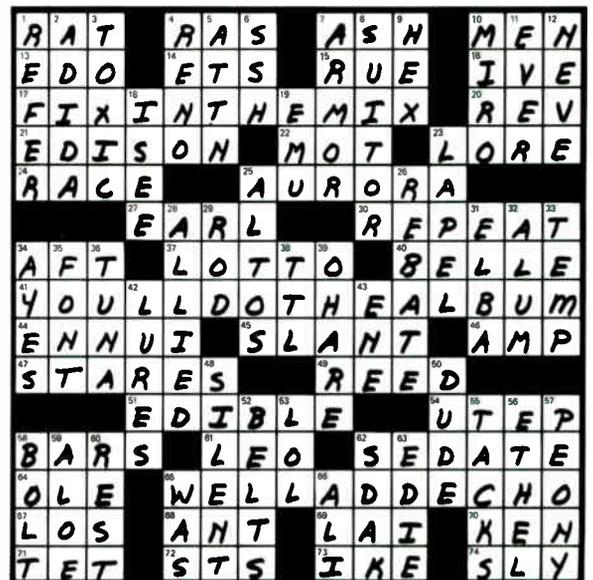
1. Mainsail's support
5. "Underassistant West Coast _____ Man"
10. Air (comb. form)
14. Margarine
15. Horse opera
16. Cavity in a studio
17. Transducer
19. Trim
20. Cravat
21. Dash's partner
23. Zilch
24. Mideast city
26. Vapor
28. "_____ boy!"
30. Friend, in France
31. Rub out
33. Tone _____
34. Legendary
36. A gender
38. Elevate
41. Booster stages
43. A Neil Young LP
45. Metric prefix
46. Espy
48. And others (abbr.)
49. Phone (abbr.)
50. The middle day, to Brutus
52. Squeeze by
53. Condition preferred by record collectors
54. "_____ Me, Feel Me..."
55. Drums along the Nile
57. Oriental philosophy
58. Fallout
60. Diner's interjection
61. German article
63. Mic, for one
69. Snicker _____
70. Spooky
71. Likely for an overdup
72. Swiss archer
73. Mixing console feature, one of many
74. Redact

DOWN

1. Dad's partner
2. "The Greatest"
3. Wall Street watchdog
4. A calorie bomb
5. Capo di tutti Catholics
6. Cheer
7. Pertaining to the ear (comb. form)

8. Repairs
9. A famous brand of cookie
10. Body's energy carrier
11. Part of a wireless system
12. West Side Story heroine
13. Imported car of yore
18. Pig's dialog
22. Princess' wear
24. "That's _____"
25. Microphone characteristic
26. Studio barrier
27. Everything
29. Line on a scope
30. Greek letter (comb. form)
32. Sprite
35. Eat or Be _____
Firesign LP
37. Wear away
39. Immerses for a while
40. Perry's creator
42. Mediterranean isle
44. Summer, in Paris
47. Another calorie bomb
51. Great gig for a stallion
53. "Remember the _____"
54. Bhagwan's middle name
56. Entertain
57. Check out
59. Flower's support
60. River to the North Sea
62. Conger
64. Pepper or Carney
65. Never, to Herman Ze German
66. Cape _____
67. Yalie
68. Decompose

— Solution to February Mix Words —



it like we are now," says Mack. "I was still doin' my thing, just not gettin' a lot of press or sellin' a lot of records. There were a lot of strange rumors goin' around when I left Elektra... See, I was involved in A&R and doing that whole business trip, so when I said I was quittin' the music business, I meant exactly that. I never stopped playing—I just quit the business end of it. Everybody sort of misunderstood that. There was some story in *Billboard* that I had retired... but no, I never stopped playing."

Never, indeed. And since hooking up with Alligator and releasing the acclaimed *Strike Like Lightning* (produced by Stevie Ray Vaughan, a Mack disciple and a hot artist in his own right), the bearded one has been back on the track and doin' it to death with his wicked '58 Flying V. Just goes to show, you can't keep a good man down.

Lonnie Mack was born in Harrison, Indiana, in 1941. His father worked the fields and loved the Grand Ole Opry, and his mother taught young Lonnie a few chords on an old box guitar. When he was six he picked up more from an old blind guy who played guitar in a nearby church. Lonnie remembers staying up late at night as a kid to catch the sounds on WCIN out of Cincinnati and hearing the likes of

T-Bone Walker, Ray Charles, Elmore James and Groove Holmes, all towering influences on the guitarist.

Along the way, Mack fell into a thumb-and-finger style of playing, a technique popularized by Merle Travis and Chet Atkins. "I started off playing that way... doing your own bass parts with the lead tacked onto it. A lot of the real old blues players were doing that, too, but it was a little bit different bag than what Merle and Chet were into.

"Merle was an especially big influence. When I was a kid, I just sat around the house and tried copying his licks off records. I never did use that technique much on records myself [with the notable exception of "Oreo Cookie Blues" on *Strike Like Lightning*]. I mostly play that around home. It's just been in the last few years that I've been trying to play a little bit of that style again."

As a teenager, Mack emulated Elvis' guitarists, Scotty Moore and James Burton. It was around that time that he changed his name from McIntosh to Mack and bought a brand new '58 Gibson Flying V guitar. "It's serial number 5," he says with no small measure of pride. "It was a weird-looking guitar at the time. There was nothing like it. Gibson introduced the Explorer and the Flying V that year, and I

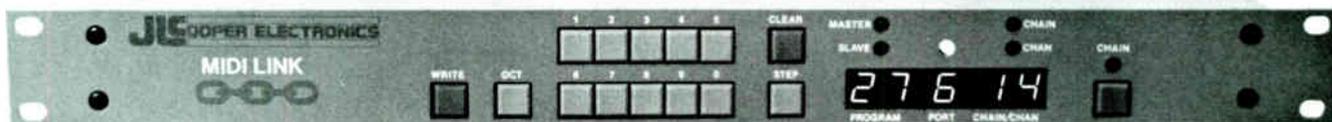
thought it looked cool so I jumped on it. I broke the neck off it once and had it refretted a couple of times, but other than that it's the same guitar I bought back in '58."

A friend who ran a music store in Cincinnati turned Lonnie on to the Flying V, and later put a Bigsby tailpiece on it. With that wang-bar in place, Mack went on to forge a signature style that has been an inspiration to the likes of Eric Clapton, Jimmy Page and Stevie Ray Vaughan.

Mack began doing session work for Cincinnati's now-defunct Fraternity Records, recording at the King Records studios. In 1963, he scored a hit in his own right: his instrumental version of Chuck Berry's "Memphis" shot up the *Billboard* charts and remained there for five weeks. Mack had never read *Billboard* and knew nothin' about charts, but he was glad to have a hit on his hands. A series of hot singles followed—"Wham!", "I've Had It," "Save Your Money." But when he was right on the verge of making it really big, the Beatles hit and Mack, like countless other jazz and blues artists, became a casualty of the British Invasion.

But he persevered; bluesmen always do. Mack continued to work the road. He hooked up with Elektra on the West Coast, gigged as an A&R man for a

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while, then split and went back out on the road.

In 1976, Mack cut a countrified album for Capitol. Recorded in Nashville, it was restrained by Mack standards. For the followup, he put together a band which featured brother Bill McIntosh on guitar, keyboardist Stan Szelest (who is in Lonnie's current outfit) and multi-instrumentalist David Lindley. That album, *Lonnie Mack and Pismo*, mixed country gospel and roadhouse rock—and puzzled reviewers and record buyers alike. But the next album, *First Edition*, recorded with an eight-piece band called South, stands as a landmark LP in the field of country-rock. And now there is *Strike Like Lightning*, which bears the high-visibility stamp of today's roadhouse hero, Stevie Ray Vaughan.

"I've known Stevie for a good seven, eight years, I guess," says Lonnie. "I knew him when he was just playing around Austin. He's finally made it

and it's great. He's 'bout my favorite player right now. Boy, he works hard! He's a great person, too."

Vaughan's presence in the studio as producer and special guest on *Strike Like Lightning* helped spur Mack on to new heights during the session. As he put it, "When I'm playing with Stevie, he sort of makes me reach out more than I would if he wasn't around." And the proof is in the grooves.

Lonnie Mack continues to play the juke joints—Antone's in Austin, the Lone Star Cafe in New York City, points north, south, east and west. With a successful album under his belt, an acclaimed Carnegie Hall concert under his belt (and soon to be broadcast), and a new Alligator awaiting release, it's safe to say Lonnie Mack is back on the track and leadin' the rockin' blues pack with his wicked attack. It's been 23 years since his first big hit, and he's just getting warmed up. Hell, he's only 45. That's young for a bluesman.

Steve Goodman's Peers Celebrate His Memory

by David Gans

There's precious little worth crying over in popular music today (unless you're trying to launch or maintain a career without a stupid haircut and/or an encyclopedic knowledge of the MIDI system), and I don't guess Steve Goodman would want people weeping over his memory, but I just can't help it. I cried when he died, I cried when *Tribute to Steve Goodman* arrived in my home, and I'm crying as I listen to it and write this. I miss him.

Steve Goodman's passing went unnoticed by the spineless, heartless record companies which dropped him because they couldn't figure out how to sell his warm and witty songs and ebullient performances. His death earned only a passing mention from the celebrity mill which acknowledged only that the Chicagoan wrote "City of New Orleans," a hit record for Arlo Guthrie. Goodman's leukemia, his decade-long remission and smiling, easy-going bravery, and his final, losing battle with the disease were only a small part of this wonderful artist's story.

Some of the people who loved Steve Goodman—the musicians among the thousands who were his friends and admirers—got together on at least two occasions to pay public tribute to the tender and good-humored guitarist. An album has just been released from

the second of these events, and it is a beauty. *Tribute to Steve Goodman*, a two-record set, was recorded January 26, 1985 at Chicago's Arie Crown Theatre and features the artists who were closely associated with Goodman during his life—John Prine, Jethro Burns, David Amram, Mike Smith, and a pickup band called the Lincoln Park Pirates (named after one of Goodman's funniest songs), featuring the gorgeous saxes and recorder of Jim Rothermel—as well as Bonnie Raitt, David Bromberg, the Nitty Gritty Dirt Band, John Hartford, Fred Holstein, Richie Havens, and others.

Prine, the singer/songwriter most closely linked with Goodman in spirit as well as on stage and in studios over the years, wrote the liner notes in his perfectly balanced blend of the bitter and the sweet: "... What am I supposed



to tell them? You won every argument you ever started? You hated speeding tickets, bureaucrats, and nosy Mounties? That you remembered every joke you ever heard, good or bad, and told them all to me twice? I mean, am I supposed to sit here and tell everybody how great you were when all you ever did was laugh at my guitar playing and brag about my songwriting behind my back?"

Bonnie Koloc sings "I Can't Sleep," the Nitty Gritty Dirt Band performs "Face on the Cutting Room Floor" (written by Goodman and the Dirt Band's Jeff Hanna and Jimmy Ibbotson), mandolinist Jethro Burns plays "The Lady Is a Tramp," and Mike Smith sings his own "The Dutchman," long a mainstay of Goodman's concerts. John Prine and Bonnie Raitt join together for Prine's classic "Angel from Montgomery," and Prine solos on "Souvenirs," Goodman's "My Old Man," and the album's closer, "Please Don't Bury Me."

Arlo Guthrie tells of a night in 1972 backstage at the Quiet Knight, when the club owner asked if he'd listen to a young man's song. Guthrie recalls telling the songwriter, "I'll tell you what: You buy me a beer, and I'll sit here and I'll drink it, and as long as it lasts, you can do anything you want." I sat down with the beer, he took out his guitar and played me this song. Turned out to be one of the finer beers of my life. . . . "City of New Orleans" brought more fame to Arlo than to Stevie, but the royalties from that song made a big difference to Goodman and his family.

(*Tribute to Steve Goodman* is available for \$15.00 postpaid from Red Pajamas Records, P.O. Box 233, Seal Beach, CA 90740. Goodman's three other Red Pajamas albums, *Artistic Hair*, *Affordable Art* and *Santa Ana Winds*, are \$9.00 each. Look for Bud-dah's *The Essential Steve Goodman*, and, on Elektra/Asylum, *Jessie's Jig* and *Other Favorites* and several other titles that are now out of print.) ■

Michael Franks Discovers the Machines

by Josef Woodard

No one can accuse Michael Franks of making menacing pop music. He is neither a chronicler of adolescent alienation nor an excitable white soul man, but a singer/songwriter in the droll post-Mose Allison tradition. For all his facile wordplay and silky pop/jazz/latin meld, Franks has assembled

a body of work that is the aural equivalent of a brandy after dinner.

This pattern, one of the surer bets in pop music over the last decade, has been partially uprooted on Franks' eighth Warner Bros. release, *Skin Dive*, which sports not only an innuendo of a title but harder, funkier edges than past Franks vinyl. No, Franks hasn't found religion, nor new musical angst—just the prospect of better living through digital technology. Franks has met MIDI, with the aid of producer Rob Mounsey (who previously produced Franks' *Passionfruit*), and the results are intriguing.

"We cut about half the tracks with a LinnDrum and synthesizers MIDI'd together and driven by sequencers,"

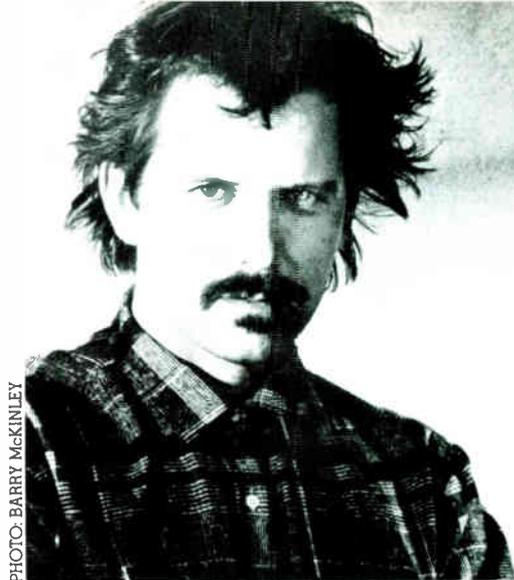


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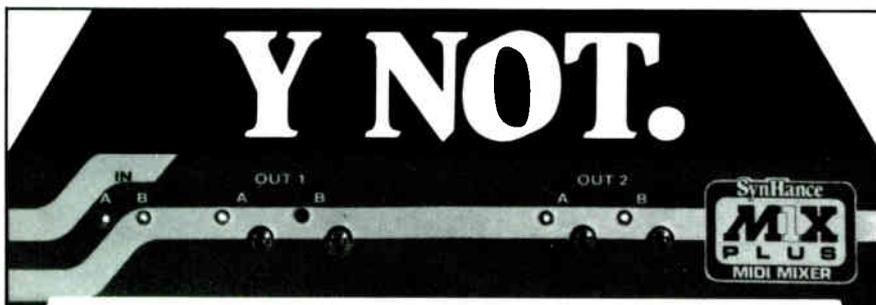
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says Franks from his home in Woodstock, New York. "A lot of people have been doing that, but for me it was new and strange to be in the studio with so few people around—just Rob, myself, and an engineer. To come out four or five hours later with these things that sounded like *tracks* was a marvel. Rob would lift up the top of the LinnDrum and yell into the chips, 'Great groove!'

"It was strange not having players around, the kind of scene where everybody comes into the control room and critiques the take. It was lonely in some ways, but I think the positive side of it was that you end up getting these iron-clad structures which you could do almost anything to. You can zoom in on one bar or one beat and make a change. Having that kind of foundation, we were able to laminate a lot of players on top of that."

And laminate they did. This is no case of enclosed *auteurism*; Franks brought in many first-call New York session men to give weight and analog veracity to the tracks. Drummers Chris Parker and Dan Gottlieb embellished the Linn rhythm tracks with fills and real cymbals, and soloists such as David Sanborn and Michael Brecker and guitarists Steve Khan and Hiram Bullock added their licks. But much of the sound is courtesy of Mounsey's synthesizer parts, giving the project a tight, metallic surface in contrast to Franks' breathy purr of a voice.

The MIDI method also affected Franks the songwriter. "Rob made some bare Linn tracks, gave them to me and said, 'Why don't you try to write to the drum tracks?' I actually did write the single, 'Your Secret Is Safe with Me' that way. But basically with my music, there's an intrinsic element of featured soloists, which I think is why I've been associated with jazz so much. I've borrowed from the etiquette of jazz."

As such, Franks finds himself in the midst of a modern musical paradox: the obsolescence of human input as the industry immerses itself in the ever more available technology. Franks has always championed the cause of studio players who rarely get to tap their potential on the job, and now the music market may be shriveling in the shadow of the digital revolution. "It's incredible—all these musical entities are so self-contained that musicians are out of a gig. A lot of these great players are hungry for jingles now," Franks comments.

When Franks broke in with *Art of Tea* in 1976, it was halcyon days for studio musicians. Franks had taught comparative literature at UCLA and been a housepainter, all the while hammering away at songwriting (his

earliest writing score was, oddly, with Sonny Terry and Brownie McGhee). When his record deal came, Franks suddenly had to confront his own pop-sicle toes in the presence of his heroes. "It was mind-boggling to be in the studio with Joe Sample, Wilton Felder, Larry Carlton, Michael Brecker, John Guerin—this dream rhythm section," he recalls. "I wanted to be at my best, and I remember rehearsing so much the night before the session that my voice was kind of blown out for a couple of the sessions."

Franks has had a solid, steady career in pop music, with a faithful following accustomed to his gentle vocal contours (he counts Julie London, Dusty Springfield and Peggy Lee as influences along with the wily Mose Allison). "I've been lucky in that I've never really had a disastrous failure. Some of my earlier albums are slowly approaching the 500,000 mark. The record company has always let me go my own way, because... it hasn't been meteoric, but I've always had a perceptibly upward movement." ■

The Boys on Bourbon Street

by Linda Jacobson

Tourists and New Orleans go together like fried catfish and jambalaya. If the city is one giant souvenir shop, then its cash register is Bourbon Street... because, more than any other American mecca, this one's economic health depends upon a strong, live music community.

Along the main five-block stretch of Bourbon Street, at any intersection, there's a club blasting bebop from one corner, a club blowing blues across the street, and a third one exploding with rock and roll. If you love music, the confusion is exhilarating, which sure does make you thirsty. That's the idea... Bourbon Street musicians aren't coy about the fact that they're hired to sell beer. And although over a dozen clubs hire performers, no one suggests that breaking Bourbon Street is a snap. And no one goes there to showcase original material. Doesn't seem much different from tourist traps in New York, L.A., or Chicago, does it?

The musicians here don't think so. From fusion player to jazzman, from rocker to crooner, they share a respect for Bourbon Street akin to reverence. *Mix* spent a Saturday night checking out the scene, talking to "typical" Bourbon Street musicians...

Joe Foxx is the trumpeter in Choco-



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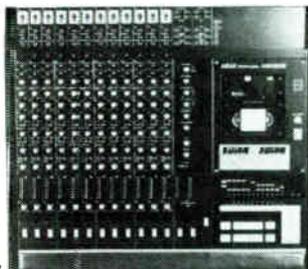


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late, formerly Chocolate Milk. This fusion/jazz dance band plays four nights a week at the Old Opera House, at Bourbon and Toulouse Streets—one of the few places on Bourbon where you can find Huey Lewis on the jukebox.

Jim Atwood drums with Lou Sino and the Bengals down the street at Maison Bourbon, three nights a week. Their material is the stuff from which the New Orleans legend is made: Dixieland and swing standards, pop tunes from the '40s, '50s, early '60s.

Randy Hebert, local recording artist, songwriter, and one-man guitar synthesizer band, performs five nights weekly at the 711 Club, a short walk from Maison Bourbon. Using sequencers, harmonizers, and MIDI to sound like an ensemble, Randy sings the kind of pop and soft rock you hear on top-40 radio.

John Vindigni is the regular evening vocalist at Pat O'Brien's, right off Bourbon Street. John once sang lead with the Jackson Brewing Company, a local, successful, and original funk/jazz band whose guitarist was Randy Hebert. But they got bored, split up, and John and Randy started acts as singles. That was six years ago. Now John, along with dual-piano accompaniment, sings old and new standards and answers requests from "middle America."

Nora Wixsted, pianist, vocalist, and songwriter at the 711 Club two nights a week, performs all original material—R&B, blues, ballads. She's been there almost five years, either solo or with a keyboard player.

Joe Foxx and his band are New Orleans natives who've already satisfied their urge to hit the big time. They recently were welcomed back to New Orleans in the pages of a local rock mag, following the band's "lengthy stay in L.A." There they were signed with RCA/Victor Records. Chocolate Milk put out ten albums before deciding to quit the touring scene and settle down—in New Orleans. They're happy to stay.

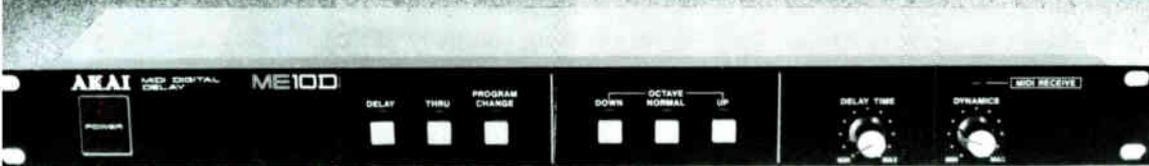
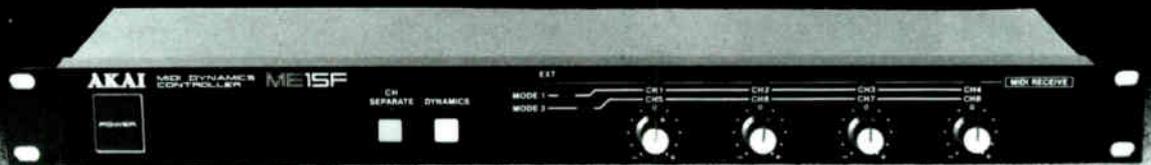
Jim Atwood's from Baton Rouge, and moved to New Orleans after graduate school to play with the Symphony and the Dukes of Dixieland. He left to teach music in Mexico; "I was also playing tympani and percussion with the Mexico City Philharmonic. But after the big devaluation, I returned, and ended up on Bourbon Street. I'm starting my fourth year with Lou Sino's band; Lou's been here for seven years."

Does Jim look beyond Bourbon Street, for a recording contract, perhaps? "Noooo... I am a work-a-day musician. I can make my living playing music, not because I'm a fantastic drum set player, but because I can do a lot of things. I can sub with the Symphony, play tympani with the Ballet, chamber

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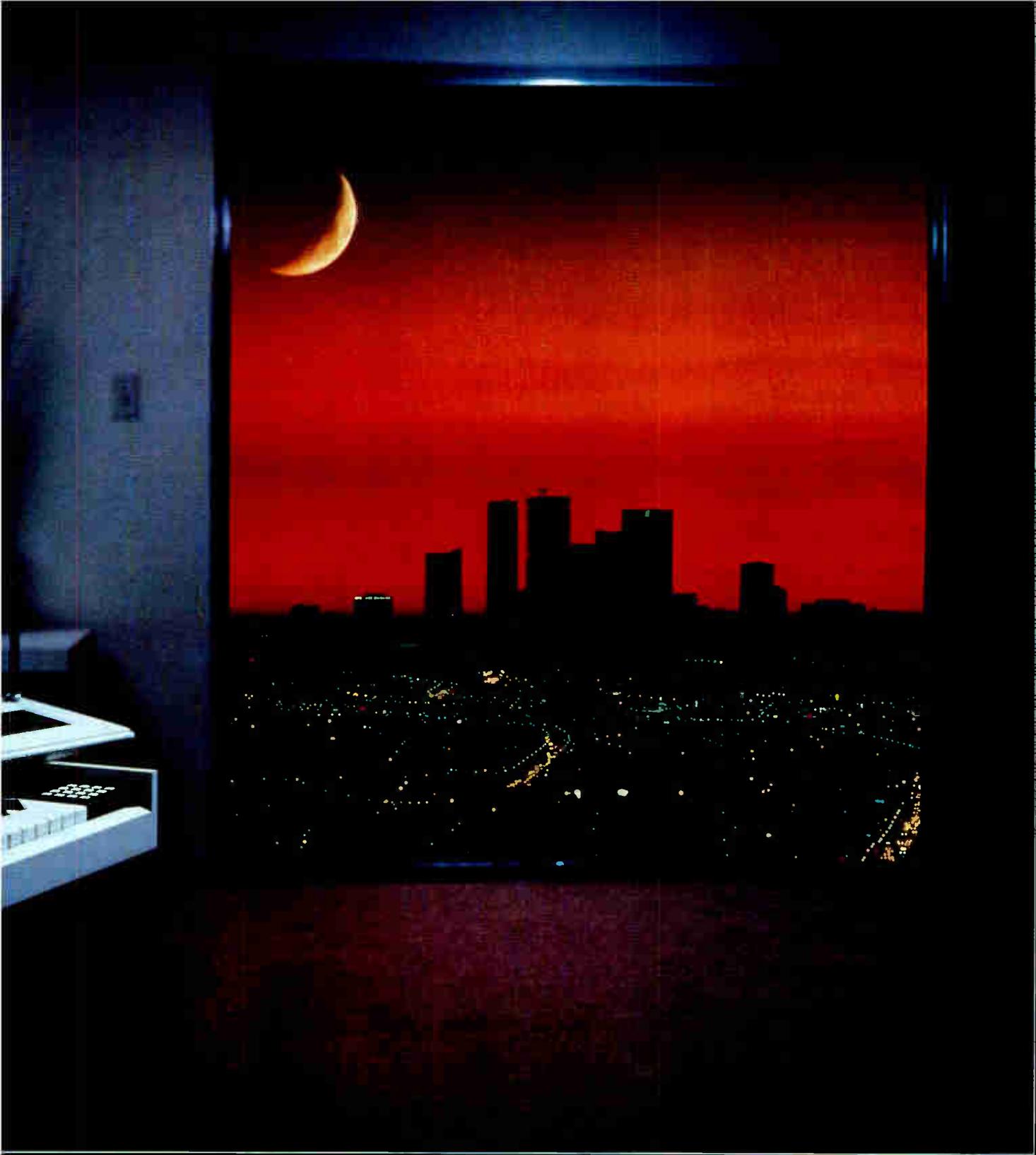
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ever need anything I could ask them; they give me a line of shit first, and then they give me everything I need."

Even better is the fact that musicians can play their own tunes, although people like Lou Sino or John Vindigni choose not to. Chocolate's Joe Foxx says "Bourbon Street is one of the only steady jobs for musicians in town, and we have a chance to play some of our own stuff." Randy's been at the 711 for so long that his clientele want to hear his music. "The main thing that makes or breaks an act here is whether or not you fill the cash register. If my original material wasn't good enough to make a living for the club, I couldn't play it."

Musicians on Bourbon Street don't find the dog-eat-dog atmosphere of N.Y. or L.A. They book their own gigs and hustle for jobs, but they jam together and help each other. This delights ex-New Yorkers like Nora: "There's competition between the clubs, but not between the musicians. I know I'm as good as everybody else, and they know they're as good as me. There's a brotherhood here; people are very, very close. If someone can't do a job, they go and find someone on the street who can do it. We all don't make the same kind of music, though occasionally we do, because we all make music. We all love to play it, and that's why we're here." ■



Roger Linn with MIDIStudio, Linn 9000, Linn Sequencer

Roger Linn Faces the Music

by Tony Thomas

In the past year, Roger Linn has had more than his share of reliability problems with the Linn 9000 drum machine/sequencer, which his company introduced in 1985. The inventor of the digital drum machine seems intent on

making things right, though. Linn levels with *Mix* readers in this exclusive interview on the future of the 9000, the effects of his products on music, and his future product plans.

Mix: Let's begin by talking about the various problems associated with the Linn 9000.

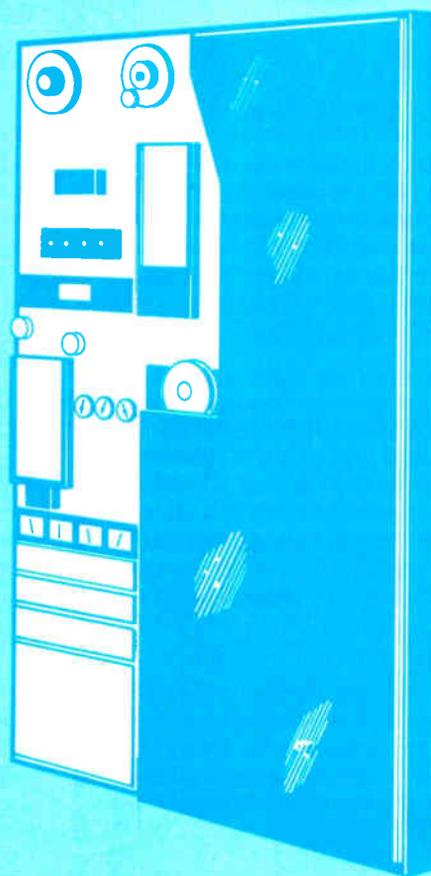
Linn: I'd like to apologize to the owners who have had to deal with bugs in the earlier releases and let them know we are standing by the 9000. I under-

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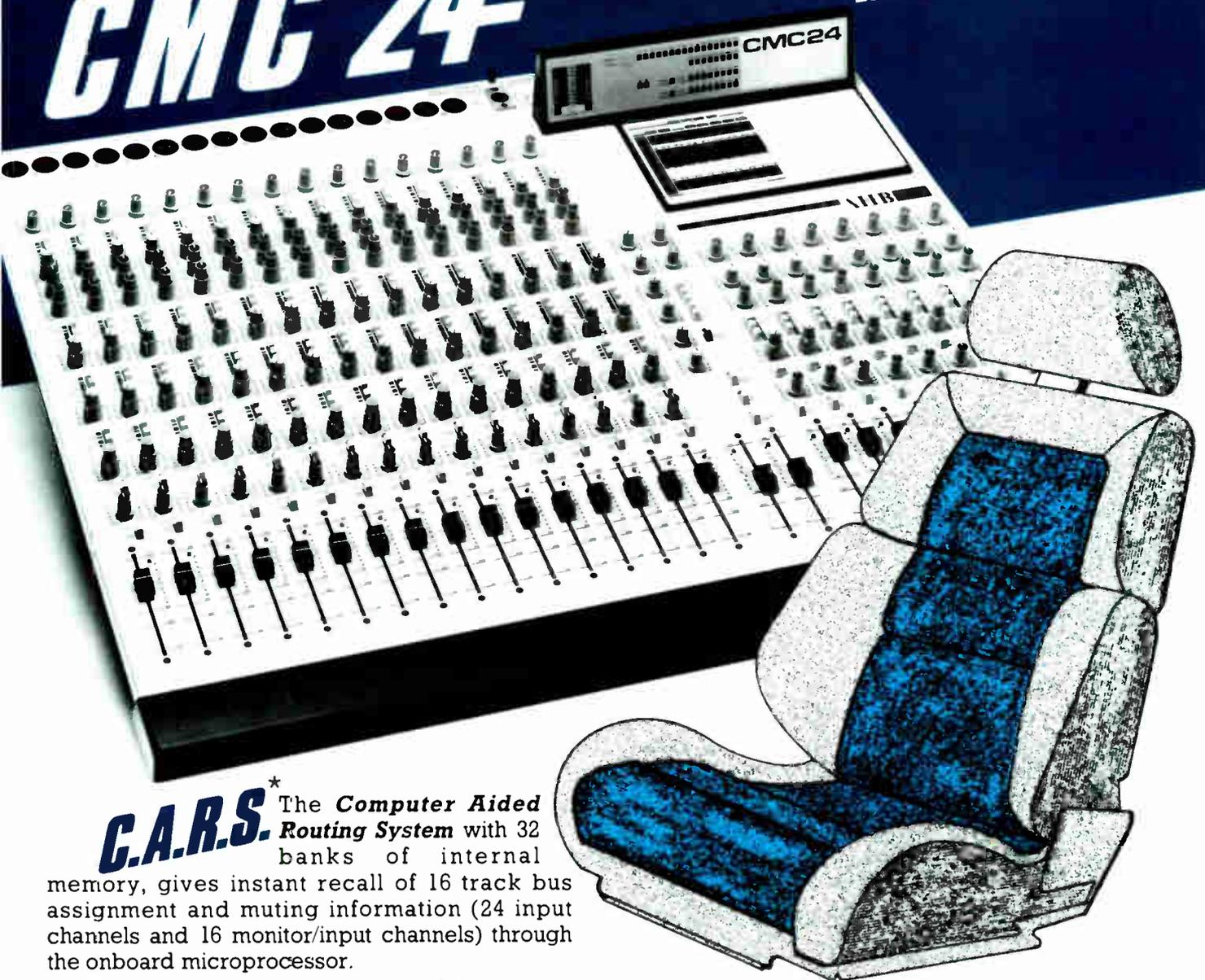
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stand that our reputation has suffered, and I would like to tell all the musicians out there that we are committed to making products that are 100 percent reliable.

The last year has been a great learning period for our company. We will never again release a product that, to our knowledge, has bugs in it. The 9000 was too ambitious a project for a company of our size. It was very difficult for us to design and build a machine that complex and versatile. But I have made some changes in the company that will allow us to realize our ambitions, and I have assembled what I believe to be the finest engineering team of any company our size.

At this point, the beta testing is very

thorough. Before every software release, I'm involved every day and sometimes every night hunting bugs—they call me "the bug man" around here. As a result, the Linn 9000 is now functioning reliably and nearly all its features are working. If anyone is having problems with the 9000 now, I suggest they take it to their local service center and have them install the newest software. By the way, all updates to the 9000 are free. To make certain all 9000 owners have ample time to have their units updated, we are extending the warranties on all early Linn 9000s to July 1, 1986.

Mix: Tell us how the new LinnSequencer's features differ from other hardware-

based sequencers.

Linn: The LinnSequencer is essentially identical in function to the sequencer section of the Linn 9000. The advantage of that unit is that it operates just like a multi-track tape recorder with timing error-correction. If you are recording on one of its 32 tracks, you simply fast-forward up to the bar you want and begin recording. Should you make a mistake, you can back up and then re-record the part correctly. If you want to change tracks, you can select a different track and continue recording. It is extremely intuitive and very fast to use. It has all the features you would expect, such as single-step editing and chain mode, plus a novel feature that automatically copies all the steps in your song chain into a separate sequence. That way, when you edit you don't have to think in step numbers as in chain mode.

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"It has always been my philosophy to make products that meet the needs of the working musician. When I was a working musician, I found it frustrating to buy a product at a good price only to discover it lacked a feature I thought was important."

Mix: You have another new product, the Linn MIDISudio.

Linn: The MIDISudio is functionally nearly identical to the 9000, except that it is in two pieces—a rackmount unit containing all the electronics, the mixer, and the disk, and a lap pad containing all the buttons, controls,

drum pads and the LCD display. One major improvement over the 9000 is its ability to load alternate sounds or sample live into all of its 16 drum memories without any additional memory expansion. The voices are held in battery-backed RAM.

Mix: Why are you building a product with essentially the same features as the 9000?

Linn: First of all, the 9000 is a very expensive and complex machine to manufacture, whereas the MIDiStudio is easier to manufacture and service using components common to the Linn-Sequencer. Also, the MIDiStudio includes some features that our customers specifically requested.

Mix: Is the MIDiStudio going to replace the 9000?

Linn: Yes, eventually. However, some people prefer the 9000's single unit design. The 9000 also has certain advantages over the MIDiStudio, so for now the buyer has a choice.

Mix: Where does that leave existing 9000 owners?

Linn: It leaves them with a product that is unequalled as a compositional, recording and performance tool and probably will be for years to come. And if fully updated, it will work with 100 percent reliability. We have always stood behind our products and we always will.

Mix: Is it true that you are phasing out the LinnDrum?

Linn: The LinnDrum is out of production at the moment. Most of the people who want LinnDrums already own them, and many are selling their LinnDrums and buying 9000s. There will be enough LinnDrums to go around for quite a while. We may go back into production on them, but not for a while.

Mix: Are there any plans in the works to market a MIDI version of the LinnDrum?

Linn: I don't think so. There are a number of devices made by companies such as J.L. Cooper that will allow you to convert MIDI to LinnDrum sync. Most of the people who need that usually have such a device. Of course, you cannot do key note assignment on the LinnDrum.

Mix: How about a version of the 9000 without the sequencer?

Linn: We get all kinds of wonderful rumors around here. Once we released the LinnSequencer, which is the 9000 without the drum machine, a lot of people just assumed we were going to release the drum machine without

the sequencer. We aren't planning to release that configuration because to perform all the functions in the 9000's drum section you would need nearly all of the hardware of the 9000. All you would be taking away is the software, which wouldn't reduce the price of the unit that much.

It is very clear to me that drum machines and sequencers need to be integrated. Since adding a sequencer doesn't add that much to the overall price, I feel that most people will find out very quickly that its addition makes the product infinitely more useful, even for the most simple sequencing situations.

Mix: How do you justify the comparatively high price of your products?

Linn: It has always been my philosophy to make products that meet the needs of the working musician. When I was a working musician, I found it frustrating to buy a product at a good price only to discover it lacked a feature that I thought was important. I think it is more economical to buy a product that has everything you need. Our LinnDrum, for example, has been very popular for three years. Musicians who have bought other models have had to replace them three or four times, which in the long run is more expensive.

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Mix: What is your response to the feeling that your products have put session drummers out of business?

Linn: Many drummers have had to change the direction of their playing in the same way that guitarists had to buy electric guitars and amplifiers and that keyboard players had to buy synthesizers. There is a lot more technology available to the drummer now, and I think the drummer who ignores that is refusing to accept an important trend. The drummers who are purchasing equipment like the drum machine and electronic drums are still getting work; in fact, they are getting more work. It is just an extension of their kit. And as much as I would like to think our machines are so dynamic that they can cover all styles of music, in reality they can't. You simply cannot replace the great drummers—a LinnDrum cannot think of wonderful creative ideas.

Mix: How has MIDI changed your products?

Linn: MIDI has been phenomenal, and I and everyone else in our industry thank innovators like Dave Smith of Sequential for being the catalysts in its creation. All products these days are tremendously different than they were before MIDI. It's now possible to choose the controller you like and couple it with the sound generation

equipment you like. My sequencer can control anyone else's synthesizer, and that's much better than having to make a synthesizer just for my sequencer. MIDI is a universal interface standard and a step forward in music synthesis.

Mix: Some manufacturers were opposed to MIDI at first because they thought it was too slow and because it was a serial (as opposed to parallel) interface. Have you had any problems with timing errors in your hardware and software development?

Linn: There are some inherent limitations in MIDI's speed, but nothing that can't be overcome. Many of the problems with MIDI are caused not just by the speed of MIDI but by the operating speed of the other software. We have invested considerable effort to make sure our software responds to MIDI as quickly and efficiently as possible.

Mix: Where do you think the music scene is headed?

Linn: I think computer technology is going to continue to affect it the very same way it has the typewriter. You don't see too many typewriters around anymore, because if you make a mistake you have to correct it on the paper. The computer allows the writer to con-

centrate on the creative aspects of his writing and delegate the repetitive tasks to the computer; it can correct his spelling errors, and to a lesser extent his punctuation.

As computers have been introduced into musical instruments, features like error correction—which we developed—allow, for example, a drummer with wonderful creativity but poor timing to get more work. Any repetitive aspect of an artist's work will receive more sophisticated levels of computerization. There are already some very sophisticated computer programs that utilize artificial intelligence to compose music along very simple parameters.

Mix: How do you think your products have changed the face of contemporary music?

Linn: I think the greatest reward of making these products is being told by popular musicians what a positive effect the machines we make has had on their music. For example, the drummer for Bruce Springsteen's band, Max Weinberg, told me that Bruce's use of the LinnDrum has had a great influence on his songwriting. The effects can be heard on his latest records. I'm very proud to make devices that will allow people to create better music. ■

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Hal Willner

Hal Willner Master Matchmaker

by Bill Milkowski

What do Nino Rota, Thelonious Monk, Kurt Weill and Ralph Kramden have in common? Answer: Hal Willner.

The Philadelphia-born musicologist, record producer and music coordinator for *Saturday Night Live* has put out highly ambitious tribute albums to each of the aforementioned composers, and he was the man behind last year's hit novelty single, "Honeymooners Rap" (with Joe Piscopo as Kramden and Eddie Murphy as his pal, Ed Norton).

That's quite a wide spectrum, but wait—there's more to come. Willner is already at work on his next tribute, an album honoring Charles Mingus, in collaboration with the late jazz bassist/composer's widow, Sue Mingus. And there are plans for a Duke Ellington tribute album down the road.

Busy guy, Willner. And who knows? Maybe he'll find some time between the tributes and his weekly *SNL* chores to work on an album honoring another of his heroes, Shemp Howard of the Three Stooges.

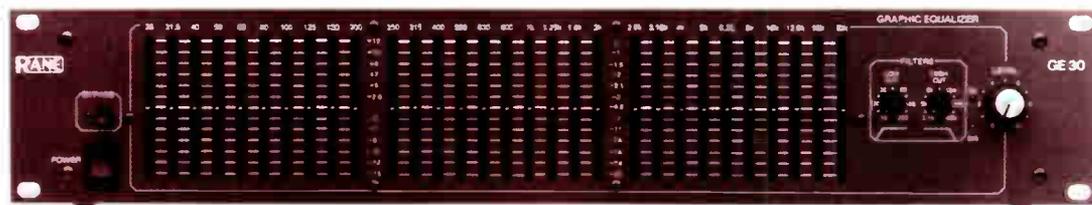
The Shemp Rap? "There's a lot of humor in my records," he points out. "It's a real important part. I think that along with the influence of, say, Eric Dolphy, Jimi Hendrix and Igor Stravinsky, I'd also have to include Laurel and Hardy and the Chipmunks.

"Most producers today have a certain thing that they do. This one's strictly a dance music producer, this one's a rock producer, and so on. But on these records I've done... Take the Weill album [*Lost in the Stars*, released late last year]. In one record, you go through jazz, rock, classical and everything, and it works together. To me, Little Richard, Wagner and John Coltrane all go together. I mean, music is emotion. It's what music makes you feel that really counts."

Like his previous projects, *Amarcord Nino Rota* (Hannibal) and *That's the Way I Feel Now* (A&M), this Weill tribute album is typically eclectic and blatantly interpretive. Take Lou Reed's version of "September Song," from Weill's 1938 Broadway hit, *Knickerbocker Holiday* (with lyrics by Maxwell Anderson). Reed did not render the song solemnly, as did everyone from Frank Sinatra to Jimmy Durante. Instead, what you get is Lou Reed

—PAGE 164

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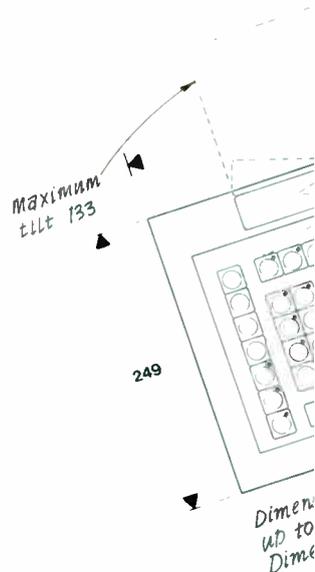
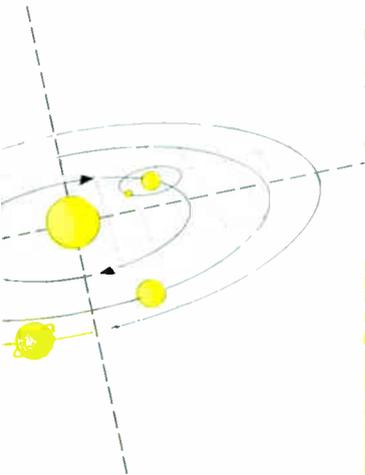
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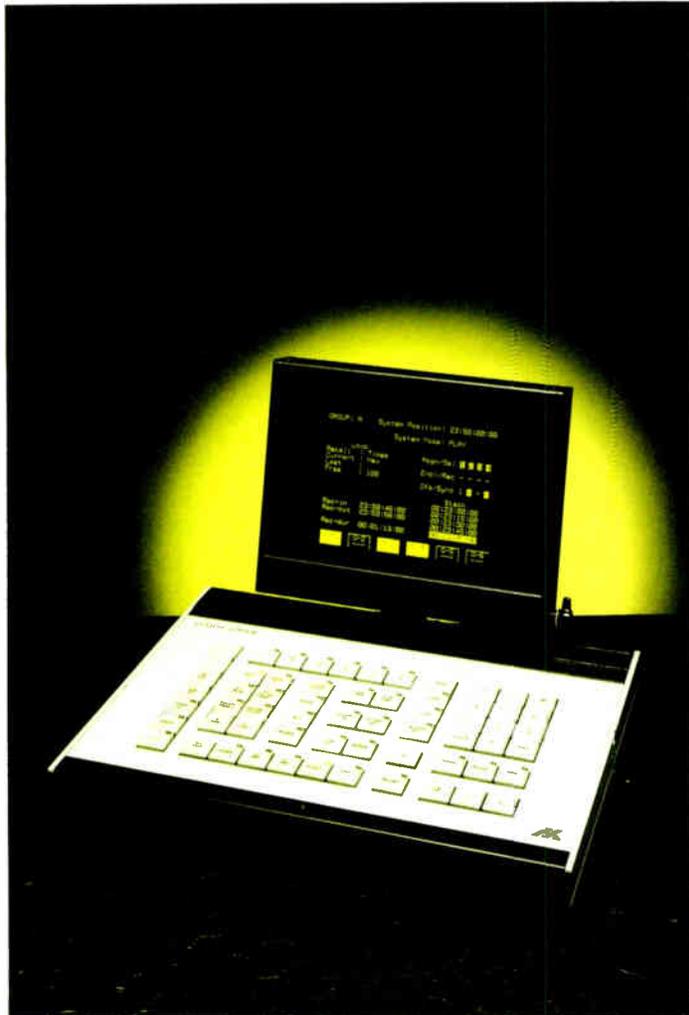
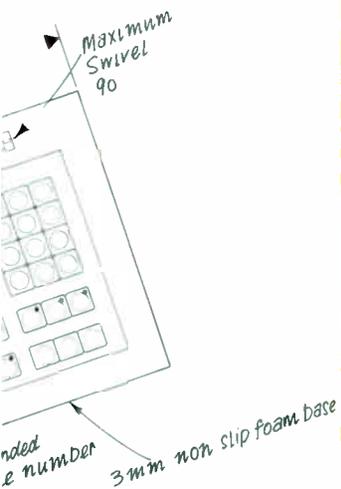
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—FROM PAGE 22, WISSERT

on an independent label—True Tone, distributed by Polygram. But again, he downplays the achievement, preferring to focus the attention to the band and the songs. "It's more important that their release on CD gives their songs and playing full range, not the fact that it's some kind of music first—it's the music that comes first!"

It's been a long way from one-track studios in the early '60s to the new technology of digital CDs. And along the way, Wissert kept cropping up on incredibly varied productions. Starting with the Cameo/Parkway labels in Philadelphia, his first productions included the Orlons' "Wa Watusi," and sides for The Dovells and DD Sharp. Moving to New York to work with both MGM and Decca artists like The Broadways, Wissert soon split his travels between the soul train and the rock cruisers.

His first gold record came with The Turtles' "Happy Together" in 1967, and he produced their other singles "She'd Rather Be With Me," "She's My Girl" and "Do You Know What I Mean." "She's Still a Mystery to Me," and "Younger Generation" were hits he produced for Lovin' Spoonful from their first orchestrated album, *Everything's Playin*. And when the master tapes for Jimi Hendrix had to be remixed for the *Smash Hits* album, it was Wissert who blended the sounds.

Into the '70s, he produced Gordon Lightfoot's "If You Could Read My Mind" and "Summer Side of Life" on the mellow side, and then immersed himself in a funkier feel producing the early Earth, Wind and Fire albums: their self-titled debut effort, *Head to the Sky*, *Last Days and Time*, *Another Time*, *Open Our Eyes*, and the fine live album, *Gratitude*. Perhaps his greatest work was the realization of blue-eyed soulster Boz Scaggs' *Silk Degrees* which garnered Wissert a Grammy nomination followed by *Down Two*, *Then Left*.

His journey to Australia was prodded by producing Helen Reddy's *No Way To Treat a Lady* and *Free and Easy*. A long-standing curiosity coupled with the urgings of Reddy to make the hop over the Pacific culminated in a month-long odyssey in Oz in early 1983. What he saw and heard there lured him to come back a year later, shifting both career and family with no regrets. Much to his delight, there was an amazing wealth of talent Down Under. "There is an element

"The freshness and vitality of Australian artists and music are stimulating and challenging."

of purity, some might call it naivete, in Australian music," says Wissert. "But there's also a distinct edge honed from the live pub and club circuit that is a vital part of the Australian music experience—a factor that emerging American bands don't have in their development. They have to go out and work the live scene, and they have an obligation to their audience. One night they might play a sweaty pub packed with 200 punters, and the next, a 10,000 seater. Australian bands don't feel they're owed as much as bands in other countries seem to. There are fewer ego demands and no prima donna attitudes that show through in the music."

But on the recording side, the small size of the market creates a lot of problems for the bands. "The criticism of there not being enough 'world class' producers and engineers is true and not true," he says. "The best ones are booked out. Mark Opitz is constantly busy, as are Ricky Fataar and Mark Moffat."

And on the state of studios in Oz, Wissert feels that the similarities are more with the English experience. "It costs less to record here, and the studios are as good as many you'll find overseas—Rhinceros, Paradise, Studio 301, and Platinum are all trying to keep up with world standards. But the problem for bands doing their first recordings is that the better studios are locked out with bands like INXS or Midnight Oil. This means that the younger bands lack the opportunity to use the better facilities—having to record some of their stuff in one studio, then another, and then mix somewhere else."

Not that Wissert is a fan of high-

technology. He prefers to grasp the essence of the song and then nurture the artist's ability to perform from the heart rather than through effects devices. "Technology is often over-used because it exists. I find technical innovations interesting, but talent exciting. There's a real difference between a great tune and a great production, and there's often too much of an emphasis on getting the guts of the sound rather than the soul of the song. There are technologies made a long time ago that have stood the test of time adding a lot more character to music rather than force-feeding effects into it to achieve a certain sound that is formularized and formatted rather than subtly formed.

"The really valuable advances in recording have less to do with the effect they produce but more with the facilitation of the process—taking the physical burden away and subtracting time, not adding a new texture." Wissert believes that record companies are partly to blame in that they expect more impact out of dwindling recording budgets, and that impact is often made by gadgets and techniques at the expense of the music. "At the same time," he says, "they seem to be signing bands more because of their image, or who manages them, or what is being said about them in the media, or even who is interested from competing labels. As soon as one label has a hit with a female singer with red hair, the others start looking for redheads who can sing!"

And that mistake is often compounded by picking a producer on the basis of who he's just done or the particular style he specializes in. "The thing is, most artists don't necessarily write in a categorized style, but they tend to get locked into it because they are manipulated in that direction. It all comes back to the individual song—a trendy producer with a control room full of gear can easily overwhelm the tune."

Wissert's direction in Australia is geared to mating himself with the right artist and songs. He's set up a production company dubbed Nu-Plastique, and his goals are fairly straightforward and simple. "What is essential is hearing an artist that excites me, someone whose talents I can contribute to," he says. "The freshness and vitality of Australian artists and music are stimulating and challenging. And in the end, isn't that what producers need?"

—Phil Tripp

P R E V I E W



LinnDrum Midistudio

The LinnDrum Midistudio from Linn Electronics (Tarzana, California) combines a digital sampling drum machine and 32-track MIDI recorder in a single integrated package, consisting of a freestanding—or rack mountable—main unit (with disk drive, patch bay, and mixing controls) and lap pad (with record/edit controls, drum pads, and 32-character LCD display). Features include 16 on-board drum sounds—50 are included with the unit, and users have access to hundreds more through the Linn sound disk library; variable 10-50 kHz sampling rate; 3.5-inch disk drive; real time and step function editing of performance parameters; timing correction control (or defeat); internal or external triggering; 480,000 bytes of non-volatile memory; and song tempo entry in beats/minute or frames per beat at 24/25/30 frames per second.

A variety of options are available, ranging from SMPTE sync (24, 25, 30 fps or 30 fps drop-frame) and a 100 foot remote-to-main unit connecting cord to a huge assortment of alternate sound disks. The LinnDrum Midistudio is \$5,990.

Audio Precision IMD Test Option

Audio Precision, Beaverton, Oregon, has unveiled a new intermodulation distortion testing option to their System One audio test system. DIM-TIM (dynamic intermodulation-transient intermodulation) testing by the mixed squarewave-sinewave method has been added to the established mixed sinewave methods of SMPTE, DIN, and CCIF difference tone. According to the manufacturer, the system's implementation of DIM-TIM testing allows distortion measurement at levels typically 20 dB lower than spectrum analyzer measurement capability.

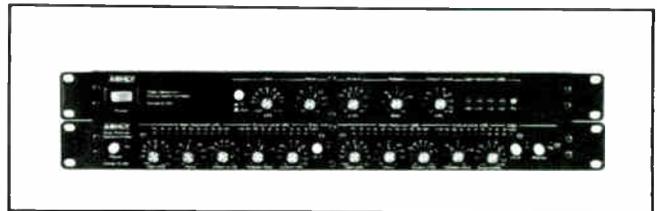
The complete IMD option is priced at \$1,200, and an entire System One with dual channel generator, dual inputs, and full measurement capability is priced at \$7,250, including the menu-and-panel driven software package.

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FM Acoustics Forcelines

Forcelines from FM Acoustics, (Wadenswil, Switzerland) are highly flexible, ultra low-loss speaker cables designed for high power, critical listening applications. The cables are of 523 strand, high purity oxide-free copper construction with a 10mm outside diameter, and are rated at 200 amps RMS continuous (1200 amp peak). Resistance is given at 0.001 ohms per meter, or 1 ohm/kilometer. Forcelines are available with either Forceplug 200 connectors (these are fluted, high power terminations designed to mate with the outputs on the company's FM 801 and FM 1000 power amplifiers) or a special spade lug, the Forceplug 25, for use with standard 5-way binding posts.

Circle #069 on Reader Service Card



Ashly Audio CL50/CL52 Compressor/Limiters

Ashly Audio, of Rochester, New York, has introduced two new compressor/limiters: the CL50, a single channel product; and the CL52, a dual mono (or stereo linkable) processor. Both models feature controls for input gain, compression ratio, attack time, release time, and gain reduction LED display; while the CL52 also includes 11-segment LED output level metering and a stereo link switch.

Circle #070 on Reader Service Card



CMX CASS 1 System

An integrated time code-based audio editing and console automation system, said to be the first of its kind, has been introduced by the CMX Corporation of Santa Clara, California. The CASS 1 (Computer Aided Sound Sweet-

ener) simultaneously controls up to six audio recorders and 15 additional sources, for the precision mixing of an entire soundtrack.

The system interfaces to most audio consoles with VCA faders, offering recall and modify, and the CASS 1 utilizes the familiar CMX keyboard and edit decision list, which may be input from a floppy disk to provide a starting point in audio sweetening. The automation's fader memory can "learn" a mix with up to 16 faders, in preview or record, and dynamic graphics on the CRT display current levels at all times. Typically, mix lengths of up to a half-hour are achievable. Over 100 different mixes may be stored on the integral hard disk and mixes can be archived to floppy disk. The CMX CASS 1 system is priced from \$40,000.

Circle #071 on Reader Service Card



MIDI Controller for Lexicon 224XL

Clarity (formerly Electron Farm), of Garrison, New York, has introduced the MIDI/ 224, which allows full MIDI programmability of the popular Lexicon 224XL digital reverberator. Features include: both program change and control of all LARC parameters; factory and user presets; a bypass mode to return full control to the LARC; a LARC to MIDI output; and full positive and negative scaling of the control input. Another model, the MIDI/224V has all the features of the above unit, but also offers eight control voltage or resistance outputs for retrofitting existing signal processors and synthesizers for MIDI control.

The MIDI/224 is comprised of a microprocessor that translates MIDI data to the LARC format and is installed between the 224 mainframe and the LARC. The MIDI/224 is tentatively priced at \$895 and the MIDI/224V is \$1,195, directly from the factory.

Circle #072 on Reader Service Card



Alesis XT:c Digital Reverb

Alesis, of Los Angeles, has introduced the XT:c digital reverb which offers many features found on higher priced units, despite its \$749 price. The XT:c boasts a 16kHz bandwidth, full stereo inputs/outputs, up to 15 seconds of decay time, and eight separate reverb programs (small spaces, large rooms, hall, and reverse and gated reverb). Rear panel 1/4-inch connections include inputs, outputs and

loop, while the front panel provides controls for predelay, program selection, decay, infinite hold, LF cut, HF damping and roll-off, input/output levels and reverb mixing.

Circle #073 on Reader Service Card



Soundtracs CMS2 Interface

The CMS2 Interface is an automated muting and video synchronization accessory for the Soundtracs CM4400 digital routing console. The interface connects a standard Commodore 64 computer to the mixer's RS232 communications port, and either SMPTE or EBU time code enters the unit via an XLR connector. Thus equipped, the system is capable of storing mutes and console patch changes in the computer's internal memory or onto a floppy disk for later retrieval, and the CMS2 provides eight events controllers for a complete video synchronization package.

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New JBL Studio Monitors

JBL has unveiled a new line of studio monitors for professional recording and broadcast applications. The 4406, 4408, 4410, and 4412 models (shown above) deliver smooth frequency response to beyond 27 kHz due to the use of pure titanium ribbed-dome tweeters. The 2-way 4406, designed for console-top or near monitoring, features a 6.5-inch polypropylene woofer; with an 8-inch fiber cone woofer, the 2-way 4408 was developed for broadcast applications; the vertical-line array of the 3-way 4410 provides spatial detail at greater listening distances; and the tight clustering of components in the 4412 (with 12-inch woofer) allows close monitoring and high power handling.

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PHOTO: ED COLVER

Vis-Ability's Celia Hirschman

A Conversation With Celia Hirschman:

by Elizabeth Rollins

As most fledgling musicians and directors know, making a good video is only half the battle; getting onto music video show playlists can require nearly as much effort. Then there's the video club circuit, the home video market and the theatrical placement to contend with.

About a year and a half ago in Los Angeles, Celia Hirschman started a company called Vis-Ability to address what she felt was the need for comprehensive marketing of video prod-

uct being released by independent and major labels. Her role is in some ways similar to that of an independent record promoter—although Hirschman points out significant differences in her approach to a completely separate network of outlets for video.

Before she started Vis-Ability, Hirschman worked for Image Consultants/Vision Management, a retail marketing and management company that represents The Blasters, The Untouchables and Marilyn Scott, among others. Hirschman handled publicity and promotion for these acts. Before that, she had a management position with

a retail record chain servicing Hawaii and Northern California.

On a brisk winter evening, Hirschman sat down to talk about promoting videos. Her voice is pleasantly low-pitched, though her sweater-vest this night is screaming orange neon. The very visible Celia Hirschman:

Mix: What territory do you cover?

Hirschman: There are several areas that we cover—all of this is prerequisite to what our clients would like us to do. We'll handle distribution of video to all television shows and video pools around the country. Selective video pools—the ten largest. We'll handle the marketing and promotion of that video to those outlets. In other words, we don't just send a tape out. We don't believe it's financially efficient to just send tapes out blindly. We'll send some pre-promotion, send the video out, then follow it up with a marketing strategy in coordination with what the record label is doing for that artist to maximize penetration of the artist in that community. We really believe in the old way, in that sense of record marketing—region by region, connecting the dots.

We work in coordination with radio airplay, with touring. If a band is going on tour and the artist is accessible, we'll set up interviews, guest VJ segments. We'll do nightclub promotions with video pools. We'll ask the band to go into the studio and make personalized IDs for some stations so the artist is recognized not only in the community as having a video out, but is personalized to that community.

Last year was a tremendous year for video promotion, and this year should be fantastic as well. The video budgets are up.

However, still lacking in the industry overall, not at any individual label, is an understanding of television, an understanding of advertising, which is the only reason television is allowed to be, and an understanding of how creative you can be in the visual medium. It's slowly building. But if it doesn't happen next year, it probably won't happen at all, and video will fall out and die, and there'll be a few shows left, and it will be very specialized.

Mix: What do you think the feeling is at record labels about video?

Hirschman: Video promotion is very important to them, and they're going

to make a commitment to it because almost every record label has hired someone just to do video promotion nationally. And that never existed a year or two ago—CBS had done it two years ago, but that's it.

Video is not a shady market. People are not going out there and paying for play. There's no underhanded dealing in video, and hopefully, there won't be because that will destroy the industry, unequivocally. Without that, if people keep on the up-and-up and play what they want to play, or what their audience wants them to play—or even play what the radio tells them to play—it doesn't matter. They're still programming on the basis of what they believe in, not on what someone is palming them. As long as the video industry stays fairly clean, video promotion will stay a very inexpensive proposition. My prices are not expensive. They are very inexpensive compared to the work I do.

Most of these shows don't require much. They're asking for some albums, some posters, some T-shirts; real simple stuff. The kind of stuff that rolls off a pinkie of a radio promotion budget. Consequently, video promotion shouldn't be a major deal, with the exception of the major outlets—"major" meaning having the most market penetration, and the most viewership.

Aside from that, the smaller shows that garner a certain amount of community following should be supported proportionately to the number of people who watch the shows. And that's all the shows are asking.

There's a whole other avenue that has not been exploited, much to my dismay. Advertising is very much the lifeline of television. Television video shows do not exist without it, and advertising is extremely cheap on these shows.

And yet the record companies overall have not even looked into it. I'm talking about their home videos, which are selling in the retail market. There hasn't been a cohesive understanding of the retail visual medium and of the television medium. And until someone walks in there—and I hope to be involved in '86—and starts creating that energy, excitement, promotion and then starts cross-coordinating all facets together, no one will be able to see the importance of a video show. But when you're advertising your home video and you're doing a cross-promotion with a video store that's selling that home video, and you've got the artist coming into town in two weeks, it makes a whole lot of sense.

Mix: What's a good case study of one of your promotions?

Hirschman: A-ha was a video that came to Warner Bros. and when it came in, Warner Bros. looked at it, called me in, I looked at it, and we wanted to break the act visually. It's a very visual piece. Not that the band wasn't able to break musically, but we felt we had the best way to break the band visually, at that point.

So we released the video to MTV and 30 other outlets and each one got it exclusively for three weeks to a month to play as much as they wanted. And in addition, what we did—aside from giving them personalized IDs and all the promotional material we had on hand to give them—we asked most of the stations to ask their viewers to tell Warner Bros. what they thought of that video. So we got thousands of letters from viewers all over the country.

We got active viewer support before the record was released to radio. We set the groundwork for a tremendous amount of visibility for artists who had never performed in the United States; who had never been on the radio; who had absolutely no exposure before that. That turned into a very brilliant marketing campaign—and I don't take credit for that. That was Warner Bros.

What it did was generate a tremendous amount of excitement on the regional level, but it generated interest

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everywhere in the company. The sales people were given updates, and everybody else got involved in the project.

Mix: I know they deny it, but are video programmers really relying on the radio charts—and also, are they relying on marketing information you can bring them from smaller video markets?

Hirschman: Every video show is different because every programmer is different. Programmers come, not from radio necessarily, although a few do, and for those that do, I certainly make sure they get all the information about every chart movement in every trade I can get my hands on.

Some come from television production. In that case I work more towards

what they'd be interested in. Each one is different. It's not like radio where everybody's in the same market, and they all look at the same trades. It's much broader, so I'll bring in the radio tracking sheets on an artist, and the tour, and the press, and I'll make sure most of the video outlets get press and bios. To me, that's basic stuff... which a lot of labels can't do. And it's not that they don't want to. It's that they don't have the manpower or the budgets to do it yet. So a lot of videos just go out there—unexplained. And that's probably the worst thing you can do to an artist. That's like letting a record go out and not working it at radio, and just assuming that everyone will pick up on it.

When I started, it was not that competitive. Now there's a video promotion person at every label and everybody's pitching for that half-hour time frame to get one or two or three artists in there.

Mix: What's an easy video to sell?

Hirschman: An easy video to sell is something that's in the Top Ten! [Laughs] However, I've worked Top Ten, or really Top 20 videos that have been difficult. I worked a video which was at #12, but it was an instrumental. It was a beautiful piece but it was "too slow," it had "no vocals," and there was no rock star ripping off his clothes in the middle of it, so some programmers wouldn't play it. It was too "soft."

I've worked videos that have had more success which had absolutely no chart action and no major AOR airplay happening—like The Untouchables. And yet that video was probably played more than some Top Tens.

Mix: But what inspires programmers?

Hirschman: Without a doubt what inspires programmers is innovation. That's why the a-ha video did so well. That's why Godley and Creme did well before the record was even out. You know who the players are, who makes great videos...

Mix: What's the five year forecast?

Hirschman: My job won't be the same job. It'll be highly specialized and more selective. Because ultimately, the video shows are going to fall by the wayside. Advertising revenue overall is not good for video shows right now. And unless things change drastically in the next two years, I don't anticipate things getting better. Consequently, a lot of people run their shows at a loss. A tremendous number of these programmers have other businesses that are their main businesses, and they'll pay for these video shows because they enjoy the medium. But they're going to get tired of that.

And record companies have chosen to charge—not just for the duplication, but for the *airing* of their video clips—and a lot of people are upset about that. A lot of programmers are beginning *not* to play a lot of product because of it. Either they will go to a more underground circuit of videos, or a lesser-known artist, or a lesser-known label. Or, they pay the price. If they pay the price, they've got to have some income to pay the cost. If they can't do that, they're going to go off the air.

So I anticipate, not that a lot of shows will go off the air *solely* because of this cost, but that they will go off for a lot of reasons.

So what we're going to be left with

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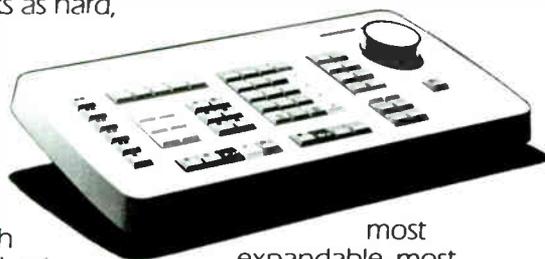
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are specialized shows, magazine-type shows, interview shows—underground rock shows will always exist—MTV type services, and 24-hour stations in regional markets, which are the biggest and the hottest thing in video right now.

Mix: What should we know about that the press never asks or writes about? **Hirschman:** The artist, the record company and/or the manager should know that once they begin the process of making the video, make sure that several things are taken care of. So that when the video's done, the IDs are also done, so they don't have to go back later and rent a studio.

When any major motion picture company makes a film, they make an electronic press kit to go with it. They don't make the electronic press kit after the film is made and distributed—they make it while it's being done. And they do the interviews on the set, on location, as it's happening. And then they distribute it to all the media outlets for promotion. Video should be treated the same way. It can be such a waste of time and money. The record company should put it in the producer's contract.

Also—and this has probably been beaten to death by me and other people—but it basically comes down to

not just making sure the video is solicited, but figuring out the best way to generate the most excitement for that artist. ■

Facilities: New York Gets Post Perfect in Near Future:

Post Perfect, a high-end video post-production house specializing in computer graphics and special effects, is scheduled to open in New York in September. **Gordon Enterprises**, which already owns New York's Super Dupe, Automated Sound, and East Side Film and Video, has leased 40,000 square feet in the Daily News Building.

According to **Dean Winkler**, VP of computer graphics and optical services, *Post Perfect* will offer two on-line optical editing suites, three 3-D work stations, plus 2-D computer animation and motion control capability. At press time, Winkler had plans for Wavefront software with Silicon Graphic turbo charged Iris 2400 for 3-D graphics, and Solarity Computers for rendering. The *Quantel Paint Box with The Harry* are in the budget, as well as the new da Vinci color correction system from *VTA Technologies* of Hollywood, Florida. A separate in-house art department will be available for consultation in anything from story-boarding to editing.

Winkler and president **Pat Howley** are designing the facility for four channels of audio, with both RGB and NTSC signals routed throughout. "We believe that the change from one-inch to digital will be much faster than the change from quad was to one-inch... and we're going to be ready for it," adds Winkler.

...Speaking of digital, **Sony** has announced a prototype for the first digital VTR with an ultra-high-speed recording capability that exceeds one gigabit per second. The one-inch reel-to-reel format can take a high definition signal with a frequency range more than five times broader than standard NTSC, and record it without any bit rate reduction. Frequency compression techniques were rejected in favor of this 8 channel high speed format, which simultaneously lays down a luminance signal and two chrominance signals. Sony has developed a line of HDVS (High Definition Video System) equipment in cooperation with **NHK (Japan Broadcasting Corporation)**.

New Magazine for Visual Artists:

Here's news for anyone who wants to stay on top of the newest techniques for creating graphics using computers or video. The bi-monthly tabloid, *Pe-*

—CONTINUED ON PAGE 170

UNLIMITED LIMITERS

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The Macintosh and the Music Video Producer

by Lou CasaBianca

One of the new buzzword phrases in personal computers is "productivity enhancement," the ability to produce two or three times the work output for the same effort. A further evolution of this concept are "expert systems," designed to serve as an educated assistant dedicated to learning your approach to doing things. These "expert" software packages represent the first practical application of "artificial intelligence" in business and industry. The film and video producer relies on what could be considered a maze of multiple business, creative and technological disciplines. While we are probably still a few years away from fully qualified "expert" software for the media producer, there are in fact a number of stand alone packages that can be integrated to serve as personalized entry-level expert systems.

In last month's MVP we reviewed some of the basic application software and operating hardware packages now available for the Macintosh. The Mac's exceedingly friendly user interface makes it easier to learn and a pleasure to use, especially compared to other personal computers. The typical PC takes anywhere from 20 to 40 hours to learn to be productive. With the Macintosh, you can produce documents in less than half an hour. You don't have to memorize complex commands. Every Macintosh program includes a MENU BAR that allows you to access the program's capabilities with the mouse-pointer. You organize your work on a simulated desk top and access the file or activity you want to use with the mouse. What you see on the screen is precisely what you get when you print out. However, under the Mac's "hood" is a 32-bit Motorola 68000 microprocessor that also makes it one of the most powerful personal computers on the market (See November 1985 *Mix*, MVP and February 1986 *EM*). The following is a brief review of some of the packages available to help the producer in-

crease productivity and creativity in the studio.

Jazz

Lotus Corporation's Jazz uses five integrated modules for word processing, graphics, worksheets, databases and communications. Each of the modules is substantial and could stand alone as a powerful package. The combination of these five functions makes it a very attractive option for the producer or user who is not interested in wasting time and losing concentration in having to change programs when going from one function to another.

Jazz has a feature called "HotView" which allows data placed in any module to be automatically updated or moved to other documents that use that data. So, for example, script updates that affect the budget could be modified calling on the HotView feature to update worksheets and graphs as necessary. If you're working in the middle of a spreadsheet and you want to see the data as a bar graph, a few clicks of the mouse will generate a customized graphic that illustrates the data you highlight. The graph can then be easily copied into a word processing memo or presentation. The spreadsheet has 8192 rows and 256 columns. The graphics program renders six types of charts: pie, line, bar, area, scatter, and percent. The database can handle several thousand records and can be used to generate custom forms.

The communications module allows communication through a modem with mainframes, minicomputers, and public domain databases such as Dow Jones or the Source. It also allows exchange of files with Lotus 1-2-3, Symphony and Microsoft Multiplan. The package supports auto-dial and auto-answer modem features. Its relative ease of use, global functionality and HotView are probably its best features. Jazz provides adequate coverage of most data, budgeting and communications needs for the average studio

or production company. It requires 512K internal memory and an external disk drive. Cost: \$595.

MacProject

This allows a user to plan and track a project from beginning to end. It uses Critical Path Method (CPM) to produce schedules with start and finish dates for each task. It can report on resource interdependencies and generate all needed printed reports. It shows the resource allocations you make, task charts, cash flow and instantly recalculates every time you make any change. The mouse and pull-down menus allow each function to be accessed simply. You draw boxes for each task, connect them easily with rules, and enter start and projected finish dates by filling in the blanks on forms provided. The cut and past functions allow you to move MacProject charts to other programs such as MacWrite, MacDraw and MacPaint can be used to modify charts as needed. One specific MacProject application would be the development of itemized breakdowns of tasks, time and materials flow on a video production or a studio construction project. The 512K version handles 2,000 tasks with 50 resources per project and six resources per individual task. Developed by Apple Computer, MacProject comes with a very clear and concise manual and cost \$125.

ThinkTank

Developed by Living Videotext, ThinkTank is a basic outline processor. The user interface is not the standard Mac interface, but is relatively simple to use and quite efficient. The program provides speedy feedback in allowing the user to brainstorm ideas in a stream of conscious fashion. When all of your ideas are laid out you can then go back and organize and prioritize as you see fit. It is a great tool for script or presentation development. Printer support is limited, but files can be printed in a draft-style mode. ThinkTank is available in a 128K and 512K version. Cost \$145.

Slide Show Magician

Magnum Software is the developer of Slide Show Magician which lets users easily design and show their own text and art presentations in the form of a slide show. It provides a total of 16 movie-like special effects options including wipes, barn doors, Venetian blinds, fade-ins and fade-downs. It can

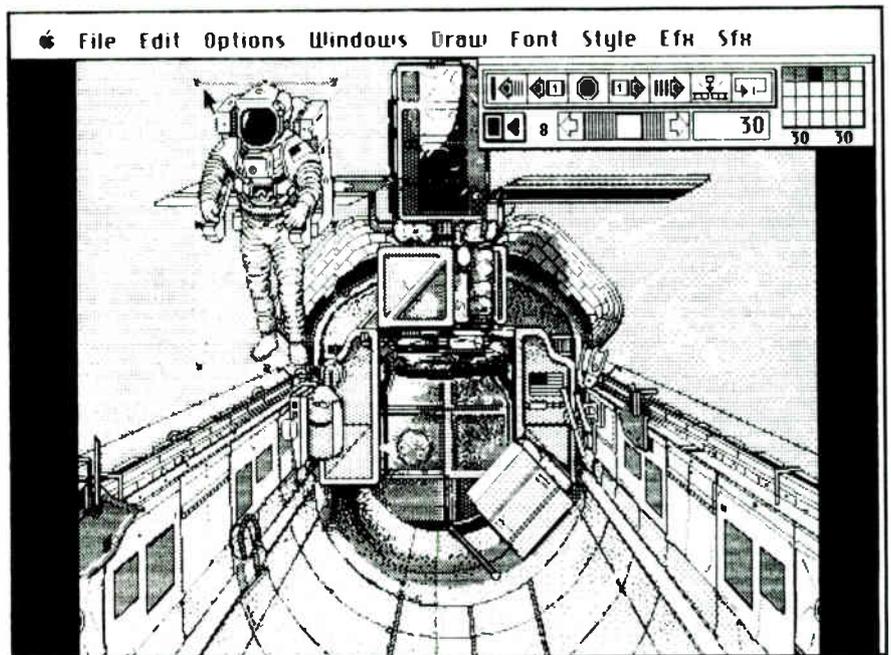
run unattended or control each frame with a click of the mouse to program start-up, next frame, backup, skip, pause and stop. You can superimpose text over images while adding or deleting any effect or time exposure. You can also choose from a number of screen borders provided with the package or create your own. The program accepts documents created in MacWrite and MacPaint, plus any clip-art style graphics helpers. An option lets users install custom working button controls on the screen. Slide Show Magician is a very easily managed storyboard presentation tool requiring little if any graphic or illustration ability. Cost: \$59.95.

VideoWorks

This is a full-featured animation package. Professional quality animations are easily accomplished using the tools provided. Developed by Hayden Software VideoWorks, it features frame-by-frame and real time animation modes and comes with an art disk of pre-drawn images and Art Grabber (which allows the user to use any part of a MacPaint document in VideoWorks). It includes many special video and sound effects, an excellent manual, and many on-disk examples. VideoWorks is a little more complicated to use, but can actually generate frame-by-frame animation that can be run in real time. You can add sync sound and music soundtrack creating a full featured animatic or sketch animation presentation that would typically cost thousands of dollars to produce on video. Cost: \$99.95.

ConcertWare

ConcertWare +, developed by Great Wave Software, is one of a number of Music software packages developed for the Mac. Three integrated pro-



Above: Sample graphic from VideoWorks art disk.

grams support functions that are designed to allow professional level music notation, composition and experimentation. You can choose from 30 pre-defined instruments including piano, harpsichord, guitar, sax, oboe and harmonica. As many as eight instruments can be selected, and you can listen to any four at once.

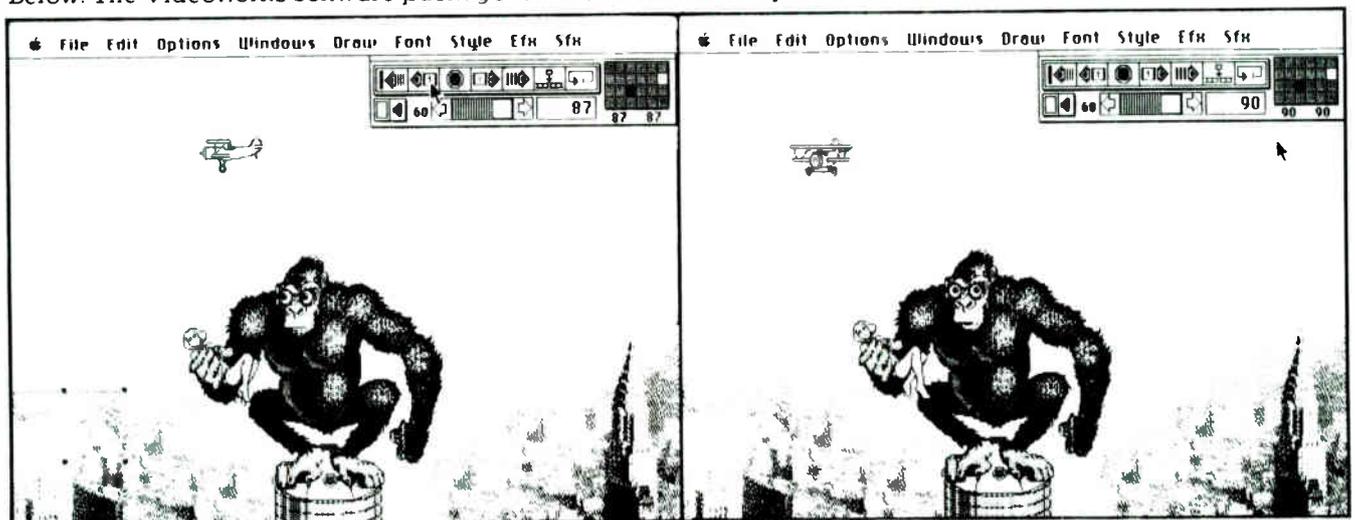
Music Writer is a music "word processor" which allows you to create and edit scores in four voices by entering full-length pieces with the mouse or "play" the Macintosh keyboard. You can change key, tempo or instruments. MacPaint can be used to add notations or text to your scores and print out high quality sheet music. Instrument Maker lets you design your instruments' sound. You can control waveform, harmonics, vibrato and en-

velope for a broad range of sounds. Music Player produces what are probably the highest quality sounds available on the Mac. ConcertWare + can read and use ConcertWare and MusicWorks files. One of the better programs available for developing music on the Mac. Cost: \$69.95. (Another excellent music software package for the Mac is Southworth's Total Music. See the January 1986 issue of Mix Publications', *Electronic Musician*.)

CineMac

The Macintosh can also be used as an interactive group presentation tool. CineMac, developed by MicroGraphic Images, is a video kit that provides a video outlet and accommodates multiple monitors which have a horizontal scanning rate of 22kHz or more.

Below: The VideoWorks software package features both frame-by-frame and real time animation modes.



CineMac is designed to permit delivery of Macintosh images to standard or large screen monitor viewing of any software displayed on the computer. It must be installed by a qualified dealer. Cost: \$239.

Modems

The Apple 300 Baud modem is the most economical modem available for the Macintosh. At 300 baud, it transmits approximately 300 words per minute, which is compatible with most microcomputers. Cost: \$225. Hayes MicroComputer Products is the producer of the Smart Modem 2400. It can transmit at 300, 600, 1200 and 2400 baud. At 2400 baud you can transmit about 2400 words per minute. If you expect to be sending and receiving lengthy documents, the telephone connect time savings of this high speed device could defray its costs more quickly than slower models. The Hayes Smartmodem 2400 stores phone numbers and will automatically dial and answer when you choose. It provides an indicator light and an external speaker. Cost: \$899. SmartCom II software balances power and ease of use. It's capable of unattended operation, and it provides a very powerful command language. It supports MacBinary, Xmodem, and Hayes Verification protocols. The large screen buffer can easily be archived both to the printer and to disk. Lacks keyboard macros. Cost: \$149.

Thunderscan

Thunderscan replaces the ribbon cartridge in an ImageWriter. It laser scans artwork or photography that can be run through the ImageWriter, producing high-quality digitized images. The images can be manipulated as they are created or afterward. It's com-

patible with 15-inch ImageWriter and ImageWriter II. Thunderscan turns the ImageWriter into an electronic darkroom. It stores digitized images of anything you roll through the Imagewriter printer: photos, ads, sketches, diagrams, handwriting and more. The high resolution digitizer snaps into the ImageWriter in place of the ribbon cartridge. You can lighten or darken areas or use the MacPaint, too, to modify and embellish the image any way you choose. Thunderscan comes complete with cartridge, cables, user's guide and application software. Cost: \$229.

MacVision

Koala's MacVision can capture, store and output any image to or from the Macintosh. MacVision requires the use of a video camera and VCR, but installation is easy. There are just two connections: one for video, one for the Macintosh. The software also installs easily on any system disk. Editing is unlimited with MacPaint. MacVision comes complete with digitizer, software and instruction manual. Cost: \$399.95.

IEEE Interface

Recently, National Instruments introduced the GPIB-Mac, an IEEE-488 interface for the Macintosh. The manufacturer claims the device will allow the Macintosh to bridge its closed-architecture barrier by allowing the more than 4,000 devices that currently support the IEEE-488 standard to be connected to the Macintosh. The IEEE-488 standard is an established set of specifications that describe interface formats and signal levels for computers, test and measurement instruments, and some peripheral devices. As many as 14 devices can be connected and

served by a single interface. Additional devices can be attached by using IEEE-488 bus extenders.

The GPIB-Mac will be used in computer-aided design, computer-aided video production, and studio automation, according to the company. Examples of peripherals that support the IEEE-488 standard include data-acquisition systems, plotters, voice-recognition systems, and volt meters. The GPIB-Mac has a set of programming functions, as well as an 8-bit microcomputer tailored for use as an IEEE-488 bus controller. The product includes an internal power supply, a 2,000-byte random-access memory buffer, software, and a shielded serial cable for connection to the Macintosh modem port. The GPIB-Mac is priced at \$595.

Video 8

The introduction of Video 8 opens up a new era in video production. An International standard was set and agreed upon by all manufacturers, so we won't see competitive incompatible standards brought to the market place. At this point, video super 8 is available from Sony and Kodak with other manufacturers planning to release their versions momentarily. The image quality is better than half-inch VHS and Beta, and almost as good as 3/4-inch. What is revolutionary is its small, lightweight size and PCM digital sound quality.

The Sony Handi-Cam is a handheld autofocus camera recorder system about the size of a paperback book and can easily fit into a briefcase. The Handi-Cam uses a charge couple device (CCD) rather than the traditional tube. The tube can handle extremely high contrast ratios and operate in low ambient light levels. The 8mm cassette is about the size of a standard audio cassette and can hold up to two hours of audio/video information. An accessory unit can be used as a digital sound-only recorder and deliver 24-hours of six-channel stereo audio. Sony also makes a compact editor as part of its system. A third module is a receiver for off-air and timeshift recording. The company also makes a second slightly larger camera with a better lens.

The MacVideo Production Center

A system using Video 8, an 8-track recorder/mixer such as the TASCAM Studio 8, a sampling MIDI synthesizer such as Ensoniq's Mirage, a time code reader/writer, and the Macintosh might be considered the ultimate low cost off-line computer-aided audio/

MACPLUS: THE NEXT GENERATION MACINTOSH

Apple Computer Inc. unveiled a new, faster version of its Macintosh at its stockholder's meeting in January. Called the Mac Plus, the new version of Apple's top-of-the-line machine will work up to 50 percent faster than the original machine, according to developers. Although the machine's external appearance is not expected to change, it will incorporate a number of new internal features including:

- A base configuration of 1 megabyte of memory that can be expanded to 4 megabytes. The cur-

rent machine as sold by Apple has a maximum of 512K of memory, although independent parties offer additional random-access memory.

- A double-density 800K disk drive. The current drives are single-sided and hold 400K.
- A small Computer System Interface (SCSI) for the connection of peripherals, especially those from manufacturers other than Apple.
- A new 128K read-only memory (ROM), with hierarchical file structure that will allow for more efficient organization of hard disks.
- A numeric keypad incorporated into the keyboard. It is now an additional-cost option.

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KEEPING UP



CMX A edit suite at Century III Teleproductions, Orlando, Florida.

by Linda Johnson

With all the buzz and hubbub going on about *Miami Vice*—both on screen and on vinyl—it seems reasonable to wonder if everyone in the Southeast is living life in white cotton sport coats, with the music of Jan Hammer waiving in the background. Unfortunately, in *Mix's* recent check-up on studios in this region, we were unable to confirm that the Don Johnson look has infiltrated into the recording world, but we did indeed find that audio-for-video work has increased drastically this past year, an occurrence that many studio owners believe is directly related to the popularity of *Miami Vice* and its use of music to video. As a result, several facilities are gearing up for the abundance of video projects coming their way. With this audio/video fusion comes a splash of record projects and jingle work as well, indicating a healthy, music-oriented market for the entire Southeast region. From the beaches of Florida on over to the Louisiana bayou, studios are keeping up with the beat.

"We're at the beginning of greatness," says Joel Levy of Criteria Recording Studios in North Miami. The 30-year-old facility has established itself as a place to cut records, but Levy notes that Criteria is eager to do more audio work for video and film. In fact, Ted Nugent was in the studio mixing a

few tunes to be used on an episode of *Miami Vice*. Levy adds that because the video/film industry is growing in Florida, Criteria is geared for a variety of audio services. A new Solid State Logic SL-6000E console was recently installed in their Studio E, and an X-800 32-track digital recorder is now available in any of Criteria's five studios to help satisfy the needs of all clients.

Glen Fowler at Soundtrek Recording in Pensacola, FL, reports that he's "trying to keep up with the times." Construction on a new video editing suite was just completed, and the room is equipped with all Panasonic gear including $\frac{3}{4}$ -inch players, recorders, editing machines and monitors. Other construction at Soundtrek included the addition of a small tape machine room to allow for the installation of a keyboard/computer system in the control room. A Linn 9000 drum computer was recently purchased, as well as ASC Tube Silencers. The Garcias, Gandy Dancer, and Karla Lowery are among some artists in recording albums at Soundtrek, and as far as the use of the video facilities goes, Fowler plans to do mostly advertising work at first, and then move into the music video area as the studio becomes more established in the field.

For Shirley Kaye, owner of Coconuts Recording Co. in North Miami, a steady influx of business is keeping her busy

day and night. Subletting to jingle producers during the day, and recording demos/LPs by night, Kaye reports that Coconuts is a "one room studio catering to every client's needs." Kaye, a regional VP of SPARS, notes that shortly after a Holophonics demonstration held late last year at Coconuts, the facility received a Holophonically recorded music library which has been getting a lot of use as of late.

Last year, Century III Teleproductions purchased BJ Studios in Orlando, FL, and has since converted it into a video post-production facility, retaining the smaller of the two multi-track rooms there, adding video facilities, and remodeling the rest of the building. In what used to be the audio room of Studio A are two CMX video tape editing suites, one one-inch, the other mixed format. A 32 x 50 video insert stage now rests where the recording area "A" used to be. The second room was completely rebuilt, and is now equipped with an Auditronics console, Studer 24-track, an Otari 2-track, Lexicon digital reverb, and a full array of outboard gear. Century III handles everything from album projects to custom work for jingles, and has recently completed video projects for Disney and ABC.

Neighboring in Tampa, Morrisound Recording, Inc. relocated and expanded last December. The new facility is twice the size of its predecessor, according to studio manager Tom Morris. One 24-track room and one 8-track occupy the 3,000 square foot facility, equipped with all the gear from the old studio, with an additional Lexicon 224XL in the bigger room. Morris says that since the move, Morrisound has been booked solidly with album projects for the likes of The Outlaws, Bertie Higgins, The Macar Brothers and, with the post-production for *Cocoon* to its credit, Morrisound has seen an influx of video/film work as well.

Yet another Florida studio keeping busy is Miami Sound, where owner Carlos Granados says that since recently moving to a new office and adding a new kitchen to his facility, business has been great. His new Studer 24-track recorder has been put to use on LP projects for such artists as Johnny Ventura, Dennis Brown, and Granados' own "reggae in Spanish" effort.

WITH THE BEAT

Last February, BRT Sound in Ft. Lauderdale completely upgraded with a NEOTEK Elite console, Otari MTR-90, Mark II 24-track, Meyer monitors, AMS reverb, and a Kurzweil 250. A new 3/4-inch video suite was built as well, as the smaller of two studios was torn out to make room for one big LEDE-type room, with an Adams-Smith lock-up system. The new room was used to do the post-scoring of a film on Showtime entitled *What's Wrong with the Neighbor's Son?* According to Norman Titcombe, BRT is looking to do more A/V work, but at the present time is mostly busy with record and jingle projects.

Carlos Rodriguez is enthusiastic about his newly expanded facility, Monolith, in Orange Park, FL. Since incorporating late last year, Monolith has focused in on music video production, though Rodriguez is quick to point out that record projects are still a part of their business. "We present a package to our clients," he explains.

"We try to help market the people who record with us." Monolith now has an art department and a photography studio as well, and recent upgrades include a Tascam 32 2-track and an Akai MG1212 12-track, "so we can edit to the beat," says Rodriguez. "The Akai is really good for music production because it's so easy to sync up." Dedicated to break into music video production, Rodriguez has been involved in a self-produced, one-hour TV special that will promote and highlight the entertainment, art and music communities throughout Florida. With an original music score and interviews with artists ranging from Molly Hatchett to Herman's Hermits, the upbeat documentary will be released nationally this spring. Other recent projects at Monolith include an LP for the Pili Pili Band, and the production of a seven-part television series called *Terminus*.

Due north in Atlanta, GA at VTA (Video Tape Association), Dave Wheel-

er reports that business has been excellent, and next month they plan to relocate to a bigger building as they double their supply of post-production equipment. It is hoped that four one-inch on-line editing rooms and two audio sweetening rooms will help accommodate the heavy influx of business VTA has been receiving from such clients as IBM and Coke, and for various film and video projects.

"Digital audio is our big forte," says Luanne Allgood of Atlanta's New Age Sight and Sound. As one of the few 24-track facilities in the Southeast to offer digital, New Age is doing very well for having been in the business only a little over a year. "We're doing a ton of video," says Allgood. Some recent projects include audio mixdown for a PBS special featuring Tommy Roe, two high-end industrial training programs, as well as record projects for the Atlanta Virtuosi, and RCA artist Ronald Spencer.

To say that business has been good

Nashville Feels the Winds of Change

by Rose Clayton

Change comes slowly in the South, and so digital technology was not quickly embraced by the Nashville music community, whose laid-back pace was an enticement that distinguished it from the other major music centers. Nashville prefers the word "transition." It is used to describe everything current there from recording studio design and recording hardware, to recording philosophy and the music itself.

Many of the city's famous "pickers," who admit they once feared the technological revolution as a threat to the "natural feel" of their music, are now as excited as studio engineers and producers over upgrading and the latest devices invented to enhance. With more than 75 active studios, Nashville prides itself on having a number of digital rooms that will compare to those anywhere, and a studio that can provide quality product no matter what the budget.

While an important criteria for selection of a studio continues to be its atmosphere and personnel, equipment and design have become increasingly important, forcing studio owners to either upgrade or redefine their services.

In a town known worldwide for its concentration of songwriters, studios geared towards the low-budget projects have perhaps been the hardest hit, as hardware has become more affordable for in-house demos and easier for writers and musicians to operate independently. The definition of "low-budget" projects is also changing. A resurgence in popularity of bluegrass and the growth of gospel music propelled by sales of Contemporary Christian music have boosted budgets for these projects.

The technological transition has forced many studio owners, some of whom will not be able to pay for digital equipment, to reassess their role in the Nashville music scene. But as Diane Loudermilk of Nashville

Sound Connection puts it: "If your clients can only afford a rate of \$60 to \$80 an hour, you can't think about upgrading to digital when it would increase your rates to \$125 to \$150." NSC is highly recommended among songwriters who desire master-quality demos for pitching for major label deals. The warmth of analog, they feel, is a great asset at that stage of production.

Sound Stage enjoys the enviable position of operating two studios on a lease agreement with MCA and Warner Bros. Records. Jimmy Bowen (formerly of Warner Bros., now president of MCA Nashville), who ushered the digital movement into Music City, primarily works in its Back Stage Studio. Sound Stage's technical director, Mike Porter, says the lease arrangement with Bowen has been beneficial to all the parties involved: "It provides guaranteed income allowing each studio dollars for upgrades—that's part of the lease agreement; the label doesn't have the overhead, upkeep, or expense of maintenance; we handle the billing and bookwork if the label wants us to; and it allows

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for Atlanta's Crawford Post Production would be quite an understatement. The list of last year's clients (R.E.M., Kansas, The Commodores, The Producers, IBM, Coke) and brand new equipment (Studer A80s, Sony BVU-800 video recorders, AMS reverb, a Montage, Abacus A62 still store devices), plus the addition of a second sound stage and a third recording studio seems indicative of the studio's business standing. "We're pushing for unlimited expansion in each field," says Crawford's Mike Greene, noting that because of a 500 percent increase in the audio business last year, they chose to expand their audio capabilities, and have made a commitment to two major rooms dedicated to audio work. "We do it all," Greene concludes. "From basic tracks to layback to video."

In January, Doppler Studios in Atlanta announced the completion of Studio E, the center piece of an extensive 10,000 square foot expansion program. The new studio features a Solid State Logic 4000 Series console and complete audio-for-video post production capabilities with BTX Softouch, Sony one-inch and 3/4-inch VTRs, dual Otari MTR-90 II 24-tracks. The studio and 800 square foot control room were designed by George Augspurger. This new addition added a fourth 24-track studio to the five studio complex. Doppler president, Pete Caldwell, says, "We have slowly and carefully expanded and upgraded our facilities and our equipment to meet the demands of a diverse and growing industry."

Contemporary Christian album work kept Atlanta's Web IV Recording on its toes last year, working for such artists as Dony McGuire and Reba Rambo, Sheralee Lucas, and The Swinging Richards. According to chief engineer Tommy Cooper, it is the sound and size of Web IV that attracts clients. "We work with a lot of local acts," he says, "and we hope to be attracting some national acts soon."

Jim Zumpano at Soundscape Studios in Atlanta says he's noticed that people are beginning to spend more money on recording. "People seem to have gotten more serious," he says. Recent projects at Soundscape include albums for The Conway Brothers, The Heartfixers, Brick, and Joe South, and Zumpano adds that their large studio is often rented out as a soundstage to such clients as the Atlanta Ballet Co. and for various industrial A/V presentations. "But," he says, "we really want to concentrate on the music." Additions to Soundscape's machinery include a Lexicon PCM70 and a pair of Valley People Dyna-Mites. Zumpano adds that by this fall, their Studio B should be geared up with a computerized MIDI system.

Piano Quartet session at New Age Sight and Sound, Atlanta, Georgia.

Last year, Arthur Smith Studios in Charlotte, NC was bought, completely gutted, remodeled, and today it houses an arsenal of brand new equipment for the newly-named Studioeast. The two-studio facility is equipped with an Amek Angela 36 x 24 console with Audio Kinetics Master Mix automation (in A), and TAC Scorpion console w/Otari 8-track (in B). The facility is MIDI compatible and is geared for video sweetening as well. A Kurzweil 250 will surely help keep new clients content, some of whom include The Entertainers, The Band of OZ, The Poor Souls, and Tempest.

Another Charlotte facility "cleaning house" as it were, is Reflection Sound Studios, where studio A is expanding with 50 percent more floor space. Acoustics are being updated as well, and studio manager Mark Williams says that a new Sony MX-P3000 board is on order. "We wanted the place to be even more roomy, lighter, more sumptuous," says Williams. R.E.M. recorded their first two albums in the original room, and some artists in more recently include Jim Brock, The Federal Brothers, PKM, and Tammy Sue



Eakker. And while album work is Reflection's strongpoint, Williams notes that he's seen some video and film activity developing as of late.

"We've seen an explosive growth in video," says John Fry, owner of Ardent Recording in Memphis, TN. Fry adds that audio advancement has been pulled by this as well, and that "this was the year we decided it was time to go ahead and go digital." As a result, studio B was completely remodeled last November; the control room and

recording room were switched in order to create a control room with more space to accommodate their Kurzweil and Fairlight, as well as future equipment additions. And since installing a new Solid Stage Logic SL-6000E console, Mitsubishi X-850 32-track digital recorder, and X-80 2-track system, Fry says the new room has been very well received. "We haven't had a free day since," he says. A soundstage will



Neve 8128, Necam 96, Otari MTR 90, Adams-Smith Synchronizer, Mitsubishi Digital 32 Channel Available, AMS, Quantec, Lexicon, Drawmer, Eventide, etc.

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PHOTO: RICK DIAMOND

(L to R): Ed Thacker, Mike Greene, and Phil Ehart put the finishing touches on the soundtrack for the film Vacation II at Crawford Post Production.

be added this year to further satisfy the growing demands of the video realm. Along with Ardent's plunge into the film/video world, Fry says they're up to their knees in record projects for artists including ZZ Top, gospel artists Phil Driscoll and The DeGarmo & Key Band, and funk groups The Masons and Slugger. Fry projects that he will see a 65 percent growth in the video area this year, and is looking for a 25 percent increase in audio work as well.

Another Memphis facility, Cotton Row Recording, recently upgraded with a Trident Series 80 console, allowing a total of 56 inputs to its 24-track studio. Other additions include MIDI capability with sequencer and Memory Moog, AMS DMX 1580 harmonizer, and a full array of outboard gear. Upstairs at Cotton Row has been turned into a 16-track studio called The Attic. It features an Audiotronic 501 recording console, Fostex multi track, Otari 5050B 2-track, and much more. Sessions at both studios are primarily album oriented, but they recently recorded the Kansas City Royal's jingle.

Some bands in working on albums were Jim Cocoran, The Midtown Jazz Mobile, Betty Lynn McIlvian, Mariana, and King Floyd.

Specializing in electronic music production for television, film, commercials and record sweetening, Steve Schaffer in Nashville reports that business is excellent since moving out of his own facility into The Bennett House. "They requested that I move my business there," he says. "It's great, because now I have more room for all my equipment." Schaffer's barrage of keyboards and drum machines are used to do both original scores and jingles for such clients as American Express and Chevy. He is especially enthusiastic about in-house projects, "where I am responsible for all the creativity. I feel really strongly about the potential of electronic production," he adds. "The future is virtually unlimited."

"Business has gone up 200 percent from last year," says chief engineer Milan Bogdan of Masterfonics, a disk mastering house in Nashville. In Feb-

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"It's really hard to change people's perceptions of Nashville," says Lynn Gillespie, executive director

of the non-profit Nashville Entertainment Association, a group that functions as sort of a chamber of commerce for the arts in the city. "People all over—particularly on the coasts—think Nashville is a little podunk town with nothing but country music. We're trying to change that. But it's like climbing a mountain—you have to take one step at a time."

The NEA was formed six years ago as the Nashville Music Association by Jimmy Bowen and Bob Beckam, two of the city's music business leaders, to bring a sense of unity to the disparate styles of music that have co-existed (with little fanfare) in the city for years. The name was changed to the broader appellation only recently, "so we could better promote Nashville as a total center for entertainment," according to Gillespie.

The NEA has about 1,300 members who are subdivided into a number of different interest areas includ-

ing music, film/video, dance, musical theater and acting/modeling. The organization sponsors numerous events designed to promote local artists; for instance, in mid-January the NEA put on a very successful showcase for 11 local rock bands at a top Nashville club. "We managed to get A&R people from L.A. and New York to check out these bands," Gillespie says, "plus we drew 2,500 other people besides. We have a tremendous rock scene here and the record companies are beginning to realize that. We also have great pop and jazz acts here, too."

The NEA also works with other local organizations, ranging from the local NARAS chapter to the Country Music Association. "We're all in this together," says Gillespie. "Cooperation is the watchword. We're all trying to let the world know what special people we have in Nashville."

—Blair Jackson

ary, the facility expanded with a Tom Hidley designed computer control remix room with an SSL console. Though it was not complete at press time, Bogdan said the new room will be digital multi-track, probably with the 3M and

Mitsubishi, and JVC digital 2-track. With the addition of an Ampex VPR-3 with time base corrector, VPR-80, and JVC 900, Bogdan says "we're dedicated to jazzing up the audio for video." Masterfonics has been working on

projects for Alabama, Conway Twitty, Merle Haggard, and Ricky Skaggs.

"It's like an erector set!" laughs studio manager Suzi Herford of Norbert Putnam's brand new facility, Digital Recorders, in Nashville. And from the sounds of it, the 48-track, all-Sony digital studio is indeed unique. The large facility is shaped like an octagon, and everything in it is portable—even the walls move. Putnam is calling his services there "affordable digital": one full

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Below: Studio owner Harold Shedd and manager Paul Goldberg playing back tracks at Music Mill Recording Studio in Nashville. Recent sessions there include Shedd producing a new RCA project for country superstars Alabama, with Jim Cotten and Joe Scaife engineering, and George Clinton and Goldberg assisting.

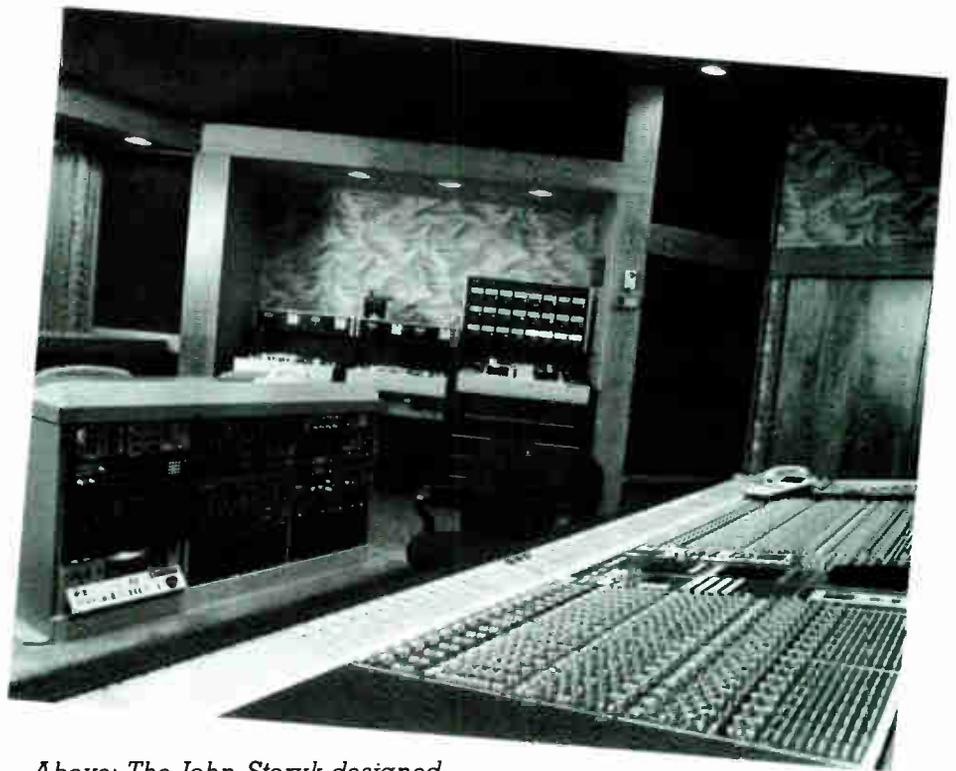


day will cost clients \$1,200. And if all goes well with this new design, there is talk that Putnam will open a similarly designed studio at another location. Kicking off the first sessions at Digital Recorders was John Hiatt.

"We're seeing a lot more music projects for film and video," says Diane Loudermilk of Nashville Sound Connection, noting that the music for Sweet Dreams was scored there by Greg Perry. Another recent project included an album for Dolly Parton's brothers and sister, Randy, Floyd and Rachel. Upgrades at the 24-track facility include an Akai 12-track, JVC mix-down equipment, a PCM70, two PCM-60s, and a Lexicon LARC. Loudermilk adds that there are plans to get a Mitsubishi 32-track machine by this June.

At D.I.Y. Recording in Hendersonville (Nashville area), Ted Wilson says that Contemporary Christian album work increased this year, and that jingle and demo work has helped keep the facility busy as well. "We're pushing jingles right now," he says, "and trying to target major accounts." As of now, D.I.Y. does 70 percent record projects and 30 percent jingles. Recent upgrades at the studio include Roland 2000 and 3000 delays, Roland Synch Box SBX80, and updates in sampling for their Kurzweil.

—PAGE 163



Above: The John Storyk-designed control room at PARC Studio is operated as a partnership of Pat Armstrong Record Company and Full Sail Recording School. Located at the school's Orlando, FL, complex, the facility is used for class instruction, producer Armstrong's projects, and outside clients such as Adrian Belew, Gail Davies, and Menudo.

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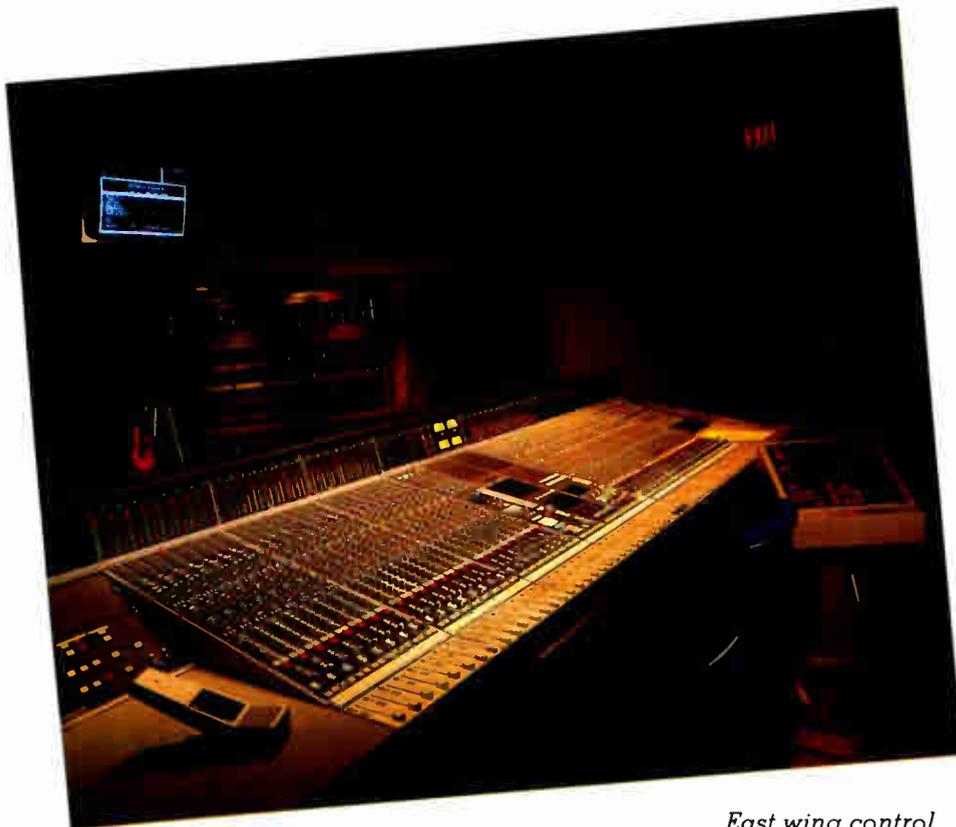
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East wing control room at Criteria (Miami, Florida) features an SSL SL-6000E console.

—FROM PAGE 111, NASHVILLE

them to come in and work on a project without tearing down."

Some of the clients whose projects have been produced on the Neve 8068 console are Hank Williams, Jr., Conway Twitty, George Strait, Mac Davis, John Schneider, Loretta Lynn, and Bowen's latest "new artist," Waylon Jennings.

"The reliability of the Neve is incredible," says Porter, "we couldn't afford to get by with anything else. We couldn't afford the down time because of the way we operate. Sometimes we are going 16 to 18 hours a day, seven days a week, usually 11 months a year."

Sound Shop, a division of Tree International, is another studio that operates under a lease agreement, but with three studios, it also has other projects. "This will always be a good songwriting town," says manager Pat McMakin, "so we will always have a good demo situation. We also are fortunate because we have a good reputation in the jingle market."

McMakin reports that even with country record sales down and budget cuts, their master session work is healthy. "Probably 80 percent of our master sessions are country, but recently we had a heavy metal band and a Contemporary Christian session going on at the same time. The Christian music is rocking harder than anything in town. Musically they are neat acts and are really happening."

Sound Shop has had its share of pop/rock acts cut there, too, with the likes of Grand Funk Railroad, Neil Young, and Paul McCartney using the studio. The former pop group Exile, produced by Tree owner Buddy Killen, has recorded six number one country records at Sound Shop.

Over the past year, Nashville's historic Sound Emporium Studio A was closed for more than six months to allow for a \$450,000 complete control room renovation. The 20'x22'x12' hexagonal, acoustically live, futuristic design was a cooperative effort between studio manager Rick Horton and Mike Poston of Digital Associates.

A new Neve 8124 48-in 32-out console with the Necam 96 computerized automation system, Otari MTR 90 24-track analog, and digital availability with the Mitsubishi 32 channel recorder, form the nucleus of the control room. Entertainer Roy Clark, a partner in Sound

—PAGE 120

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PHOTO: MELODIE GIMPLE

Studio manager John Abbott (left) and owner/producer Larry Butler at 1111 Studio in Nashville.

—FROM PAGE 118, NASHVILLE

Emporium, says, "Digital technology is running high in Nashville and we expect to see more. If we are to compete with the other top studios in town, we have no choice but to install the best equipment available."

Sound Emporium gained a hit-factory reputation throughout the '70s with the popularity of Kenny Rogers' "Lucille" and "The Gambler," successful Waylon & Willie LPs, and a string of hits by Don Williams.

Horton is more excited about the future than the past, however, and points out that the soundtrack for the Roy Clark/Mel Tillis movie *Uphill All the Way* was done at Sound Emporium. Also, "Tom Petty stopped by and did some overdubbing while he was in Nashville," says Horton. "I think he was attracted by the equipment we have more than by our reputation."

Eleven Eleven Sound Studios, formerly Sound Emporium's Studio C and located behind a prestigious old home on Music Row, recently added Mitsubishi's X-850 32-track digital recorder and the X-80 2-track in what it termed "its continuous strive for excellence."

Emerald Sound on Music Row, Treasure Isle, situated in the Berryhill community, and The Castle, located in suburban Franklin, are also among Nashville's top studios heavily committed to digital technology.

Producer Tom Taffe, working on

an album project with Stefan Anderson that was begun in L.A., chose to work at both Castle and Treasure Isle because of the compatibility of the 3M 32-track digital recorder. Taffe says that he was surprised in working with the engineers at both studios, "not so much for their technical expertise—I expected that—but for their concern, support, and creative input into the L.A. project."

While The Castle produced Nashville's first fully digital recording (Deborah Allen's *Let Me Be the First*) and numerous top country artists (Ricky Skaggs, Reba McEntire, Dolly Parton, Emmylou Harris, etc.), it has always attracted clientele from London and New York. Josef Nuyens, who oversees operations at The Castle, which he owns with his parents, says several New York based R&B acts have been recording some exciting music there, and he has been producing a "unique sounding" local act, Walk of the West.

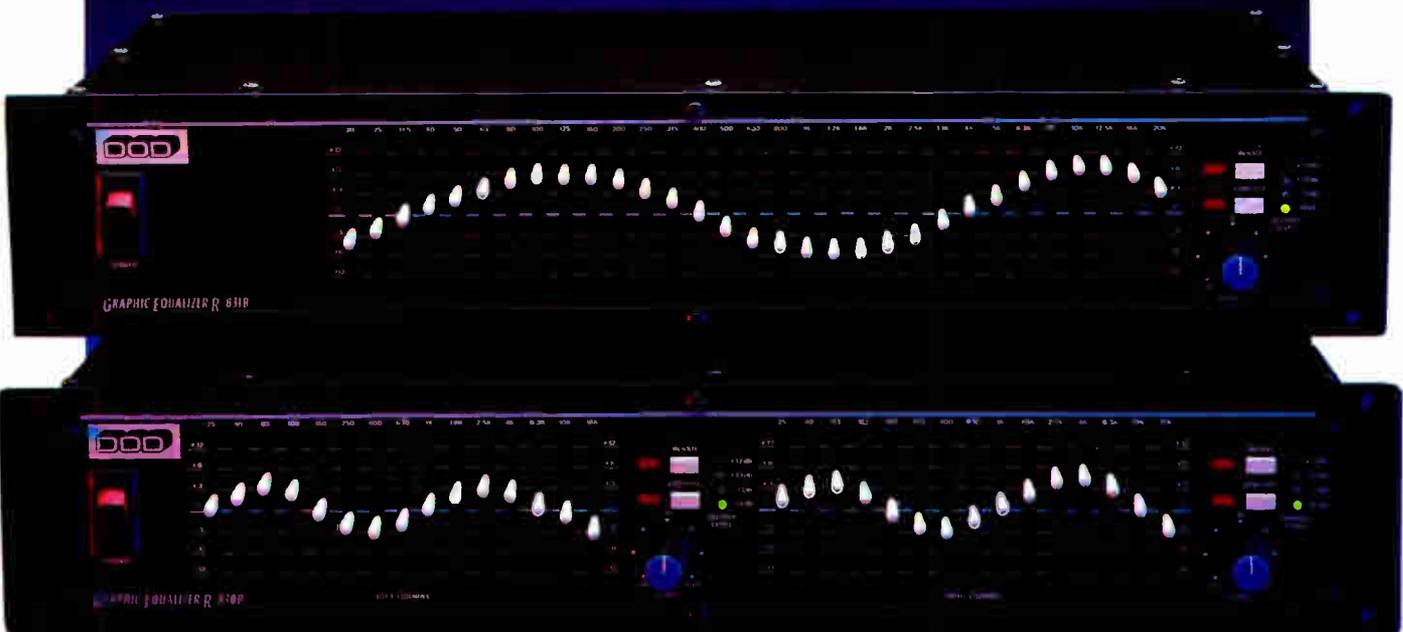
Noted producer Norbert Putnum, whose Bennett House was also located in Franklin, has moved his operation to the new Welk Building on 16th Ave. According to studio manager Don Cobb, Putnam's new studio, Digital Recorders, opened in mid-January, and, as its name indicates, is totally digital.

Putnam designed the modular control room himself, choosing a Sony 3000 console and two Sony 24-track digital machines.

Studio 19, with its Trident series

—PAGE 124

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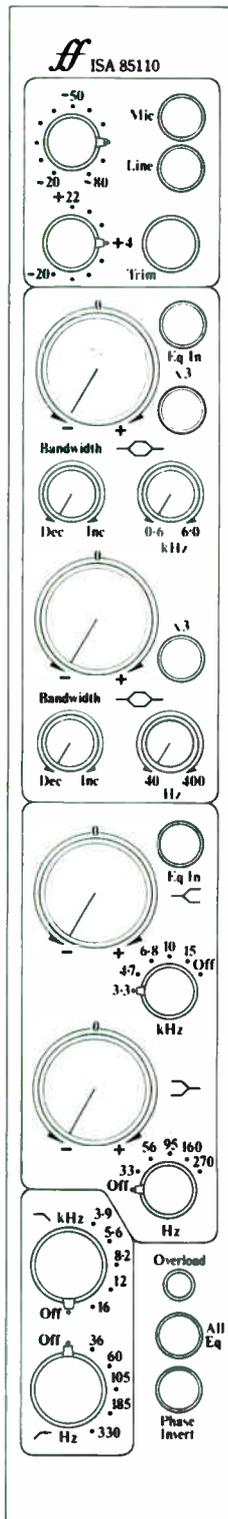
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—FROM PAGE 120, NASHVILLE

80B console and Studer A80 24-track recorders, recently redesigned its control room and updated all power amps. "A lot of engineers around say our monitors are now the most accurate they have used," says chief engineer E.J. Walsh. At one time, Studio 19 was almost exclusively booked for production by Welk Music Group writers, but Walsh reports they are placing a lot of attention on attracting bluegrass groups.

"The acoustics of the room are well-suited for acoustic instruments and strings, because of the openness of the room and the natural wood," Walsh says. "Floors are walnut and ash. We get a sound that bluegrass groups just love. Don Johnson, who plays keyboards for Emmylou Harris, comes in from Oklahoma just to use the room for strings."

Studio 19 leases digital equipment for the groups that request it. "They seem to be getting more into the technology," Walsh adds. Doc Watson, the Virginia Squires, and the Bluegrass Cardinals are some of the groups that use the studio. It is also beginning to be used for jingles.

"The jingles are getting big here because of the room size and because they like the sound of the horns and strings," says Walsh. "Business is so good that our owner, Larry Rogers, is going to upgrade his studio in Memphis (Lyn-Lou) and start producing his acts back there because he can't get time here."

Another studio in town that is often chosen for its size and unique sound is Music City Music Hall, located in the RCA building.

"Studio A is physically probably the largest studio in town," says chief engineer Bill Harris. "This room is patterned after the RCA rooms in L.A. and New York. It's 75' long, 50' wide, and three stories high, but we have it looking intimate because we have three garage door openers that can close off certain parts."

The Music Hall has a Neve console model 8030 that Harris says has a certain appeal: "Some people feel that vintage equipment has a unique sound. We also probably have the best collection of old microphones in town."

Although Harris isn't certain whether Elvis Presley ever record-

ed in the famous studio, Elvis' *In Concert* and *Moody Blue* albums were completed there. All of Charley Pride's classic country sounds were captured there, as well as the first two George Strait LPs, and records by Eddy Arnold, David & Sugar, Jerry Reed, and Loretta Lynn, whose long-time producer, Owen Bradley, co-owns the studio with his brother Jerry.

Owen Bradley now prefers to work at his new Bradley's Barn in Mt. Juliet, about 30 miles outside Nashville. One of the last projects completed before the famous Bradley Barn burned in 1980 was the soundtrack album of the film biography of Loretta Lynn's, *Coalminer's Daughter*. Strangely enough, the soundtrack of the Patsy Cline biopic *Sweet Dreams*, was the first project completed in the new studio. After working with the legendary Lynn and Cline, though, Bradley took working with Academy Award-winning actresses Sissy Spacek and Jessica Lange, who portrayed the legends, as just another day's work.

Since Bradley has added video capabilities to the Barn before it burned, Bradley has some tapes of Spacek studying audio tapes of Lynn's voice for the movie in order to perfect her accent. "She really worked hard for six or eight weeks," says Bradley. "On the songs, I had Loretta's tracks and I took her voice off. Sissy got used to the tracks and when she had to fly by herself, she found she had been flying all along."

On the Cline tracks for *Sweet Dreams*, Bradley says, "We copied the tracks and did everything we could to make them better so we could better control the voice. It was strange watching Jessica listen to the tracks and sing. She would watch tapes of herself and work and work until she got the moves just right."

Having been active in the recording industry here for more than 30 years, Bradley doesn't seem to be concerned about the criticism of Nashville being too slow to update its music for the '80s and that its place as a major recording center might be slipping.

"Everybody has to talk about something," says Bradley. "We've always made good music here and people have always bought it. We must be doing something right." ■

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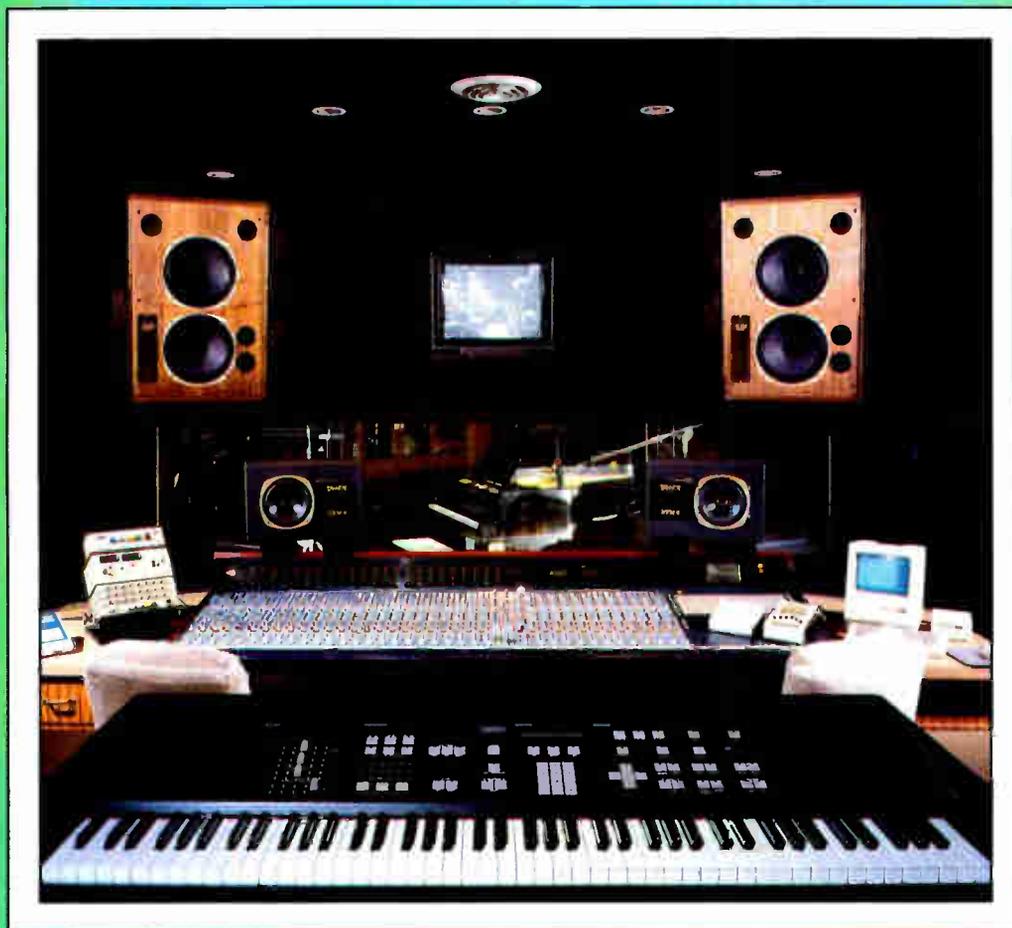
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SOUTHEAST STUDIOS

LISTINGS



The information in the following listings section was supplied by those listed. **Mix** claims no responsibility for the accuracy of this information. People and equipment change, so please verify critical information with the studios.

Left: The control room at Studioeast, in Charlotte, North Carolina. The million dollar facility, designed by Steve Durr, went on-line last September and features an Amek Angela 36x24 console, Audio Kinetics MasterMix automation, Kurzweil 250/Macintosh 512K system, Tannoy FSM monitors, and an MCI 24-track. Photo by Consolidated Studios.

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Mix listings procedure: Every month, **Mix** mails questionnaires to recording studios and/or other vital facilities and services for the recording, sound and video production industries. Basic listings (name, address, contact) are provided free of charge. Extended listings (equipment, credits, specialization), and photographs or company logos may be included at a nominal charge. If you would like to be listed in a **Mix** Directory, write or call Lauri Newman, **Mix** Directories, 2608 Ninth Street, Berkeley, CA 94710, (415) 843-7901.

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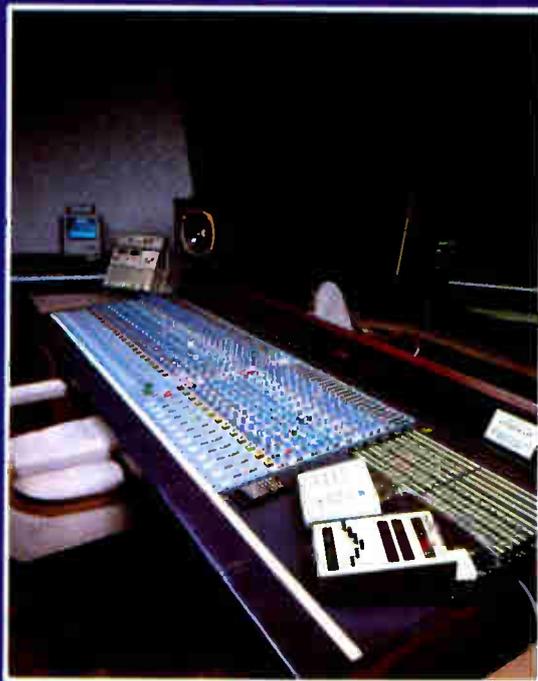


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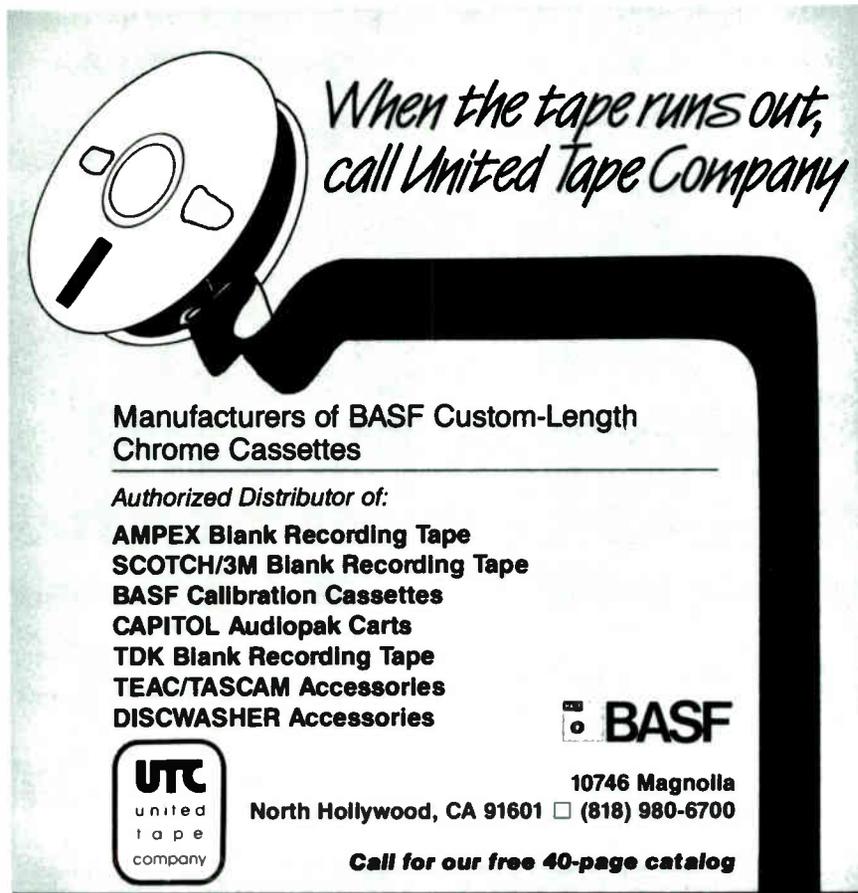
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519A Greenup, Covington, KY 41011
(606) 581-4986
Owner: Kraig B. Greff
Studio Manager: Kraig B. Greff

•• **GROUND LEVEL SOUND**
2717-A Clayton Dr. NW, Huntsville, AL 35810
(205) 852-7454
Owner: John Heilman, Bill Roof
Studio Manager: Jeff Holland



SOUTHEAST STUDIOS

•• **GYPSY STUDIO**
also REMOTE RECORDING
3039 Hazelton St., Falls Church, VA 22044
(703) 241-7445
Owner: Mike Rivers
Studio Manager: Mike Rivers

•• **HAMPTON UNIVERSITY DEPT. OF MUSIC**
Hampton University, Hampton, VA 23668
(804) 727-5402, 727-5514
Owner: Hampton University
Studio Manager: Bob Ransom

•• **H & G RECORDED PRODUCTIONS**
only REMOTE RECORDING
600 Blanche St. P.O. Box 161, Chalmette, LA 70044
(504) 469-7963
Owner: Ben Hordy
Studio Manager: Marcelle Hardy

•• **HAPPY FACES PRODUCTIONS**
also REMOTE RECORDING
419 Lanier Lane, Winter Haven, FL 33880
(813) 324-3487
Owner: Charlie Massey
Studio Manager: Charlie Massey

•• **HAYES RECORDING STUDIO/WEST**
also REMOTE RECORDING
333 1st St. NE, Ste. A, St. Petersburg, FL 33701
(813) 894-3676
Owner: Paul Hayes
Studio Manager: Paul Hayes

•• **HEARTH PRODUCTIONS**
3608 Woodmont Blvd., Nashville, TN 37215
(615) 297-6292
Owner: Dunkin Nelson
Studio Manager: Eric Thorson
Engineers: Dunkin Nelson, Eric Thorson
Tape Recorders: Tascam 48, 8-track; Tascam 42, 2-track; Nakamichi CX-5, cassette; Nakamichi CX-3, cassette; Nakamichi (digital) DMP-1000, 2-track.
Mixing Consoles: Tascam 520, 20 x 8 x 2; assorted Yamaha sub-mixers.
Monitor Amplifiers: Audio Research D-100, D-75 (tube), NAD.
Monitor Speakers: Klipsch Herseys, JBLs, Magneplanar 1-Bs, Auretones, KEF.
Echo, Reverb & Delay Systems: Yamaha REV-7, ART 01A, Lexicon PCM 42 with 4.8 sec option.
Other Outboard Equipment: Aphex Type-B Exciter, Rane HC6, Gatec, BBE, (2) dbx 160x compressors, Stewart & Audio Technica direct boxes, AKG and Sennheiser phones, assorted Music Man and Peavey amps, full array of "stomp boxes."
Microphones: Neumann TLM-170, AKG 330s, Sony, assorted Shures.
Instruments Available: Yamaha DX7, TX7, KX88 keyboard, Juno 106, CZ-101, 360 Systems MIDI Bass, Yamaha QX7 sequencer, Oberheim DMX, Yamaha RX11, Oberheim Xpander, assorted acoustic and electric guitars, basses, Shobud pedal-steel, fine old Howard piano with very sweet spruce.
Video Equipment & Services: Available upon request.
Rates: \$25-\$50/hr., depending upon scope of project.
Extras: A full complement of professional players/programmers is readily available. Hearth Productions offer a low-key, low-cost approach to high-tech sound and equipment. Any necessary gear can be easily rented and available. Our fully MIDI-ed keyboard/sequencer array is very valuable for experimentation in arranging and composition.
Direction: Although leaning towards the MIDI-magic of the

present, we have done soundtracks for stage, extensive country/pop demo work, jazz, and voice-overs. We will arrange our resources to suit your project, whatever it might be. We enjoy new directions, and we enjoy our work at Hearth.

•• **HERITAGE RECORDS & RECORDING STUDIO**
also REMOTE RECORDING
Rt. 3, Box 280, Galax, VA 24333
(703) 236-9249
Owner: Bobby F. Patterson
Studio Manager: Bobby F. Patterson

•• **BERRY HILL STUDIO**
also REMOTE RECORDING
Kentucky Dept. of the Arts, Berry Hill Mansion
Frankfort, KY 40601
(502) 564-8076
Owner: Kentucky Dept. of the Arts
Studio Manager: Ray Bowman

•• **HILLSIDE SOUND**
also REMOTE RECORDING
P.O. Box 992, Etowah, NC 28729
(704) 891-9270
Owner: Wilson Hauss
Studio Manager: Wilson Hauss

•• **HOME SPUN RECORDINGS**
Rt. 4, Box 261, Camden, SC 29020
(803) 432-8648
Owner: Michael W. Hayes
Studio Manager: Michael W. Hayes

•• **HORIZON PRODUCTIONS**
1010 West Platt St., Tampa, FL 33606
(813) 254-3399
Owner: Robert Stephenson
Studio Manager: Philip Schwarz

•• **HORIZON RECORDING ARTS STUDIO**
2607 Eastland Ave., Nashville, TN 37206
(615) 226-2227
Owner: Richard Owens
Studio Manager: Richard Owens

•• **IKON SOUND**
also REMOTE RECORDING
Rt. 2, Box 640 #0, Asheville, NC 28805
(704) 298-8325
Owner: Mark Miller
Studio Manager: Mark Miller

•• **DEBRA J. STUDIOS**
3204 Sydney Dover Rd., Dover, FL 33527
(813) 659-1066
Owner: George Riddle, Debra Riddle
Studio Manager: George Riddle

•• **JASIR PRODUCTIONS**
also REMOTE RECORDING
5438 Mason Rd., Memphis, TN 38119
(901) 761-0657
Owner: Jeffrey S. Rust
Studio Manager: Jeffrey S. Rust

•• **JBG AUDIO PRODUCTIONS**
also REMOTE RECORDING
425 St. Rose Ave., St. Rose, LA 70087
(504) 468-9200
Owner: Bob Himmaugh
Studio Manager: Glen Himmaugh

•• **JOBE SOUND**
also REMOTE RECORDING
Rt. 8, Box 433, Corinth, MS 38834
(601) 287-9538, 287-3101
Owner: Joseph A. Jobe
Studio Manager: Joseph A. Jobe

•• **LA LOUISIANNE RECORDING STUDIO**
711 Stevenson St., Lafayette, LA 70501
(318) 234-5577
Owner: Carol J. Rachou Sr.
Studio Manager: David M. Rachou

•• **LEATHERWOOD SOUND**
also REMOTE RECORDING
 4107 Bynum-Leatherwood Rd., Anniston, AL 36206
 (205) 238-1038
 Owner: Kevin Freeman
 Studio Manager: Ben H. Haskell

•• **LENTZ & ASSOCIATES**
also REMOTE RECORDING
 501 Washington St., Raleigh, NC 27605
 (919) 828-6761
 Owner: L.A. Lentz
 Studio Manager: L.A. Lentz

•• **GERALD LEWIS RECORDING**
only REMOTE RECORDING
 216 S. Pershing Dr., Arlington, VA 22204
 Owner: Gerald Lewis

• **LIMITED PRODUCTIONS**
 3188 Holiday Place, Atlanta, GA 30340
 (404) 457-6248
 Owner: King Enterprises
 Studio Manager: Allen Swaim

• **LINDEN A.V.**
also REMOTE RECORDING
 229 N. Henry St., Alexandria, VA 22314
 (703) 549-4424
 Owner: Katherine Monteith
 Studio Manager: Gregg Powers

• **LIVINGROOM STUDIOS**
also REMOTE RECORDING
 35 Deerwood Dr., Aiken, SC 29801
 (803) 649-2889
 Owner: Geof Northridge
 Studio Manager: Geof Northridge

•• **LOCONTO PRODUCTIONS/
 FXL SOUND STUDIOS**
 7766 NW 44 St., Sunrise, FL 33321
 (305) 741-7766
 Owner: Frank X. Loconto
 Studio Manager: Phyllis Finney Loconto

• **LOST RIVER RECORDING STUDIO**
 631 N. 9th St., Paducah, KY 42001
 (502) 444-7594
 Owner: Clyde Wood
 Studio Manager: Andy Wood
 Engineers: Laddie Wood
 Dimensions of Studios: Studio A: 14 x 12; Studio B: 12 x 7.
 Dimensions of Control Rooms: 9 x 12.
 Tape Recorders: TEAC 3340S 4-track; TEAC 3300S 2-track; TEAC A-170 cassette; Technics M270X cassette; Panasonic RS-808 8-track cartridge.
 Mixing Consoles: Tapco (4 mixers in 6' console) 6000R series, 24 in x 4 out; TEAC/Tascam Model 1; TEAC meter bridge MB20.
 Monitor Amplifiers: Crown D-60.
 Monitor Speakers: Custom built, also cubes.
 Other Outboard Equipment: dbx 155, (4-track); dbx 152 (2-track); Dolby, (8-track tapes); Tapco 2200 graphic EQ; TEAC PB-64 patch bay; (6) AKG K-140 headphones.
 Microphones: Audio-Technica AT-813, Shure 585, E-V DS-35, Barcus-Berry 1355 guitar transducer.
 Instruments Available: Baldwin Acrosonic piano, Fender-Rhodes piano-bass, synthesizer, electric piano, small organ, Leslie tone cabinet, Fender Bandmaster amp, Fender Bassman amp, two Sunn amps, 6 and 12 string Alvarez acoustic guitars, bass guitar, Gibson classic guitar, steel guitar, violin, conga drums, percussion (all instruments in studio).
 Rates: Call or write for prices.

•• **LOWERY SOUND**
 1509 14th Ave. S.W., Decatur, AL 35601
 (205) 353-2403
 Owner: Steve Lowery
 Studio Manager: Steve Lowery

•• **LUNDY RECORDING STUDIO**
also REMOTE RECORDING
 P.O. Box 485, Barbourville, KY 40906
 (606) 546-6650
 Owner: David Duane Lundy, Duran Lundy
 Studio Manager: David Lundy
 Engineers: W.D. Lundy, D.D. Lundy, D.A. Lundy
 Dimensions of Studios: 24 x 30.
 Dimensions of Control Rooms: 12 x 20.

Tape Recorders: Scully 284-8, 8-track; Ampex AG-440-B, 2-track; Ampex 351-2, 2-track; Ampex AG-600-B, 2-track.
 Mixing Consoles: Custom-built 24 x 24.
 Monitor Amplifiers: McIntosh, Southwest Tech.
 Monitor Speakers: E-V, Altec, JBL 4311.
 Echo, Reverb & Delay Systems: Mechanical Fairchild, Tapco, Lexicon PCM60 and 70.
 Other Outboard Equipment: LA2-A, LA3-A; Ashly Audio SC-5; UREI Dual Graphic EQ 535; Sansui Cassette Deck, dbx and Dolby noise reduction.
 Microphones: Neumann U47s, U48s; RCA 77DX; Electro-Voice; Beyers; AKG; Shure; Sony; Sennheiser, 20 in all.
 Instruments Available: 6'8" Chickering grand piano; Fender amps, Peavey amps, Korg Poly-800; Baldwin organ, one full drum set, and Simmons electronic drums.
 Video Equipment & Services: Tape duplication Ampex BLM 200 plus 5 slaves method of duplication; Bin Loop, tape used 3M/Ampex/Capitol tape. Duplicating Speeds: 32-1, 16-1. King loader.
 Rates: Upon request.

• **MAC'S TRACKS**
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 Box 1472, Laurel, MS 39441
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 Studio Manager: James McNeil

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 (601) 371-1808
 Owner: Sam Kazery
 Studio Manager: James A. Johnson, David Ellenbaum

•• **MARIAH RECORDING**
also REMOTE RECORDING
 Village Green Mall, Hattiesburg, MS 39401
 (601) 545-1886
 Owner: Vaughn Wilson
 Studio Manager: Vaughn Wilson

•• **MAYS COUNTRY DEMOS**
 340 N. Broadway, Georgetown, KY 40324
 (502) 863-1533
 Owner: Elmer L. Jones
 Studio Manager: Norman L. Mays

•• **MBL RECORDING STUDIO**
 667-669 Hawthorne, Memphis, TN 38107
 (901) 278-5003
 Owner: Bobby Davis, Vikki Davis, and Tom Davis
 Studio Manager: Bobby Davis, Bob Pierce, and Steve Wenger

• **MCDONALD SOUND**
also REMOTE RECORDING
 2806 Napier Ave., Macon, GA 31204
 (912) 746-9308
 Owner: W.R. McDonald
 Studio Manager: W.R. McDonald

•• **McKINZIE RECORDING SERVICES**
also REMOTE RECORDING
 2472 Adina Dr. #8, Atlanta, GA 30324
 (404) 266-3840
 Owner: Don McKinzie
 Studio Manager: Don McKinzie

•• **MEDIA PRODUCTION AND CONCEPTS**
 1324 N. Hearne Ave. Ste. 230, Shreveport, LA 71107
 (318) 424-5407 ext. 230
 Owner: RealArt Projects
 Studio Manager: Howard Jennings Hart

•• **MEDIA PRODUCTIONS**
also REMOTE RECORDING
 125 Miller Ave., P.O. Box 322, Oak Hill, WV 25901
 (304) 465-5786
 Owner: W. Doug Gent
 Studio Manager: W. Doug Gent

•• **MEMPHIS COMMUNICATIONS CORPORATION**
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MEMPHIS SOUND PRODUCTIONS
Memphis, TN

•• **MEMPHIS SOUND PRODUCTIONS**
also **REMOTE RECORDING**
2850 Lamb Pl. Ste. 5, Memphis, TN 38118
(901) 363-3856
Owner: John L. Fleskes, Tim Goodwin, John McDowell
Studio Manager: John L. Fleskes
Engineers: John Fleskes, Tim Goodwin, John McDowell
Dimensions of Studios: Main: 24 x 24 x 12, Drum: 13 x 12 x 8 isolation: 8 x 8 x 8
Dimensions of Control Rooms: 14 x 13 x 9
Tape Recorders: Tascam #38, 8-track; (2) Studer/Revox PR99, 2 track; Tascam 122, cassette; Recordex high speed copier Super Pro HST, 1-2
Mixing Consoles: Tascam M-50, 12 x 8 x 2; Soundcraft 400B, 24 x 8 x 2
Monitor Amplifiers: McIntosh MC2300, BGW 250, Yamaha P2100, Kenwood KA701
Monitor Speakers: 'BL 4430, Auratones, B&O reference Echo, Reverb & Delay Systems: Ursa Major 8 x 32, (2) Lexicon PCM60 & PCM41, Aphex Exciter, Effectron 1024, Valley People Dyna-Mite, (4) dbx-903 comp/limit, (2) dbx 904 gates, 8-ch. dbx 150 NR, Orban 911 Para. EQ.
Other Outboard Equipment: Large sound system on premises with interfaced electronics
Microphones: (2) Neumann U-89, AKG C452EB, D12E, (7) Sennheiser 421, (5) EV DS35, RE20, Shure: (14) 57s, (8) 58s, SMSB, SM81, P2M, stereo hot plate, (2) Countryman.
Instruments Available: Yamaha EX7, TS816 (MIDI), Poly 61 (MIDI), Apple Iie w/DX PRO and 3 Polywriter software systems, LinnDrum, Wurliizer studio grand and electric pianos, Pearl drums w/Zildjians.
Video Equipment & Services: 1/2 stereo w/Dolby VCR, JVC Newvicon camera. Staff writes, musicians, singers.
Rates: \$30/hour, block rates available
Extras: With our new MIDI computer system, we are able to write, transpose, alter, and print sheet music instantly. Over 2,000 voices are currently in stock with additions weekly. With our TS816 and Apple Iie, 128-track MIDI sequence recording is possible
Direction: We are mainly set-up as a writers and arrangers facility, although several albums, demos, and commercials have been done here. Any questions, please give us a call.

•• **MIAMI SUNSET SENIOR HIGH SCHOOL**
also **REMOTE RECORDING**
13125 S.W. 131 Ave., Miami, FL 33183
(305) 385-4255
Owner: Dade County Public School
Studio Manager: Daniel B. Sell

•• **MILLER RECORDING STUDIO**
also **REMOTE RECORDING**
2513 S. Scales St., Reidsville, NC 27320
(919) 342-1892, 349-8911
Owner: Robbin Miller
Studio Manager: Robbin Miller

•• **THE MONKEY ROOM**
also **REMOTE RECORDING**
2216 Jasmine Dr., Lexington, KY 40503
(606) 278-5055
Owner: Bill Jones
Studio Manager: Bill Jones
Engineers: Bill Jones, Brad Plant, Jeff Little
Dimensions of Studios: 14 x 20, 10 x 10 drum/vocal booth.
Dimensions of Control Rooms: 12 x 12
Tape Recorders: Fostex 80, 8-track; TEAC 3340s, 4-track; TEAC A-4010S, 2-track; Akai 4000DB, 2-track; Akai HX-AZ, 2-track; TEAC 122, 2-track.



THE MONKEY ROOM
Lexington, KY

Mixing Consoles: Yamaha PM400 8 x 2; Shure SR1000 8 x 1; BFI 81 8 x 1.
Monitor Amplifiers: Phase Linear 700B, Phase Linear 400, Dynaco ST400, SAE MK35B.
Monitor Speakers: E-V, JBL, Yamaha, Auratone
Microphones: AKG, Shure, Sennheiser, Countryman, Audio Technica, others.
Instruments Available: Gibson guitar, Ovation guitar, Kay bass, Yamaha RX 15 drum machine, ARP Odyssey, Holton trumpet, Martin sax, Olds trombone.
Rates: \$25/hr., block rates available.

•• **MOUNTAIN EAR PRODUCTIONS**
also **REMOTE RECORDING**
P.O. Box 77, Mountain City, TN 37683
(615) 727-5070
Owner: Ralph Nielsen
Studio Manager: Marc Nielsen

•• **MULTI-TRAC PRODUCTIONS**
also **REMOTE RECORDING**
908 Circleview Dr., Dothan, AL 36301
(205) 792-5900
Owner: Frank Tanton
Studio Manager: Frank Tanton

•• **MULTI-TRAXX PRODUCTIONS, INC.**
859 McCallie Ave. Ste. 103, Chattanooga, TN 37403
(615) 266-6534
Owner: Steve Wallace
Studio Manager: Steve Wallace

•• **MUSICAL REFUGE STUDIOS**
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6403 Elliot Dr., Tampa, FL 33615
(813) 884-2854
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Studio Manager: Gary Griffith

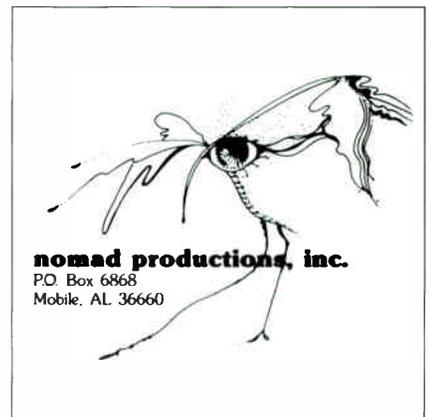
•• **MUSIC MUSIC STUDIOS**
also **REMOTE RECORDING**
987 Cedarwood, Dunedin, FL 33528
Owner: Mark Scott and John Comerford

•• **MUSIC PEOPLES STUDIOS**
also **REMOTE RECORDING**
932 Woodlawn Rd., Charlotte, NC 28209
(704) 527-7395
Owner: T. James Harden
Studio Manager: James Harden

•• **NAN AND ASSOCIATES STUDIO**
also **REMOTE RECORDING**
P.O. Box 37 (Hwy. 80 West)
Tuskegee Institute, AL 36088
(205) 727-3921
Owner: Nan Poole Spicer
Studio Manager: Nan Poole Spicer

•• **NEW ORLEANS RECORDING COMPANY**
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620-B Frenchmen St., New Orleans, LA 70116
(504) 943-6359
Owner: New Orleans Recording Company, Inc.
Studio Manager: Daniel Urman

•• **NITESHAD**
927 1/2 N. Hagan, New Orleans, LA 70119
(504) 488-7408
Owner: Donald Hull
Studio Manager: Donald Hull



NOMAD PRODUCTIONS
Mobile, AL

•• **NOMAD PRODUCTIONS**
also **REMOTE RECORDING**
P.O. Box 6868, Mobile, AL
(205) 479-2769
Owner: Nomad Productions, Inc.
Studio Manager: Barry L. Little

•• **JACK O' DIAMONDS RECORDING STUDIO**
4201 Central Pike, Hermitage, TN 37076
(615) 883-9600
Owner: Alex Zanetti
Studio Manager: Jon "Mr. Big" D'Amelio

•• **OHMEGGA**
4900 Myrtle Dr., Ft. Pierce, FL 33482
(305) 464-7221
Owner: Greg Graves
Studio Manager: Jack Meoff, Jr.

•• **ON LINE AUDIO**
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(803) 577-4629
Owner: Robert Graves
Studio Manager: Brian Gilbert

•• **ORANGE STREET RECORDERS**
also **REMOTE RECORDING**
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(205) 752-3191
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Studio Manager: Brook Clement

•• **PEARLMAN AUDIO & VIDEO**
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(704) 253-4127
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Studio Manager: Aileen Pearlman

•• PENGUIN STUDIO
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 1305 Cedar Keys Ct., Stone Mountain, GA 30083
 (404) 299-2614
 Owner: Alex Ayers
 Studio Manager: Alex Ayers

•• PINK PELICAN MUSIC CO.
 2908 Edenwood St., Clearwater, FL 33519
 (813) 799-0661
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 Studio Manager: Tom Klepacki

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 Studio Manager: Barry J. Hayes

•• PRINCESS BRIDE MUSIC & RECORDING
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 1308 Via de Luna, Pensacola, FL 32561
 (904) 932-3221
 Owner: Dave White
 Studio Manager: Dave White

•• PRODUCTION WORKS
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 (205) 870-6767
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 Studio Manager: George Pirkle

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also REMOTE RECORDING
 3224 W. Kennedy Blvd., Tampa, FL 33609
 (813) 877-7125
 Owner: Melvin A. Berman
 Studio Manager: Ginny Berman

•• PROJECT 70 AUDIO SERVICES, INC.
also REMOTE RECORDING
 777 Lambert Dr. N.E., Atlanta, GA 30324
 (404) 875-7000

Owner: Jerry L. Connell and John G. Harrill
 Studio Manager: Jerry L. Connell

•• PROTECH PRODUCTIONS
also REMOTE RECORDING
 Rt. 1 Box 339D #4, Marrero, LA 70072
 (504) 689-4556
 Owner: Rick Naiser
 Studio Manager: John Sauer

•• PROTRACKS
 75 Steele Rd., Covington, GA 30209
 (404) 786-1397
 Owner: Steve Jeffries
 Studio Manager: Steve Jeffries
 Engineers: Steve Jeffries
 Dimensions of Studios: 24 x 30 (including drum booth).
 Dimensions of Control Rooms: 8 x 10.
 Tape Recorders: Tascam 38, 8-track; Tascam 22-2, 2-track; Technics RS-B11W cassette; Akai CS-MO2 cassette.
 Mixing Consoles: Tascam M-50, 12 x 8.
 Monitor Amplifiers: Pioneer
 Monitor Speakers: KLH, Auratone, custom built main studio playback system.
 Echo, Reverb & Delay Systems: ADA 1280 digital delay, Furman reverb, Digitech digital delay.
 Other Outboard Equipment: dbx noise reduction, Yamaha GC2020 limiter/compressor with noise gates, Furman limiter/compressor, Aphex Aural Exciter, others include: DOD, Ibanez, Morley, Electro-Harmonix, electronic metronome, Korg WT-12 tuner, Korg GT-6 tuner.
 Microphones: AKG 414; Shure SM57, SM58, SM80; Electro-Voice; PZM.
 Instruments Available: Casio CZ-1000 synthesizer, upright piano, Slingerland drums w/roto toms and Syndrum, other percussion, Marshall and Fender amps, (2) vintage Telecasters, vintage P-Bass, Gibson Firebird, Yamaha acoustic, mandolin, Sho-bud LDG steel guitar.
 Rates: \$25/hr. recording, \$15/hr. mixing, block rates available.

•• REAL TO REEL
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 Studio Manager: Gary Willhoite

•• REASON'S EDGE
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 3530 Seagrape Ave., Naples, FL 33942
 (813) 774-6237
 Owner: Gary J. Edgington
 Studio Manager: Gary J. Edgington

•• RECORDING ASSOCIATES STUDIOS
 1045 Savannah Hwy., Charleston, SC 29407
 (803) 556-5770
 Owner: Ronald E. Clifton
 Studio Manager: Edd Salen

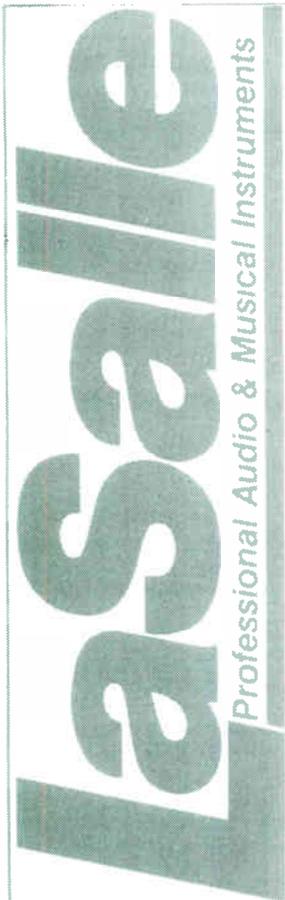
•• REEL SOUND AUDIO AND RECORDING
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 (404) 479-5181
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 Studio Manager: Randall Roop

•• REEL SOUNDS
 75 Parris Ave., Nashville, TN 37210
 (615) 255-6347
 Owner: Dana Clark
 Studio Manager: Cindy Clark

•• RIDGE RECORDING STUDIOS
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 407 South St., Greenville, AL 36037
 (205) 382-7800
 Owner: Cleveland Poole
 Studio Manager: Cleveland Poole

•• RITZ STUDIOS
 1817 Park Lake St., Orlando, FL 32803
 (305) 896-9369
 Owner: Paul Rizzo
 Studio Manager: Carol Becker

•• RIVER CITY SOUND PRODUCTIONS
 2146 Old Lake Cv., Memphis, TN 38119
 (901) 683-2514
 Owner: Steve Wenger, Bob Pierce
 Studio Manager: S. Wenger, B. Pierce, B. Davis



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•• **ROCKING HORSE STUDIO**
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(615) 832-2379
Owner: Michael G. Smith
Studio Manager: Michael G. Smith

•• **RON SOUND CO.**
333 Butterfly Forest Rd., Oviedo, FL 32765
(305) 349-5832
Owner: Ronald J. Schrader
Studio Manager: Ronald J. Schrader

•• **ROOT PIZZA STUDIO**
280 Northern Ave. #26D, Avondale Estates, GA 30002
(404) 294-6910
Owner: Berndt H. Gnner
Studio Manager: Berndt H. Gnner

•• **STEVE RUSSELL AUDIO**
4 Carriage Lane Ste. 305, Charleston, SC 29407
(803) 763-SPOT
Owner: Steve Russell
Studio Manager: Steve Russell

•• **MIKE SCHRIMPF MUSIC SERVICES & STUDIO**
143 Forrest Retreat Rd., Hendersonville, TN 37075
(615) 822-1856
Owner: Mike Schmpf
Studio Manager: Mike Schmpf

•• **SILHOUETTE STUDIOS**
11657 Ellison Willson Rd., Juno FL 33408
(305) 627-4743
Owner: Mark Brown
Studio Manager: Cecilia Erazo

•• **SING-A-SONG RECORDING STUDIOS**
also REMOTE RECORDING
12701 Meadow Creek Ln., Pineville, NC 28134
(704) 542-6129
Owner: Slep-Tone Entertainment Corporation
Studio Manager: Derek J. Slep

•• **SOUND CENTER RECORDERS**
also REMOTE RECORDING
329 N. Main St., P.O. Box 233, Church Point, LA 70525
(318) 684-2176
Owner: Lee Lavergne
Studio Manager: Lee Lavergne

•• **SOUND INVESTMENT RECORDING**
only REMOTE RECORDING
P.O. Box 1092, Greenville, MS 38701
(601) 335-0946
Owner: Andrew D. Gilliam
Studio Manager: Gail Gilliam

•• **SOUND INVESTMENT RECORDING STUDIO**
also REMOTE RECORDING
Rt. 3 Box 702, Covington, GA 30209
(404) 267-8771
Owner: Steve Marcum, Linda Marcum
Studio Manager: Steve Marcum

•• **SOUND SHACK STUDIOS**
also REMOTE RECORDING
2716 Okeechobee Blvd., W. Palm Beach, FL 33409
(305) 683-8900
Owner: Mark Barthel
Studio Manager: Ed Fitzgerald

•• **SOUND SERVICES**
also REMOTE RECORDING
5138 Lakeview Ct., New Orleans, LA 70126
(504) 241-2389
Owner: Marc T. Hewitt
Studio Manager: Marc T. Hewitt

•• **SOUND STAGE**
also REMOTE RECORDING
2040 N. Rio Grande Ave., Orlando, FL 32804
(305) 849-9767
Owner: Fletcher/Franklin Assoc., Inc.
Studio Manager: Dan Franklin

•• **SOUNDS OF WINCHESTER**
314 Lanny Dr., Winchester, VA 22601
(703) 667-9379
Owner: Jim McCoy
Studio Manager: Bertha McCoy

•• **SOUNDS, REASONABLE!**
only REMOTE RECORDING
5400 Jennifer Dr., Fairfax, VA 22032
(703) 250-9355
Owner: Fred Wygal



S O U T H E A S T S T U D I O S

•• **SOUNDTRACK, INC.**
1975 N.E. 149 St., Miami, FL 33181
(305) 945-4449
Owner: George Blackwell
Studio Manager: Jenny Blackwell
Engineers: George Blackwell, Paul Kaminsky, Vince Olver
Dimensions of Studios: 14 x 10.
Dimensions of Control Rooms: 17 x 11.
Tape Recorders: Otari MX-7800 8-track, Mark III 4-track, Mark III 2-track; MCI JH-110C 3-track (video layback); Sony PCM-10 digital 2-track; TEAC 4430 4-track; Otari 5050B (S) 2-track; Technics RSB100 (2) cassette.
Mixing Consoles: Sound Workshop Series 30 16 x 8.
Monitor Amplifiers: Audio Effects, Sansui.
Monitor Speakers: JBL 4311, Yamaha NS10, Auratone, Visonik.
Echo, Reverb & Delay Systems: Eventide 949 Harmonizer, Visonik, Lexicon PCM42, Lexicon PCM60, AKG BX10.
Other Outboard Equipment: (2) UREI 1176 Complimixers, Scamp noise gates, Parametric EQ, custom 2-way phone patch.
Microphones: Neumann; AKG; Sennheiser; Beyers.
Video Equipment & Services: JVC 3/4-inch video; Sony 3/4-inch video; Panasonic 1/2-inch video; BTX Shadow SMPTE Interlock.
Rates: Dubbing/editing: \$30/hr., analog-digital audio: \$65/hr., SMPTE Interlock: \$100/hr.
Extras: Complete interconnection with our sister studio South Coast Recording Company. (24-track) available upon request.
Direction: We are THE place for commercial audio.

•• **SOUNDTRAXX RECORDING STUDIO**
also REMOTE RECORDING
3043 Salem Dr., Gastonia, NC 28052
(704) 864-0941
Owner: Jerry Reid
Studio Manager: Jerry Reid

•• **SOUNDWORKS, INC.**
1509 Government #104, Mobile, AL 36604
(205) 479-3331
Owner: Gary Mitchell
Studio Manager: Gary Mitchell

•• **SOUTHERN CITY STUDIO**
also REMOTE RECORDING
4307 Edgehill Ct., Raleigh, NC 27612
(919) 781-5135
Owner: John Hopkins
Studio Manager: John Hopkins

•• **SOUTHERN OAK MUSIC**
also REMOTE RECORDING
P.O. Box 1681, Meridian, MS 39301
(601) 655-8447
Owner: Brad Lee
Studio Manager: Brad Lee

•• **SOUTHERN SOUND PROD.**
100 Labon St., Tabor City, NC 28463
(919) 653-2546
Owner: Elson H. Stevens
Studio Manager: Elson H. Stevens

•• **SPIRE STUDIOS**
also REMOTE RECORDING
1509 S. Andrews Ave., Ft. Lauderdale, FL 33316
(305) 527-4042
Owner: Jack Spire
Studio Manager: Mark Duffy

•• **STARSONG PRODUCTIONS**
only REMOTE RECORDING
1508 Clearview #C, Metairie, LA 70001
(504) 888-2834
Owner: Doug Ferguson
Studio Manager: Doug Ferguson

•• **STAR TRACK**
also REMOTE RECORDING
1820 Beechwood Ave., Nashville, TN 37212

(615) 297-5563, 297-1010
Owner: Dana C. Belser
Studio Manager: D.C. Belser

•• **STAR TRACK RECORDING**
also REMOTE RECORDING
1550 W. 84 St., Hialeah, FL 33014
(305) 558-1481
Owner: John Bauer
Studio Manager: John Bauer

•• **STAR TRACKS RECORDING STUDIO**
also REMOTE RECORDING
207 S. Macon St., Jesup, GA 31545
(912) 368-3228, 427-8303
Owner: Walter & Kathy Pinder
Studio Manager: Walter F. Pinder, Jr.

•• **STONEBRIDGE RECORDING**
Rt. 15 Box 54, Maryville, TN 37801
(615) 983-7448
Owner: Michael Ishibashi
Studio Manager: Michael Ishibashi

•• **THE STUDIO**
also REMOTE RECORDING
Rt. 8 Box 484-B, Chapel Hill, NC 27514
(919) 967-8470
Owner: John Santa
Studio Manager: Mac Monroe

•• **STUDIO 8**
also REMOTE RECORDING
1701 S.W. Coconut Dr., Ft. Lauderdale, FL 33315
(305) 523-1431
Owner: Sam Hamory
Studio Manager: Nancy Frey

•• **STUDIO ON THE RUN**
also REMOTE RECORDING
132 E. State St. Apt. 1, Baton Rouge, LA 70802
Owner: Earl Reinhaller
Studio Manager: Johnny Yerienden

•• **STUDIO 77**
Rt. 12 Box 66, Laurel, MS 39440
(601) 426-2619, 425-2777
Owner: Bill J. Nichols
Studio Manager: Bill J. Nichols

•• **STUDIO SOUTH**
also REMOTE RECORDING
3423 South Blvd., Charlotte, NC 28209
(704) 525-0296
Owner: Bill Schinman
Studio Manager: Bill Schinman

•• **SUDEKUM PLANETARIUM**
800 Ridley Blvd., Nashville, TN 37203
(615) 259-6099
Owner: Cumberland Museum
Studio Manager: Larry Wilson

•• **SUNRISE SOUND**
Rt. 2 Box 408, Sumter, SC 29150
(803) 481-2128
Owner: Charles Ardis
Studio Manager: Charles Ardis

•• **SUNSHINE SOUND RECORDING STUDIO**
also REMOTE RECORDING
2826 Whitlock St., Louisville, KY 40213
(502) 968-8757
Owner: Carl Sandler
Studio Manager: Carl Sandler

•• **SYNC RECORDS**
9111 Parliament Dr., Burke, VA 22015
(703) 978-4999
Owner: George Bowley
Studio Manager: George Bowley

•• **THE SYNC STUDIOS**
3424 Stratford Rd., Atlanta, GA 30342
(404) 264-0827
Owner: Paul B. MacDonald
Studio Manager: Paul B. MacDonald

•• **T&S STUDIO**
also REMOTE RECORDING
P.O. Box 12115, Lake Park, FL 33403
(305) 622-5981
Owner: Tom Green
Studio Manager: Tom Green

•• **TOPTRACKS RECORDING STUDIO**
1019 17th Ave. S. Ste. D, Nashville, TN 37212
(615) 321-4876
Owner: Tom Pallardy
Studio Manager: Tom Pallardy

•• T PORT SONG FACTORY
3228 Hanes Ave., Richmond, VA 23222
(804) 321-4154
Studio Manager: Gerald A. Woodson

•• THE TRACKING CO.
1005 28th Pl. So., Birmingham, AL 35205
(205) 939-1493
Owner: Hugh Brothers
Studio Manager: Hugh Brothers

•• TREST VIDEO/AUDIO PRODUCTIONS
dba DISCOVERY RECORDING STUDIO
2750 N. Siwell Rd. A-5, Jackson, MS 39212
(601) 373-9857, 371-2357
Studio Manager: Perry Trest

•• TRUSTY TUNESHOP RECORDING STUDIO
also REMOTE RECORDING
Rt. 1 Box 100 Hwy. #1034, Nebo, KY 42441
(502) 249-3194
Owner: Elsie Childers
Studio Manager: Elsie Childers

•• TWIN OAKS STUDIO
also REMOTE RECORDING
P.O. Box 187, Rocky Point, NC 28457
(919) 675-9226
Owner: Tempo I. Inc.
Studio Manager: L.J. Teachont

• UNDERWOOD AUDIO
Bldg. 34A, DeKalb/Peachtree Airport
Chamblee, GA 30341
(404) 457-1268
Owner: Hamilton P. Underwood
Studio Manager: Sarah L. Carpenter

•• UNICORN FIDELITY STUDIO
Rt. 1 Box 3, Galliano, LA 70354
(504) 632-7117
Owner: Kim Dulrene
Studio Manager: Nicky Maucele

•• USC SOUND ENTERPRISES
only REMOTE RECORDING
190 Waynoka Ln., P.O. Box 11211, Memphis, TN 38111
(901) 458-0275
Owner: Rodney Peppenhorst

• THE VIDEO PRODUCTION CO., OF AMERICA INC.
also REMOTE RECORDING
1201 Central Ave., Charlotte, NC 28204
(704) 376-1191
Owner: Mary & Walter Knox
Studio Manager: Walter Knox

•• VMR STUDIOS
also REMOTE RECORDING
173 West Putnam Ferry Rd., Woodstock, GA 30188
(404) 926-3268
Owner: Deryl Voutila
Studio Manager: Ruth Voutila

• WLM RECORDING
also REMOTE RECORDING
2808 Cammie St., Durham, NC 27705
(919) 471-3086
Owner: Watts Lee Mangum
Studio Manager: Watts Lee Mangum

•• WOODRICH RECORDING STUDIO
also REMOTE RECORDING
P.O. Box 38, Lexington, AL 35648
(205) 247-3983
Owner: Woody Richardson
Studio Manager: Woody Richardson

• WUNC RADIO
also REMOTE RECORDING
205 Swain Hall 044A, Chapel Hill, NC 27514
(919) 966-5454
Owner: University of North Carolina
Studio Manager: David C. Wright

• ZAO MUSIC
only REMOTE RECORDING
P.O. Box 1489, Andrews, NC 28901
(704) 321-4175
Owner: Scott Duncan
Studio Manager: Scott Duncan



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APPEARING IN THE MIX APRIL ISSUE...

THE 1986

TEC

AWARDS

NOMINATING BALLOT

The April issue of *Mix* will contain the nominating ballot for the Second Annual TEC Awards. These awards, nominated and voted upon by the subscribers of *Mix Magazine*, recognize outstanding technical and creative achievements in all aspects of recording, sound and music production. The TECs reflect the very best that our industry has to offer, as judged by you, the professional.

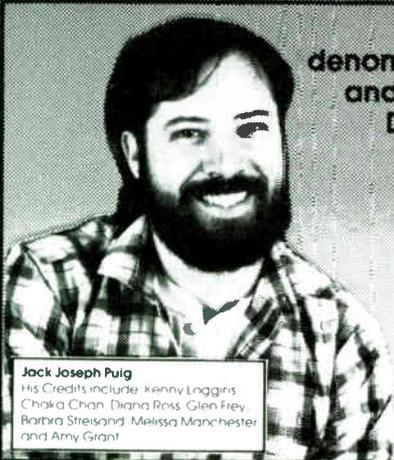
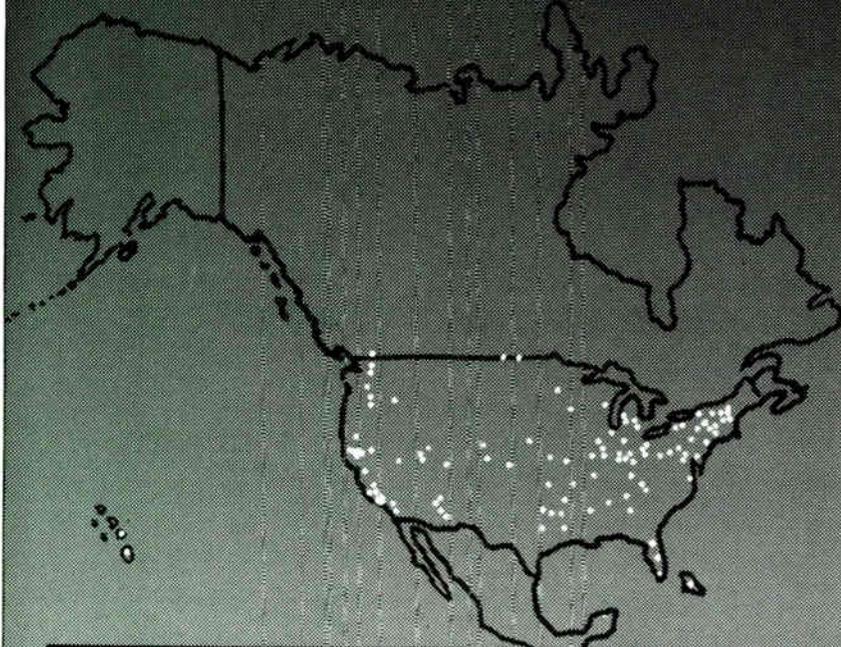
Watch for your Nominating Ballot (in subscriber copies only) and give us your input for this one-of-a-kind awards program.

The 1986 TEC Awards Celebration will be held in Los Angeles during the AES Convention, November 13 through 16. Watch upcoming issues of *Mix* for complete details.

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S O U T H E A S T S T U D I O S

••• **ALIVE RECORDINGS**
1251 Virginia Ave., Harrisonburg, VA 22801
(703) 434-6703
Owner: Mennonite Board of Missions
Studio Manager: Abe Rittenhouse

••• **ARCHER PRODUCTIONS**
also **REMOTE RECORDING**
P.O. Box 1118, Pompano Beach, FL 33061
(305) 781-9901
Owner: Peter Archer
Studio Manager: Rey Monzon

••• **ARTISTS' RECORDING SERVICE**
also **REMOTE RECORDING**
980 Barret Ave., Louisville, KY 40204
(502) 581-9294
Owner: Artists' Recording Service Inc.
Studio Manager: Bob Hunter, Mike Franklin

••• **ASSOCIATED SOUND PRODUCTS INC.**
also **REMOTE RECORDING**
215 Bickett Blvd., Raleigh, NC 27604
(919) 829-1143
Owner: David Emory, Steve Foley
Studio Manager: David Emory

••• **AUDIO INC.**
820 East Blvd., Charlotte, NC 28203
(704) 376-3818
Owner: Frank Rogers
Studio Manager: Sandi Rogers

••• **BEAVERWOOD STUDIOS**
also **REMOTE RECORDING**
133 Walton Ferry, Hendersonville, TN 37075
(615) 824-2820
Owner: Clyde Beavers
Studio Manager: Don Silvers

••• **BEECHTREE RECORDING STUDIO**
also **REMOTE RECORDING**
2804 Beechtree Dr., Sanford, NC 27330
(919) 774-8926
Owner: Bill Tripp
Studio Manager: Bill Tripp

••• **BIRDLAND RECORDING STUDIO**
3116 Sandlin Rd. SW, Decatur, AL 35601
(205) 353-8324
Owner: Owen Brown, James Murphree and Jeff Simpson
Studio Manager: Owen Brown

••• **BOONE SOUND**
also **REMOTE RECORDING**
313 Highland Ave., Albany, GA 31701
(912) 436-6508
Owner: Jesse Boone
Studio Manager: Jesse Boone

••• **CARLSON-ATLANTA**
also **REMOTE RECORDING**
P.O. Box 2422, Smyrna (Atlanta area), GA 30081
(404) 952-8459
Owner: Kevin Carlson
Studio Manager: Kevin Carlson

••• **WALLY CLEAVER'S RECORDING**
also **REMOTE RECORDING**
1518 Princess Anne St., Fredericksburg, VA 22401
(703) 373-6511
Owner: Peter L. Bonta
Studio Manager: Lorie Stannard
Engineers: Peter Bonta, Dave Heffelfinger, Remy David,
Lin Arroyo

Dimensions of Studios: Main room 20 x 22, dead room 9
x 13 1/2, isolation booth 6 x 7.
Dimensions of Control Rooms: Main room 12 x 14, post-
production room 10 x 10.
Tape Recorders: Tascam 85-16B, 16-track; 3M M-79, 4",
4/2-track; Otari 5050, 2-track; Scully 280, 2-track; (3)
TEAC cassettes.

Mixing Consoles: Sound Workshop Series 30 w/ ARMS
VCAs, 24 x 24 x 2; Allen & Heath 2416, 24 x 16 x 2.
Monitor Amplifiers: Crown D-150a, (2) Dyna mono 60s,
Dyna 31-70, Uher CV-140.

Monitor Speakers: JBL 4311s, Altec 9842-8As, Minimus
7s, JBL custom monitors.

Echo, Reverb & Delay Systems: AKG BX-10II, Lexicon
PCM60, PCM41, DeltaLab DL-2, Effectron 1024, Intersound
PRV-1.

Other Outboard Equipment: (2) UREI LA-4s, Symetrix
522, (3) Dyna-Mites, (3) dbx 160s, (2) dbx 163s, Aphex
Aural Exciter, dbx n/r on all channels, SMPTE sync on
16-track Roland MSQ-700 digital keyboard recorder, DOD
15 x 2 EQ, Accessit noise gate, Roland dig. delay, comp.,
MXR flanger, Ibanez stereo chorus, Rat box, Audioarts
stereo parametric EQ., Commodore C64 computer with
MIDI sequencer and editing programs.

Microphones: Neumann U87, U47FET, (4) KM84s, AKG
(2) C414s, (4) C451EBs, E-V (2) RE20s, Shure (3) SM57s,
SM54, SM55, Sennheiser (3) MD441s, MD421, (2) MD409s,
RCA 44a, RCA 77DX, RCA BK-5B, RCA 74, (2) PZMs,
ATM-11, (2) Adams transducers, misc. DIs.

Instruments Available: Yamaha 6ft. grand piano, Yamaha
DX7 synth, Roland TR707 drum computer, 6 pc. Rogers
drums, Vox AC-30 amp, Vox AC-15 amp, Marshall 50 watt
amp, Roland Playbus amp, Fender Tele, Strat guitars, 1957
Precision Bass, 1952 Gibson acoustic guitar, misc. perc.
insts., 1966 Fender electric 12 string guitar.

Video Equipment & Services: Call for rates and info.
Rates: \$38.50/hr. call for block rates.
Extras: We offer the most affordable remote 16-track rates
combined with exceptional audio quality. Our remote truck
has been to Pittsburg to tape a 42 member choir, Windgap,
PA to record the three day Windgap Bluegrass Festival,
and to the Birchmere in Alexandria, VA to record "The
Johnson Mt. Boys Live," which received two Grammy nom-
inations and is considered one of the best live bluegrass
records ever recorded.
Direction: Clients: Rounder Records, Rebel Records, Song-
Bird Records, Del McCoury, Jimmy Arnold, Mark Wenner,
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••• **CLOUD NINE RECORDING**
also **REMOTE RECORDING**
1221 Baker Street, Mount Dora, FL 32757
(904) 383-1888
Owner: Steven and Sharon Farrell
Studio Manager: Sharon O. Farrell

••• **COLEY RECORDING**
also **REMOTE RECORDING**
10 Harris St., P.O. Box 1529, Carrollton, GA 30117
(404) 832-0616
Owner: Phil Coley
Studio Manager: Phil Coley

••• **COMMERCIAL AUDIO**
also **REMOTE RECORDING**
77-79 S. Witchduck Rd., Virginia Beach, VA 23462
(804) 497-6506
Owner: General Jo
Studio Manager: Josiah Blount

••• **CREATIVE SOUND CONCEPTS**
495 Armour Circle, Atlanta, GA 30324
(404) 873-6628
Owner: Dennis Baxter and Spencer Herzog
Studio Manager: Spencer Herzog

••• **CRS RECORDING STUDIOS**
also **REMOTE RECORDING**
116 N. Chestnut St., P.O. Box 85, Marion, VA 24354
(703) 783-6828
Owner: James K. Cornick
Studio Manager: Scott Sparrow

••• **CUSTOM MUSIC CONCEPTS INC.**
14875 NE 20th Ave., Miami, FL 33181
(305) 947-8101
Owner: Michael E. Fowler
Studio Manager: M.E. Fowler

••• **CYPRESS RECORDING STUDIO**
P.O. Box 51067, Jacksonville Beach, FL 32250
(904) 246-8222, 246-4816
Owner: David T. Plummer
Studio Manager: David T. Plummer

••• **DIGITRAX, INC.**
also **REMOTE RECORDING**
5226 North Ave., P.O. Box 572, Buford, GA 30518
(404) 932-2842
Owner: E. Lerner, M. Lerner, R. Atha, L. Day
Studio Manager: E. Lerner

••• **DISTANT THUNDER RECORDING**
P.O. Box 290096, Davie, FL 33328
(305) 474-3073
Owner: Distant Thunder Music
Studio Manager: Yarrow Ann Kearney

••• **FALK RECORDING SERVICE**
also **REMOTE RECORDING**
7914 Fegenbush Lane, Louisville, KY 40228
(502) 239-1010
Owner: Gary Falk
Studio Manager: Ed Powers

••• **FIVE SQUARE RECORDING**
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Owner: Paul Jackson
Studio Manager: Paul Jackson

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SOUTHEAST STUDIOS

••• FLACK PRODUCTIONS
also REMOTE RECORDING
P.O. Box 100, Cedar Mt., NC 28718
(704) 884-7979
Owner: Tommy Flack

••• GATOR TRACKS
also REMOTE RECORDING
104 E. Main St., Houma, LA 70360
(504) 851-4602
Owner: Charlie Positerry, Louis Eschete
Studio Manager: Louis Eschete
Engineers: Charlie Positerry
Dimensions of Studios: 26 x 17, 8 x 8
Dimensions of Control Rooms: 18 x 13
Tape Recorders: Tascam 85-16B, 16-track; Otari MX5050, 2-track; TEAC 3340-S, 4-track; Tascam 122, cassette; Nakamichi 1000 II, cassette.
Mixing Consoles: Studiomaster 16-16-2, 16 x 16.
Monitor Amplifiers: H&H, Tapco (control room monitors) H&H (monitor).
Monitor Speakers: JBL 4312, Infinity RS-10, Auralone.
Echo, Reverb & Delay Systems: Orban 111-B reverb, (2) Roland SDE 2000 digital, Ibanez multi-mode analog delay.
Other Outboard Equipment: Furman sound parametrics, Limiter/compressors, and noise gates, UREI LA-4 compressor, EXR-SP2 Exciter, Tapco 27-band EQs, NEI 27-band EQs, Rane RE 27 analyzer/EQ.
Microphones: Sennheiser, AKG, Shure, Electro-Voice, Audio-Technica, Crown PZM, Beyer.
Instruments Available: Samick 5'9" grand piano, Ludwig drums, Paiste and Zildjian cymbals, LP percussion, Korg Poly-61, Crumar orchestrator, Crumar TI-C, Hammond B-3, G&L L-2000 bass, acoustic guitars (6-string, 12-string, classical) Conn Strobotuner.
Rates: Upon request.

••• GIZMO RECORDING, INC.
308 Talahi Rd., Vienna, VA 22180
(703) 938-6692
Owner: Bob Dunbar
Studio Manager: Christine Moon

••• GROUP EFFORT SOUND STUDIO
2656 Crescent Springs Rd.
Crescent Springs, KY 41017
(606) 331-TAPE
Owner: Dan Murphy, Wayne Hartman, Jeffrey Seeman
Studio Manager: Dan Murphy, Wayne Hartman, Jeffrey Seeman

••• HIGHER SKYS RECORDING STUDIOS
1706 Platt Springs Rd., West Columbia, SC 29169
(803) 794-9300
Owner: Gary Bolton, Doug Baker
Studio Manager: Gary Bolton

••• HOMESTEAD RECORDING STUDIO
also REMOTE RECORDING
Rt. 1 Box 1097, Norton, VA 24273
(703) 679-4182
Owner: Ron Swindall
Studio Manager: Ron Swindall

••• HUMMINGBIRD RECORDINGS
113-A Nelson Ave., Melbourne, FL 32935
(305) 259-6576
Owner: John O. Foley
Studio Manager: John O. Foley
Engineers: John Foley, Scott Peters, Jay Barrows.
Dimensions of Studios: Main room is 1400sq. ft with 16 ft. ceiling—9 x 13 drum booth.



HUMMINGBIRD RECORDINGS
Melbourne, FL

Dimensions of Control Rooms: 12 x 15.
Tape Recorders: Fostex B16-D, 16-track; Fostex A-8 LR, 8-track; Fostex A-2, 2-track; Sony 70, ES PCM 2-track digital; JVC cassette deck.
Mixing Consoles: Tescam M-320 20 in. x 20 x 4 x 2; Fostex 350, 8 x 4 x 2; Peavey MF-12, 12 x 2 x 1; Tapco 6000, 6 x 1.
Monitor Amplifiers: Pioneer
Monitor Speakers: Fostex RM780; IBL L15, Minimus 3.5.
Echo, Reverb & Delay Systems: AHT DR-2 digital reverb, 3 digital delays, Fostex stereo reverb.
Other Outboard Equipment: Compressors, graphic EQs, Parametric 4-channels, dbx type 1 on 2-track; guitar effects, etc.
Microphones: Fostex printed ribbon, Shure 58s and 57s, Beyer, Audio Technica, AKG.
Instruments Available: Upright piano, Korg Poly 61 synthesizer, Wuritzer electric piano, Drumulator, 5-piece drum set, Roto toms, percussion, acoustic and electric guitars, bass guitars, Ilite, Marshall 50-watt amp, Peavey Studio-pro, Bass Rockman, Guitar Rockman, Sunn 4 x 12 speaker cabinet, trumpet, trombone, alto and tenor saxophones.
Rates: Very affordable, block rates available.

••• IMAGE RECORDING STUDIO
also REMOTE RECORDING
211 Salem Rd., Seneca, SC 29678
(803) 882-4420
Owner: Chevit and Jane Crenshaw
Studio Manager: Chevit Crenshaw

••• INNER EAR RECORDING
712 S. Ivy St., Arlington, VA 22204
(703) 521-7781
Owner: Don Zientara
Studio Manager: Don Zientara

••• ISLAND STUDIOS INC.
also REMOTE RECORDING
#9 West Grace St., Richmond, VA 23220
(804) 643-2022
Owner: Victor Benschhoff, Paul Rubis
Studio Manager: Victor Benschhoff

••• JAG STUDIO, LTD.
also REMOTE RECORDING
3801-C Western Blvd., Raleigh, NC 27606
(919) 821-2059
Owner: Byron McCay and Joy Cook
Studio Manager: Joy Cook

••• JALEX RECORDINGS
also REMOTE RECORDING
319 Clematis St., West Palm Beach, FL 33401
(305) 832-1538
Owner: Jon A. Lind
Studio Manager: Susan Elliott

••• AL JOLSON ENTERPRISES, INC.
also REMOTE RECORDING
Masterlink Studio 31 Music Square West
Nashville, TN 37203
(615) 242-1580
Owner: Albert Jolson
Studio Manager: Albert Jolson
Engineers: Dan Wuzick
Dimensions of Studios: 15 x 18, drum booth 5 x 12.

Dimensions of Control Rooms: 15 x 18.
Tape Recorders: Tascam AQ-65 1", 16-track; Studer B-67 ¼", 2-track; Studer A-80 (4-track ½"), 2/4-track; Otari MX5050 ½", 8-track; Nagra 4-S, 2-track.
Mixing Consoles: Tascam M520, 20 x 8 + 4dB; Studer 169, 8 x 4; with line drivers 24 x 24 + 4dB.
Monitor Amplifiers: Crown 1000, Studer A-68, Yamaha P2050.

Monitor Speakers: Westlake BBSM-10, Yamaha NS-10, Nagra DSM monitors.

Echo, Reverb & Delay Systems: Lexicon model 200 digital, Yamaha analog delay E101D.

Other Outboard Equipment: Symetrix limiter/compressor 150, 501, 522 Xpander, Gale, Dacker, (2) Aphex Aural Exciters type B; Galex; Eventide Harmonizer H949; Nakamichi MR-1 cassette recorder, (+ 4dB); BBE 202R; Klark-Teknik DN360; Carrolltronic multi-amp 12.

Microphones: AKG-452; Neumann 487, K84; Shure SM57, SM58; Sennheiser 421; Countryman EM-101; Symetrix.

Instruments Available: Yamaha electric baby grand, Slingerland drums, Emulator EM-2, Linn 9000, Yamaha TX-816.

Video Equipment & Services: Minolta ½-inch VHS, Concord ¾-inch VHS. Other services: Otari DP-40-50 high speed cassette duplication; (2) Hitachi D-5500M; Denon real time.

Rates: 2-, 4-, and 8-track \$25/hr. 16-track \$35/hr. Duplication rates: high speed—C-7, \$1.78 to C-90, \$2.13; real time—C-10 \$2.44 to C-120, \$7.55. Bulk rates available.

••• **LECHE SOUND**
 P.O. Box 121702, Nashville, TN 37212
 (615) 321-5479

Owner: Carl Tatz, Larry Lee
Studio Manager: Carl Tatz, Larry Lee
Engineers: Carl Tatz, Larry Lee.
Dimensions of Studios: 2 rooms—2,800 sq. ft.
Dimensions of Control Rooms: 14 x 20.

Tape Recorders: Fostex B-16, 16-track; Revox 2-track; Sony 701 ES-digital 2-track; Tascam 122 cassette deck.

Mixing Consoles: Soundcraft 400B 44.

Monitor Amplifiers: Bryston 4B, Yamaha P2050.

Monitor Speakers: Foetex RM 780s, Visicon David 9,000s, Yamaha NS 1000 Ms, Yamaha NS 10 Ms, Auratones.

Echo, Reverb & Delay Systems: Lexicon PCM 70, Yamaha REV7, Roland SRV 2000 digital room simulator, (2) Lexicon Prime Time, Master-Room LX-305 reverb.

Other Outboard Equipment: Teletronics LA-2A compressor limiter, UREI LA-4 compressor/limiter, UREI 1176 limiting amp, UREI: audioarts para. EQ, noise gates, graphic EQ, etc.

Microphones: Neumann U-87, (2) AKG 414s, AKG 451s, (2) Sennheiser 441s, (2) Sennheiser 421s, E-V RE-20, Shure SM57s.

Instruments Available: 7' Kawai grand piano, Yamaha DX7, Roland MSQ 700 MIDI sequencer, LinnDrum.

Video Equipment & Services: Video post-production.

Rates: \$35/hr

••• **LOYOLA UNIVERSITY RECORDING STUDIO**

Loyola University/College of Music
 6363 St. Charles Ave., New Orleans, LA 70118
 (504) 944-8279

Owner: Loyola University
Studio Manager: Sanford Hinderle

••• **MAGGARD SOUND STUDIO**

220 Railroad Ave.
 Box 342, Big Stone Gap, VA 24219
 (703) 523-1373

Owner: Charles Maggard, Alan Maggard
Studio Manager: Charles Maggard

••• **MAIN TRIPP RECORDS INC.**

also REMOTE RECORDING
 2804 Beechtree Dr., Sanford, NC 27330
 (919) 774-8926

Owner: Bill Tripp
Studio Manager: Bill Tripp

••• **MAJOR RECORDING STUDIO**

P.O. Box 2072, Waynesboro, VA 22980
 (703) 949-0106

Owner: John H. Major
Studio Manager: John H. Major

••• **JY RECORDING**

P.O. Box 2602, West Monroe, LA 71291
 (318) 325-4413

Owner: James E. Young
Studio Manager: James E. Young

••• **JOHN KEANE STUDIO**

165 Hillcrest Ave., Athens, GA 30606
 (404) 548-4137

Owner: John Keane

••• **KEY RECORDING STUDIO**

2969 Edison Ave., Jacksonville, FL 32205
 (904) 388-7492

Owner: John L. Key II
Studio Manager: Cyndee Key

••• **KYTCHEN SYNC STUDIOS**

103 Broadway, Birmingham, AL 35209
 (205) 879-0728

Owner: McGarity Henderson Communications
Studio Manager: Frank Pigott

••• **LAMON SOUND STUDIO**

6870 A Newell Hickory Grove Rd.
 Charlotte, NC 28212

(704) 537-0133, 537-9310
Owner: Dwight L. Moody Jr. & Sons
Studio Manager: David Moody

••• **LAST TRUMPET STUDIO**

228 Buckakin Dr., Milton, FL 32570
 (904) 623-5600

Owner: Last Trumpet Ministries Inc.
Studio Manager: Keith Wilkinson



LECHE SOUND
 Nashville, TN

••• **LIFE PRODUCTIONS AUDIO**

750 E. 25th St., Hialeah (Miami), FL 33013
 (305) 940-9197

Owner: A.M.I. Corporation
Studio Manager: Rodger Shrack

••• **LINK BROTHERS STUDIOS**

also REMOTE RECORDING
 600-D Slater Rd., N. Ft. Myers, FL 33903
 (813) 656-3500

Owner: Gary Link
Studio Manager: Steve Rogers

••• **MILEEDGE RECORDING STUDIO**

5281 Lochinvar, Memphis, TN 38116
 (901) 346-8818

Owner: Michael Elledge
Studio Manager: Michael Elledge
Engineers: Michael Elledge, Dean Bryant, Wayne Loden
Dimensions of Studios: 21 x 11.

Dimensions of Control Rooms: 8 x 14.
Tape Recorders: Fostex B16D, 16-track; Fostex A-2, 2-track.

Mixing Consoles: Tascam M-520, 20 inputs.

Monitor Amplifiers: Crown D-150A Series II, Peavey 800, Tascam MH-40.

Monitor Speakers: JBL 4311 Bs and JBL 4401s.

Echo, Reverb & Delay Systems: DeltaLab ADM 1024, Yamaha R1000 reverb.

—PHOTO AND LISTING CONTINUED ON PAGE 142

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 467 W. 38th
 Houston, Texas 77018
 (713) 695-9400

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MILEEDGE RECORDING STUDIO
Memphis, TN

Other Outboard Equipment: (2) dbx-161 compressor/limiters, Kepex noise gate.
Microphones: Shure, Audio-Technica, Beyer, Electro-Voice, AKG, Crown.
Instruments Available: Yamaha DX7, Story & Clark console piano, Hammond Porta-Borgan and Leslie, Korg Super drums, 9-piece Ludwig drum set.
Rates: \$40/hr. with block rate discounts available.

••• **MIRROR IMAGE RECORDING**
also *REMOTE RECORDING*
619 S. Main St., Gainesville, FL 32601
(904) 376-1688, (37-MUSIC)
Owner: Bob McPeck, Paul Pavelka
Studio Manager: Bob McPeck

••• **THE MISSISSIPPI RECORDING COMPANY**
107 N. State St., Jackson, MS 39201
(601) 354-0857
Owner: Jerry Puckett
Studio Manager: Lane Dinkins

••• **MORNING SUN RECORDING**
also *REMOTE RECORDING*
416 1/2 N. Orange Ave., P.O. Box 935, Deland, FL 32720
(904) 736-0300
Owner: Rike's, Greg and Nancy

••• **MOUNTAIN AIRE RECORDING**
501 1/2 S. Roan St., Johnson City, TN 37601
(615) 926-9491
Owner: William R. Livesay, Jr.
Studio Manager: Brian K. Moore

••• **MOUNTAIN MUSIC STUDIO**
1807 Pass Rd., Gulfport, MS 39501
(601) 864-7558
Owner: Carl Roberts and Chuck Ryan
Studio Manager: Carl Roberts

••• **OAK BOWERY RECORDING**
also *REMOTE RECORDING*
Rt. 3 Box 185, Lafayette, AL 36862
(205) 749-8804
Owner: E. Logan Patton
Studio Manager: Lloyd Townsend

••• **OCEAN OPRY RECORDING STUDIO**
8400 W. Hwy. 98, Panama City Beach, FL 32407
(904) 234-5464
Owner: Wayne Rader
Studio Manager: Dennis Rader

••• **OLIVERIO MUSIC STUDIOS**
750 Ralph McGill Blvd. N.E., Atlanta, GA 30312
(404) 525-4440
Owner: James Oliveno
Studio Manager: Richard B. Burgess

••• **RICK PAINTER SOUND STUDIO**
also *REMOTE RECORDING*
2826 Iroquois Ave., Jacksonville, FL 32210
(904) 388-7649



Owner: Rick Painter
Studio Manager: Donna Painter

••• **PARK ST STUDIOS**
also *REMOTE RECORDING*
120 Park St., Tupelo, MS 38801
(601) 842-0300
Owner: Barrett/Hale/Marecle
Studio Manager: Linda Hale

••• **PLAN "B"**
Rt. 5 East Lake Circle, Canton, GA 30114
(404) 442-3300
Owner: Don R. Bryant
Studio Manager: Don R. Bryant

••• **PLAYGROUND STUDIOS**
3133 W. Ox Road, Herndon, VA 22070
(703) 476-8822
Owner: Gary Stamper, William Traylor
Studio Manager: Michael Cavaliere

••• **THE POWER HOUSE**
also *REMOTE RECORDING*
3505 Macon Rd., Memphis, TN 38122
(901) 452-8063
Owner: Stephen Hauth
Studio Manager: Tony Pilcher

••• **PROGRESSIVE MUSIC STUDIOS**
also *REMOTE RECORDING*
2116 Southview Ave., Tampa, FL 33606
(813) 251-8093
Owner: Ken Veenstra
Studio Manager: Marcie Veenstra

••• **RAINBOW RIVER STUDIOS**
also *REMOTE RECORDING*
540 N. College St., Auburn, AL 36830
(205) 821-4876
Owner: Larry L. Barker, Kittie W. Watson
Studio Manager: Larry L. Barker

••• **REAL TO REEL**
4911 N. Henry Blvd., Stockbridge, GA 30281
(404) 474-4776
Owner: Bill Turpin
Studio Manager: Ed Roland, Jimmy Buster, Joe Randolph

••• **REAL TO REEL RECORDING STUDIO**
also *REMOTE RECORDING*
970 E. Lake Dr., Bartow, FL 33830
(813) 533-4650
Owner: Stanley and Howard Warren
Studio Manager: Stanley Warren

••• **REELPEOPLE RECORDING SERVICES**
only *REMOTE RECORDING*
3210 Gary Ct.
Falls Church (Washington, DC area), VA 22042
(703) 532-REEL
Owner: Remy David
Studio Manager: Alessandra Marc

••• **REELTIME RECORDING STUDIOS**
205 A Television Circle, Savannah, GA 31406
(912) 927-1761

Owner: Phil Hedaway III
Studio Manager: Phil Hedaway III

••• **RM STUDIOS**
also *REMOTE RECORDING*
2528 Chamblee Tucker Rd., Atlanta, GA 30341
(404) 458-6000
Owner: W. Lou Simmons, John L. Tyler
Studio Manager: W. Lou Simmons
Dimensions of Studios: 28 x 16.
Dimensions of Control Rooms: 8 x 22.
Tape Recorders: MCI w/dbx noise reduction JH-10, 16-track; Ampex ATR-700, 2-track; various cassette recorders.
Mixing Consoles: Tangent Series 4, 20 x 24 x 2.
Monitor Amplifiers: UREI, AB 205, McIntosh 2300s.
Monitor Speakers: Electro-Voice Sentry 500s, MDM-4 Nearfield.

Echo, Reverb & Delay Systems: Lexicon 200 digital reverb, Lexicon Prime Time, DeltaLab Acousticcomputer, Ibanez PM2000, Master-Room reverb, Korg tape echo.
Other Outboard Equipment: VSO for 16-track, Orban G22B EQs, White octave EQs, dbx 160, 165A limiters, UREI graphics, Ibanez octave and 1/3 octave EQs.
Microphones: AKG 414s; Beyer 713s; Beyer 734; Beyer M-260, M-500; Electro-Voice RE20; DS-35; Shure 57, 58; Countryman EM 101s; Sennheiser 421s, 441s.
Instruments Available: Tomo drums, assorted percussive toys; Baldwin acoustic piano; Hammond M-organ w/Leslie; Prophet-5 synthesizer; Rhodes and Wurlitzer pianos.
Rates: Call.

••• **RON ROSE PRODUCTIONS, INC.**
also *REMOTE RECORDING*
3409 W. Lemon St. Ste. 6, Tampa, FL 33609
(813) 873-7700
Owner: Ron Rose
Studio Manager: Mike Stram

••• **ROSEMONT RECORDING STUDIO**
also *REMOTE RECORDING*
222 N. Tonti St., New Orleans, LA 70119
(504) 821-8611
Owner: Al (Rosemont) Taylor
Studio Manager: Al (Rosemont) Taylor

••• **ST. AUGUSTINE PRO AUDIO**
Rt. 9 Box 68 T-3, St. Augustine, FL 32084
(904) 471-0506
Owner: Jim DeVito
Studio Manager: Bill Parker (904) 471-6771

••• **SANDCASTLE RECORDING STUDIO**
also *REMOTE RECORDING*
Ste. 109 Wade Hampton Mall, Greenville, SC 29609
(803) 235-1111
Owner: Christopher Cassels, Rick Sandidge, Rob Cassels
Studio Manager: Patrick Blackwell

••• **SATURN SOUND STUDIOS, INC.**
511 S. Olive Ave., W. Palm Beach, FL 33401
(305) 832-2148
Owner: Allen Peerson and Clinton Smith
Studio Manager: Jim Crockett

••• **SOUND CELL RECORDING**
also *REMOTE RECORDING*
601 Meridian St., Huntsville, AL 35801
(205) 539-1868
Owner: Doug Jansen Smith
Studio Manager: Doug Jansen Smith

••• **THE SOUND ROOM, INC.**
325 Patterson Ave., Ft. Oglethorpe, GA 30742
(404) 866-2432
Owner: Steve Mullinix
Studio Manager: Steve Mullinix

••• **SOUND STAGE MUSIC CO.**
300 Main St., Calera, AL 35040
(205) 668-1981
Owner: Charles Sampson
Studio Manager: Teresa Sampson

••• **SOUND VORTEX RECORDING**
2806 Oakland Ave., Nashville, TN 37212
(615) 297-8602
Studio Manager: Robb Earls
Engineers: Various independents
Dimensions of Studios: 15 x 25, 8 x 9.
Dimensions of Control Rooms: 14 x 22.



SOUND VORTEX RECORDING
Nashville, TN

Tape Recorders: Fostex B-16, 16-track; Revox B-77 MKII, 1/2-track.
Mixing Consoles: Studiomaster 16 x 8; Studiomaster 8 x 4.
Monitor Amplifiers: Yamaha P-2200.
Monitor Speakers: E.A.W. MS-50, Yamaha NS-10.
Echo, Reverb & Delay Systems: Ursula Major Space Station, (2) Roland DE-200, Ibanez HD-1000.
Other Outboard Equipment: (2) Valley People Dyna-Mite, (2) dbx 163, Ibanez MSP 1000, GateX.
Microphones: Neumann U87, U47, KM-84; (2) E-V RE16; Shure 57s, 58s; Sennheiser 421; Fender and Sony condensers.
Instruments Available: Yamaha TX-216, Oberheim Matrix-6, Casio CZ-101, Prophet-5, Moog Mini, Moog Modular, E-mu digital drums, Roland TR-808, Commodore SX-64 with Syntech multi-track MIDI software and sync-to-tape.
Rates: \$25/hr., blocks available.

••• **SOUTH SOUNDS RECORDING STUDIO**
3004 Timber Ridge Lane, Rock Hill, SC 29730
(803) 327-9613
Owner: Rod Proctor
Studio Manager: Rod Proctor

••• **STUDIO B**
also *REMOTE RECORDING*
1119 Bell St., Montgomery, AL 36104
(205) 834-6881
Owner: Harold and Jayonn Bearden
Studio Manager: Jayonn Bearden

••• **STUDIO IV**
5628 Santa Monica Blvd. S., Jacksonville, FL 32207
(904) 733-4945
Owner: Jim Graves
Studio Manager: Jim Graves

••• **STUDIO FOUR RECORDING**
P.O. Box 1686, Albemarle, NC 28001
(704) 983-2277
Owner: SFR Services
Studio Manager: Paula Hearne

••• **SYN HARMONIC PRODUCTIONS**
728 W. Smith St., Orlando, FL 32804
(305) 422-3444
Owner: Michael Davis
Studio Manager: Michael Davis

••• **TANDEM RECORDING STUDIO**
also *REMOTE RECORDING*
13 Moore St., Bristol, VA 24201
(703) 466-8675
Owner: Tandem Records, Inc.
Studio Manager: Joe Deaton

••• **TECHNI SOUND STUDIO**
1634 Auden Ln., Norcross, GA 30093
(404) 447-6305
Owner: Douglas Shriveles
Studio Manager: Douglas Shriveles

••• **THRESHOLD RECORDING**
6478 Celia Ave., Baton Rouge, LA 70811
(504) 775-2409
Owner: Chris Breaux
Studio Manager: Chris Breaux

••• **THRESHOLD RECORDING**
410 Elm Ave., SW, Roanoke, VA 24016
(703) 345-2539
Owner: F. Howard Beasley, J. Harold Thompson
Studio Manager: F. Howard Beasley
Engineers: J. Harold Thompson
Dimensions of Studios: 30 x 25.
Dimensions of Control Rooms: 20 x 12.
Tape Recorders: Ampex MM1 100 B-, 16-track, ATR 102 2-track, 440 B 2-track, Ampex 440 B 2-track, 440 B full-track.
Mixing Consoles: Loft modular devices, model 440, 24 x 16.
Monitor Amplifiers: Ashly Audio FET, AB systems.
Monitor Speakers: E-V Sentry III, Altec 9845, Auratones.
Echo, Reverb & Delay Systems: (2) BAE LP 140 plate, AKG BX-20, (2) Loft 450X, Eventide 1745.
Other Outboard Equipment: Ashly SC-50 limiters/compressors, Symetrx 501 limited/compressor, Allison Gain Brans & Kepex, Ashly SC-66, parametrcs, Ashly SC-33 noise gates.
Microphones: AKG 451; Neumann U87; Shure 57, 58; E-V 15, 20; Studer 5U; Wahrenbrock PZMs; RCA 77BX, BK5.
Instruments Available: Steinway grand piano, Hammond B-3 organ, Rhodes 88, Hohner D-6 clavinet, assorted guitars, Fender P bass.
Rates: Available on request.

••• **TOTAL TRACS**
4194 Meadow Court, Marietta, GA 30066
(404) 928-1016
Owner: Dwight Waggener
Studio Manager: Dwight Waggener

••• **TRACK-16 RECORDING STUDIOS**
also *REMOTE RECORDING*
118 Constitution, Lexington, KY 40508
(606) 253-0588
Owner: Thomas D. Tandy
Studio Manager: Thomas D. Tandy

••• **TWENTY-TWENTY INTERNATIONAL RECORDING STUDIO**
also *REMOTE RECORDING*
2817 Tremont Ave., Savannah, GA 31405
(912) 236-0000
Owner: Ferman Tyler, James Barefoot
Studio Manager: James Barefoot, Wonda Todd Simmons

••• **WHITE CAR STUDIO**
10611 Cal Rd., Baton Rouge, LA 70809
(504) 292-2400
Owner: Nelson Blanchard
Studio Manager: Nelson Blanchard

••• **WILLOW CREEK RECORDING STUDIOS**
2228 Redmond Circle, Rome, GA 30161
(404) 232-6954
Owner: Morgan Ayers
Studio Manager: Morgan Ayers

••• **ZBOP**
Walnut Hollow
1301 Briar Creek Rd., Charlotte, NC 28205
(704) 889-4508, 376-2864
Owner: Cal Walker
Studio Manager: Cal Walker



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SOUTHEAST STUDIOS

Acorn Sound Recorders, inc.

ACORN SOUND RECORDERS
Hendersonville, TN

•••• **ACORN SOUND RECORDERS, INC.**
329 Rockland Rd., Hendersonville, TN 37075
(615) 824-4924
Owner: Oak Ridge Boys
Studio Manager: Jimmy Tarbutton
Engineers: Jimmy Tarbutton. Independents welcome.
Dimensions of Studios: 25 x 36 including booths; drum room 13 x 15.
Dimensions of Control Rooms: 22 x 24.
Tape Recorders: Studer A-80, 24-track; Studer B-67, 2-track; Otari MTR-12, 2-track; Sony cassette.
Mixing Consoles: Harrison MR4, 32 x 24.
Monitor Amplifiers: Haller D-500, Crown.
Monitor Speakers: UREI 813B Time Aligned, IBL, Eastern Acoustic Works, Auratones.
Echo, Reverb & Delay Systems: Lexicon 224X w/ Larc remote, Eventide SP-2016, Super Prime Time, Eventide 1745A DDL.
Other Outboard Equipment: Kepex II, ADR Stereo Sweep EQ, (4) dbx 160 limiters, UREI 1176 limiter, Eventide Harmonizer, (2) White 1/3 octave graphic EQ, (2) Lang EQ.
Microphones: Neumann U47s, U89s, U87s, U64s, KM86, KM88, Studer Stereo, Sennheiser 421s, E-V RE20s, AKG 451s, Sony C37s, AKG D12E, (4) Shure 546s, Shure SMS7s.
Instruments Available: Yamaha C7 grand piano, Wurli- tzer electric piano, Rhodes electric piano, Hohner clavinet- tette, Hammond B3 organ, ARP String Ensemble, Fender guitar amps, Pearl drums.
Video Equipment & Services: Panasonic 3/4", Panasonic 1/2" VHS, Sony 1/2" Beta.
Rates: Call for rates.

•••• **ALLEN-MARTIN PRODUCTION INC.**
9701 Taylorsville Rd., Louisville, KY 40299
(502) 267-9658
Owner: Corporation
Studio Manager: Don Watson

•••• **ALPHA AUDIO**
also **REMOTE RECORDING**
2049 W. Broad St., Richmond, VA 23220
(804) 358-3852
Owner: Alpha Recording Corp.
Studio Manager: Carlos Chafin



AMERICAN RECORDING CENTER
Orlando, FL

•••• **AMERICAN RECORDING CENTER**
also **REMOTE RECORDING**
515 W. 18th St., Orlando, FL 32805
(305) 425-1342
Owner: Jeff Pratt
Studio Manager: Jeff Pratt
Engineers: Jeff Pratt; Otto Gomez; Glen Longacre (arranger); Christian, contemporary, country; Otto Gomez (arranger); rhythm & blues, contemporary.
Dimensions of Studios: 60 x 30 x 18' ceiling; 10 x 13, 4 x 8 (2 vocal booths); 15 x 10 (keyboard room); 11 x 12 (drum booth); 12 x 20 (Studio A); 15 x 44 (Studio B).
Dimensions of Control Rooms: 22 x 13.
Tape Recorders: Studer Mark III, 24-track; Studer 820 (1/2"), 2-track; MCI JH-10 (1/2"), 2-track; (2) TEAC 8516 (1 "A" and 1 "B") 16-track each; TEAC 58, 8-track; TEAC 52, 2-track; Technics 1520, 2-track; (10) TEAC for real time

copies 122 cassette; TEAC 25-2, 2-track; (2) Nakamichi-cassette 582; Otari MX 5050 2-track.
Mixing Consoles: NEOTEK Elite 56 x 24; TEAC M16 24 x 16 with Roland automation.
Monitor Amplifiers: Crown PSA-2, 150; BGW 250; Yamaha 2100.
Monitor Speakers: JBL 4315B, Technics, Auratones.
Echo, Reverb & Delay Systems: Lexicon 200 digital reverberator; Master-Room 305 reverb; MICMIX 404 Plate Synthesizer reverb, DeltaLab DL4 echo; Eventide H-910 Harmonizer; 964 Harmonizer; DeltaLab CompuEffectron.
Other Outboard Equipment: (8) Valley People noise gates, 32 channels Audio Kinetics automation, 4 channels Aphex Exciters, Aphex Compellor, Orban parametric EQ; (2) dbx 165 OverEasy limiters; (2) dbx 160 limiters; (2) UREI 1176 LN stereo limiters; UREI 964 digital metronome; GT4 noise gates; (2) White 1/3 octave EQ; custom 10 channel headphone mixer by Stevenson designed by American Recording Studio. BTX Softouch synchronization equipment.
Microphones: Calrec MKIV Soundfield, Neumann U89, U87; (4) AKG 414, 452; (6) Sennheiser 441; (4) Crown PZMs (4) Sennheiser 421; (2) E-V RE20; Countryman direct boxes; (5) Shure SM-81; AKG 900 shotgun.
Instruments Available: Emulator with Mac 512; Roland 707 drum machine; Korg 6000 synth; Yamaha 745 conservatory grand; 5' Chickening piano; Rhodes Stage piano; ARP-Omni 2 polyphonic synthesizer; C-3 Hammond Organ; full set of Slingerland drums; DMX drum synthesizer.
Video Equipment & Services: 3 Camera 3 Tube 3/4" Video Recorders; 28 ft. mobile unit; BTX Softouch for video to audio sweetening.
Rates: 40-track, \$100/hr.; 24-track, \$75/hr.; 16-track, \$55/hr.; 2-8-track, \$35/hr.



AMERICAN RECORDING CENTER
Orlando, FL

•••• **A.M.I.**
111 Freehill Rd., Hendersonville, TN 37075
(615) 822-6786
Owner: Michael R. Radford
Studio Manager: Michael R. Radford

•••• **PAT APPLESON STUDIOS, INC.**
also **REMOTE RECORDING**
1000 N.W. 159 Dr., Miami, FL 33169
(305) 625-4435
Owner: Pat Appleson
Studio Manager: Rich Rudner

•••• **ARDCO INC./MASTERWORKS**
also **REMOTE RECORDING**
10195-R Main St., Fairfax, VA 22031
(703) 385-1780
Owner: Michael Zook
Studio Manager: Tom McDuffee

•••• **ARDENT RECORDINGS, INC.**
2000 Madison Ave., Memphis, TN 38104
(901) 725-0855
Owner: John Fry
Studio Manager: Trish Hardy
Engineers: Joe Hardy, John Hampton, Robert Jackson, Pat Taylor, Mark Culp.
Dimensions of Studios: Studio A: 25 x 40 x 18; Studio B: 24 x 17 x 11; Studio C: 25 x 35 x 14.
Dimensions of Control Rooms: Studio A: 16 x 25 x 10; Studio B: 25 x 20 x 16; Studio C: 18 x 25 x 10.
Tape Recorders: Mitsubishi X-850, 32; Otari MTR-90, 24-track; (2) MCI JH-24, 24-track; (2) Mitsubishi X-80, 2-track; (3) MCI JH-110, 2-track.

—PHOTO AND LISTING CONTINUED ON PAGE 146

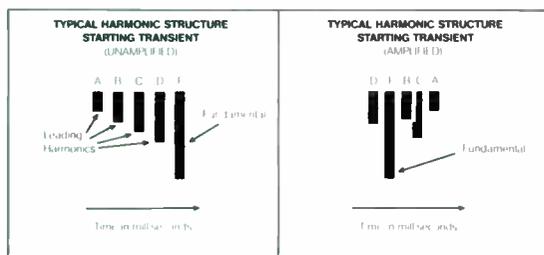
"I can't imagine ever recording without BBE™ again."

Steve Levine, Producer of Culture Club, The Beach Boys.

Steve Levine's got an ear for hits. He can pick a winning song out of a hundred rough demos, take it into the studio and polish it till it's Triple Platinum. That's why he's topped the charts time after time with trendsetters like the Culture Club. That's why he was named 1984 British Phonographic Institute Producer of the Year. And

develop, due to voice coil characteristics, reflected impedance from the environment, crossover impedance anomalies and the mechanical properties of dynamic speakers. The relationships among the fundamental frequencies, their leading harmonics and between the leading harmonics themselves become distorted in both amplitude and time. The result? Muddiness, poor imaging and pinched, colorized sound that lacks the presence and punch of the real thing.

correction to take place automatically. Convenient front-panel controls let you boost low frequencies and regulate the



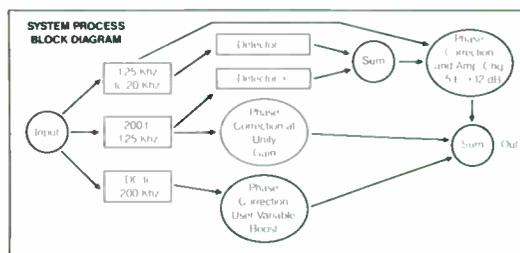
that's why Steve Levine records with the BBE 202R. When Steve produced The Beach Boys' new all-digital album, the 202R was on the team, too.

"BBE is to digital what equalizers were to analog. I'm particularly impressed with BBE's effect on synthesizers."

BBE has its own sharp ear for sound. It senses and instantly corrects problems in that all-important interface between amplifier and speaker. That's where phase and "overhang" distortion

develop, due to voice coil characteristics, reflected impedance from the environment, crossover impedance anomalies and the mechanical properties of dynamic speakers. The relationships among the fundamental frequencies, their leading harmonics and between the leading harmonics themselves become distorted in both amplitude and time. The result? Muddiness, poor imaging and pinched, colorized sound that lacks the presence and punch of the real thing.

The BBE 202R puts the clarity and sparkle back into amplified and recorded sound. We like to think of it as the "unprocessor." Rather than artificially altering the original source, BBE restores the natural harmonic balances that were present in the live performance. How? First it divides the audio spectrum into three bandwidths. Then it applies phase correction across the full spectrum and dynamic high frequency amplitude compensation as required. BBE's continual sampling of the mid/high frequency relationship allows this



amount of high-frequency amplitude correction to suit your needs. There's no encoding or decoding involved, so BBE can be used anywhere in the recording chain—from individual tracks on a multitrack tape to a mastering lab monitoring system.

Successful producers like Steve Levine count on BBE to bring that hit potential into focus. Why not discover the hidden potential in your own recordings?

To find out what the BBE 202R can do for your sound, contact your professional sound dealer.

Or write to us at Barcus-Berry Electronics, 5500 Bolsa Avenue, Huntington Beach, CA 92649, or call 1-714-897-6766.



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Barcus-Berry Electronics, Inc.



ARDENT RECORDINGS, INC.
Memphis, TN

Mixing Consoles: Solid State Logic 6000, 40 x 32; MCI 542, 42 x 32; Spectrasonics 24 x 24.
Monitor Amplifiers: Crown, BGW.
Monitor Speakers: Audicon, JBL 4350, Yamaha NS-10M, Auratone, KEF.

Echo, Reverb & Delay Systems: Lexicon 224XL, Quantec, (6) Yamaha Rev 5, (2) Publison Infernal Machines, Lexicon Prime Time, (2) Eventide 949 Harmonizer, (3) Roland SDE 3000, (2) Effectron, Scamp ADT, Marshall Time Modulator, (3) EMTs, (3) live chambers.

Other Outboard Equipment: (2) Fairchild limiters, (2) UA 176 limiters, UA 1176, (4) dbx 160, (6) dbx 165, Kepex, (3) Scamp Racks w/gates, compressors, de-essers, Dynamic noise filter, Auto Panner, (2) Valley Intelligent de-esser, Dr. Click.

Microphones: Neumann M 249, U67, U87, KM 84, KM 86; B&K; Sanken; AKG: C-422 Stereo, C-414, C-451, D-12; Crown PZM; Electro-Voice RE-20, RE-15; Sennheiser: MD-421, MD421, MD-441; Shure SM81, SM57, Beyer 201; also Sony and RCA.

Instruments Available: (2) Fairlight Series III, Yamaha DX7 and TX-Rack, (2) Roland Super Jupiters, Roland piano synthesizer, MiniMoog w/MIDI interface, MemoryMoog, Steinway grand piano, Yamaha grand piano, Chickering grand piano, Fender Rhodes, Hammond M-3 organ, Hohner clavinet, (2) Gretsch drums.

Video Equipment & Services: Complete 1" video tape, 16 and 35 mm film production and editing.
Rates: On request.

Direction: ZZ Top, Joe Cocker, Led Zeppelin, Cheap Trick, Emerson Lake & Palmer, Leon Russell, Commodores, Lou Rawls, Issac Hayes, Bar-Kays, Con-Funk-Shun, Roy Parker, Jr., Memphis Horns, Parliament/Funkadelic, Staple Singers, Bobby Blue Bland, Roy Orbison, Johnny Cash, Charlie Rich, Roy Clark, DeGarmo & Key, Mylon LeFevre, Phil Dnscoil, Glad, Blackwood Brothers, Jessie Dixon, Farrell & Farrell.

•••• **AUDIO CREATIONS RECORDING STUDIO**
also **REMOTE RECORDING**
4815 Clarks River Rd., Paducah, KY 42001
(502) 898-6746
Owner: Ralph Rowton Jr., George Cumbee Jr.
Studio Manager: George Cumbee Jr.

•••• **AUDIO MEDIA RECORDERS**
808 19th Avenue South, Nashville, TN 37203
(615) 320-5985
Owner: C.E. Jackson
Studio Manager: C.E. Jackson, Asst Manager: Hollis Halford

Engineers: Hollis Halford, Bob Wright.
Tape Recorders: Studer A800 MKIII, 24-track; Studer A80, 24-track; (2) Studer B-67, 2-track; Studer A-67, 2-track; Ampex 440B, 2-track; JVC digital 2-track.
Mixing Consoles: Harrison 32C, 28 x 32; Harrison MR2, 28 x 24.

Monitor Amplifiers: McIntosh, Phase Linear, BGW, Crown, UREI.
Monitor Speakers: Westlake TM-1s (both rooms), NS-10Ms, JBL 4310s.

Echo, Reverb & Delay Systems: (3) EMT 140 stereo plates (tube), Lexicon 224X, EMT 250, Yamaha REV-1, Super Prime Time, DeltaLab 102.

Other Outboard Equipment: LA-2As, LA-3As, dbx 160s, dbx 165s, 1176LNs, Pultec EQs, Sontec, API.

Microphones: Neumann: U47 (tube), U47 FET, U87, U67, KM 64, KM84, U249, M49; AKG: 414EB, 451, 452; Shure 57; Sennheiser-421; E-V RE20; Sanken CU-41; Telefunken 250.

Instruments Available: Synclavier II-32 Voices Polyphon-



ic, Yamaha 9' grand, Wurlitzer electric, Rhodes electric, ARP Axse, String Ensemble, Omni, clavinet, various percussion instruments.

Video Equipment & Services: Post scoring available w/Synclavier music system.
Rates: Available upon request.

•••• **AUDIO VISIONS**
710 Distillery Commons, Louisville, KY 40206
(502) 587-6863
Owner: J.R.E. Inc.
Studio Manager: Bob Ernsperker

•••• **AUGUST RECORDING STUDIO**
also **REMOTE RECORDING**
2136 Kings Ave., Jacksonville, FL 32207
(904) 399-8283
Owner: Wayne Fanning
Studio Manager: Wayne Fanning

•••• **BENNETT HOUSE STUDIOS**
134 4th Ave. North, Franklin, TN 37065
(615) 790-8696
Owner: Bob Montgomery
Studio Manager: Duke Duczer, Gene Eichelberger
Engineers: Chief Engineer: Gene Eichelberger, Engineers: Gene Eichelberg, Clarke Schleicher, J.T. Cantwell, Duke Duczer.

Dimensions of Studios: Studio A: 44 x 18, two isolation booths. Studio B: 9 x 12, overdub booth.
Dimensions of Control Rooms: 20 x 26.
Tape Recorders: (2) MCI transformerless w/ SMPTE lock-up, BTX sync 24/46-track, (2) Studer B62 2-tracks; Ampex ATR 100 1/2" 2-track; (4) Technics cassettes; (2) Studer 800s, Studer cassette.

Mixing Consoles: Studio A: Trident A-Range 28 in x 24 out. Studio B: Bud Wyatt Trident Series 80.

Monitor Amplifiers: Yamahas.
Monitor Speakers: JBL 4411s, John Meyer monitors, Yamaha NS10s, Braun 3-way, Auratones, E-V 100s, etc.

Echo, Reverb & Delay Systems: EMT 250 digital, Lawson plate, AMS DDL Eventide 949, Lexicon 224X-with Larc.

Other Outboard Equipment: Scamp Rack with 10 noise gates, (2) EQs, (2) limiter/compressors, time shape module, auto pan, Vocal Sresser and misc. various outboard rental gear.

Microphones: Tube M-249, 87s, 414, 421s, 224s, etc. AKG Tube, Sankens.

Instruments Available: Synclavier, Baldwin 7, and Eddie Reynolds Rhodes.
Rates: Call for rates.

•••• **BIAS RECORDING COMPANY, INC.**
also **REMOTE RECORDING**
5400 Carolina Pl., Springfield, VA 22151
(703) 941-3333
Owner: Bill McElroy, Bob Dawson
Studio Manager: Glona Dawson
Engineers: Bob Dawson, Bill McElroy, Jim Robeson, Bob Schnapl

Dimensions of Studios: Studio A: (1) 16 x 25 room, (1) 20 x 30 room; Studio B: (1) 16 x 25 room.

Dimensions of Control Rooms: Studio A: 12 x 16; Studio B: 12 x 16.

Tape Recorders: Ampex (Studio A) MM-1200 24-track; Ampex (Studio B) MM 1200 24-track; Ampex; Studer (7) B-67 2-track, A-67 2-track; Ampex 440-B 4-track; Technics (2) M-280 cassette.

Mixing Consoles: API (Studio A) Modified 2488 w/Allison Faded 24/8; API (Studio B) Modified 1604 16/4.

Monitor Amplifiers: Studio A: Bryston; Studio B: Crown.
Monitor Speakers: Studios A & B: Sierra/Hidley and Auratone.

Echo, Reverb & Delay Systems: (2) EMT 162; AKG BX20E; Eventide Harmonizer; Lexicon Prime Time, Lexicon Model 200, Lexicon PCM60.

Other Outboard Equipment: UREI 1176 LN; UREI LA-4; UREI 964 digital metronome, dbx 160, Teletronix LA-2A; Kepex, Dyna-Mite; MXR studio phaser, MXR studio flanger.

Microphones: Neumann, Sony, AKG, Shure.
Instruments Available: Yamaha C-5 grand piano, Hammond C3 w/Leslie, Fender Rhodes, Hohner clavinet, Slingerland drums, Fibes drums, Fender Precision Bass, Fender Twin Reverb, blond Fender Pro, tweed Fender Deluxe (2), tweed Fender Vibrolux, Oberheim DX drum machine, DX7.

Rates: Studio A: \$100/hr.; Studio B: \$70/hr.; bulk rates available.

•••• **GENE BREEDEN STUDIO**
110 1/2 Glenrose Ave., Nashville, TN 37210
(615) 256-4363
Owner: Gene Breeden
Studio Manager: Dave Signs

•••• **BROADWAY SOUND STUDIO**
1307 Broadway St., Sheffield, AL 35660
(205) 381-1833
Owner: David A. Johnson
Studio Manager: Cal Freeman

•••• **BROKEN DOOR STUDIO**
5405 Stanford Dr., Nashville, TN 37215
(615) 269-0727
Owner: Keeble Media Group
Studio Manager: Peter Keeble, Marilyn Johnson

•••• **BRT RECORDING STUDIOS**
275 E. Oakland Park Blvd., Ft. Lauderdale, FL 33334
(305) 564-2655
Owner: Norman Titcomb
Studio Manager: Beverly Makara

•••• **BULLET RECORDING**
49 Music Square West, Nashville, TN 37203
(615) 327-4621
Owner: Randy A. Holland

•••• **CAMP DUNWOODY**
140 Habersham Waters Ct., Dunwoody, GA 30338
(404) 394-1777
Owner: Kerry Livgren
Studio Manager: Kerry Livgren

•••• **CAPRICORN SOUND STUDIO**
534 Broadway, Macon, GA 31201
(912) 745-8518
Owner: Phil Walden
Studio Manager: Tad Bush

•••• **CARRIAGE HOUSE RECORDERS**
1103 18th Ave., Nashville, TN 37212
(615) 329-3429
Owner: Anose Music Group
Studio Manager: Ron W Griffin

•••• **THE CASTLE RECORDING STUDIO, INC.**
Old Hillsboro Rd., Rt. 11, Franklin, TN 37064
(615) 791-0810
Owner: Joseph Nuyens
Studio Manager: Joseph Nuyens Jr.

Engineers: Keith Odle, Giles Reaves, Tommy Dorsey.
Dimensions of Studios: size of castle.
Dimensions of Control Rooms: size of castle.
Tape Recorders: Studer A80 MKIII 24-track, Studer A80 MKII 24-track, Studer A80 2-track, (2) Studer B67 2-track, 3M DMS digital 32-track, (2) 3M DMS digital 4-track.

Mixing Consoles: Solid State Logic 4000E with Total Recall Computer 48/32, NECOTEK Elite, 32 input.

Monitor Amplifiers: (3) 4B Bryston on main; Yamaha 2201 on alternates; BGW 250s on cue.

Monitor Speakers: JBL 4430 Biradials, Yamaha NS-10s, JBL 4411, Auratones, Fostex RM 780.

Echo, Reverb & Delay Systems: Lexicon 224x with Larc, Lexicon 224, AMS DMX 15-80 with 1.6 sec. delay on A side and 3.2 sec. delay on B side, Lexicon Super Prime Time 97, Lexicon Prime Time 93, (2) Large Ecoplate II, AMS RMX-16, Lexicon PCM 42, (3) Lexicon PCM 70.

Other Outboard Equipment: AMS DMX 15-80s with deglitch card in both channels; Eventide H1910; (2) ADR Vocal Stressers, ADR 504; (4) Valley People Kepex II, (2) 504 Scamp parametric EQ; S 25 Scamp de-esser, (1) Trident stereo limiter/compressor, (2) UREI 1176; SSL has built-in compressor/limiter, expander/gates on all 48

channels.

Microphones: Complete assortment of Neumann, Neumann old tubes, Sennheiser, AKG, AKG tubes, Shure, PML, Sony.

Instruments Available: Fairlight CMI system and printer, Yamaha DX1, Yamaha DX7, Bosendorfer 7'3" grand, Roland Jupiter 8; Oberheim DMX, Simmons 7-piece set, Simmons SD56, Roland TY 808, PRO I, Hammond B3 w/Leslie, Rhodes, tack piano, Martin guitars from private collection.
Rates: Available upon request.

•••• CENTURY III TELEPRODUCTIONS

5000 Eggleston Ave., Orlando, FL 32804
(305) 297-1000

Owner: Ross Cibella
Studio Manager: Oliver Peters

•••• CHESHIRE SOUND STUDIOS

also REMOTE RECORDING
2093 Faulkner Rd., N.E., Atlanta, GA 30324
(404) 321-3886

Owner: T.G. Wright, Jr.
Studio Manager: Karen A. Smith

•••• CINDERELLA SOUND STUDIO

1108 Cinderella St., Madison, TN 37115
(615) 865-0891

Owner: Wayne Moss
Studio Manager: Wayne Moss

•••• CMC STUDIOS

also REMOTE RECORDING
106 W. Horton St., Zebulon, NC
(919) 269-5508

Owner: Vic Lipscombe and Bill Cain
Studio Manager: Vic Lipscombe

•••• COCONUTS RECORDING CO.

1830 N.E. 153 St., No. Miami Beach, FL 33162
(305) 940-4656

Owner: Shirley P. Kaye
Studio Manager: Shirley P. Kaye



COMMERCIAL MUSIC RECORDING COMPLEX
Memphis, TN

•••• COMMERCIAL MUSIC RECORDING COMPLEX

Memphis State University
Dept. of Music, MSU, Memphis, TN 38152
(901) 454-2559

Owner: Memphis State University
Studio Manager: Larry Lipman
Engineers: Larry Lipman, advanced students in audio degree program.

Dimensions of Studios: Studio A: 60 x 60 x 20, Studio B: 23 x 16 x 20.

Dimensions of Control Rooms: 20 x 16 x 12.
Tape Recorders: MCI JH-24 24-track, MCI JH-1 10B 2-track, others.

Mixing Consoles: MCI JH-636 24 x 24.

Monitor Amplifiers: BGW; AB Systems.

Monitor Speakers: UREI 813A, Yamaha NS10, JBL 4401, Auratones.

Echo, Reverb & Delay Systems: Lexicon 224XL; Lexicon M97 Super Prime Time.

Other Outboard Equipment: Aphex Aural Exciter Type B, Harmonizer H949, dbx 160x, Dyna-Mite, other. Multi-

track equipped with dbx. Monitors tuned with UREI filters and B&K Spectrum analyzer. Console equipped with MCI automation.

Microphones: Neumann U47, U87, KM84, AKG C414, C452, Sennheiser MD421, Shure SM81, SM57, E-V RE20, RE10, Crown P2M.

Instruments Available: Steinway grand, Baldwin grand, Yamaha DX7, full complement of studio, orchestral and percussion instrumentation available.

Video Equipment & Services: Complete video production services available; soon to be interfaced with recording studios.

Rates: The CMUS Complex is operated primarily as an instructional facility and was developed to handle the need of the University's Commercial Music degree programs and Highwater record company. Although normally unavailable for commercial use, studio rental is authorized under special circumstances. Availability and rates upon request.

•••• COMPASS POINT STUDIOS

P.O. Box 4599, Nassau, Bahamas
(809) 327-8282

Owner: Chris Blackwell
Studio Manager: Lorene Fraser

•••• CONTI STUDIO

also REMOTE RECORDING
509 N. Ridgewood Ave.
P.O. Box 970, Edgewater, FL 32032
(904) 427-2480

Owner: Dick Conti
Studio Manager: Dick Conti

•••• COOK SOUND STUDIOS

1419 Scenic Rd., Fort Payne, AL 35967
(205) 845-2286

Owner: Jeff Cook
Studio Manager: John Estes
Engineers: John Estes, independents.

Dimensions of Studios: 28 x 37.

Dimensions of Control Rooms: 14 x 16.

Tape Recorders: Studer A80 VU MKII 24-track, A 80 VU

—PHOTO AND LISTING CONTINUED ON PAGE 148

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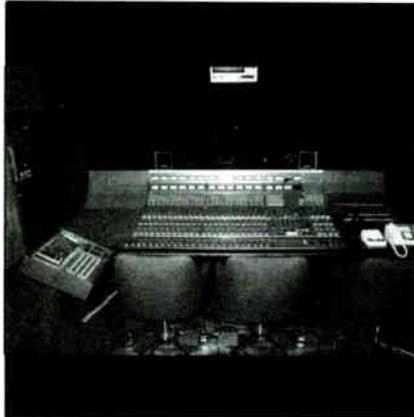
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**24
TRACK**

S O U T H E A S T S T U D I O S

—LISTING CONTINUED FROM PAGE 147



COOK SOUND STUDIOS
Fort Payne, AL

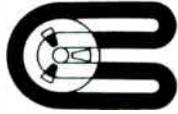
MKII 1/4" 2-track, A80 VU MKII 1/2" 2-track, A710 cassette, Revox PR 99 2-track.
Mixing Consoles: Neve 8058 28 in x 24 out.
Monitor Amplifiers: McIntosh 2300, McIntosh 2105, Yamaha 2200, Yamaha 2050.
Monitor Speakers: UREI 813, Yamaha NS-10M, Auratones.
Echo, Reverb & Delay Systems: EMT plate, Lexicon Super Prime Time, Ursa Major 8x32.
Other Outboard Equipment: Eventide Harmonizer; (2) dbx 160X compressors; EXR EXIV Exciter, Orban 622B parametric; UREI 1176LN compressors; Scamp rack w/gates, compressors, de-essers, sweep EQ; Neve compressor/limiter, telephone distort module, notch and correction filters, and background noise suppresser.
Microphones: Neumann M49, (2) U48, (2) U47, (3) U87; AKG (4) 414, (4) 452; Shure (2) SM7, (3) SM81, (8) SM57; Electro-Voice (2) RE-20; Audio-Technica (2) ATM31R; Sennheiser (4) 421; Studer SKM-5.
Instruments Available: Yamaha Acoustic piano, Oberheim OB-Xa w/DSX, Yamaha SK-15, Music Man, Fender and Carvin amps, Rhodes 73, Gretsch drums.
Rates: \$75/hr.

•••• COTTON ROW RECORDING
1503 Madison Ave., Memphis, TN 38104
(901) 276-8518, 276-8520
Owner: Ward Archer, Jr., Nikos Lyras
Studio Manager: Jack Carlson
Engineers: Danny Jones, Nikos Lyras, Gerard Harris, Richard Roseborough, Mike Allgeier, Jack Carlson, Paul Ebersold.
Tape Recorders: Otari MTR-90, 24-track; Otari MTR-10, 2-track; Otari 5050-B, 2-track; Fostex 16-track; TEAC 2-track; Tascam and Nikko cassettes.
Mixing Consoles: Trident 80, 32 x 24; Audionics 501, 26 x 16.
Monitor Amplifiers: Yamaha, Crown, BGW.
Monitor Speakers: EVs, Westlakes, Yamaha NS-10M, JBL 4401, JBL 4311, Auratones.
Echo, Reverb & Delay Systems: AMS RMX-16, Lexicon 224, Lexicon PCM60, Roland, Lexicon PCM41, DeltaLab Echotron, DeltaLab Effectron Jr., AMS DMS 1580-s (stereo-delay, harmonizer, sampler).
Other Outboard Equipment: Dyna-Mite gates/limiters/de-essers, dbx 160X compressors, White EQs, UREI EQs, Omni Craft gates, Roland choruses/flanger, TC electronics choruser/flanger.
Microphones: Neumann U87, AKG 414, AKG 451, Neumann K84, AKG D12, AKG D200, Sennheiser MD 421, EV RE20, Crown PZM, Shure SM57.

Instruments Available: Kawai 6' grand piano, Hammond B-3 organ, Gretsch 7 pc. drum set, Simmons 5 pc. SDS8 set, Emulator II, Yamaha DX7, MemoryMoog, MiniMoog synthesizers, Fender Strat, Schecter Strat, Gibson 355, Schecter bass, Roland cube amps, Fender twin reverb amp, Polytone mini brite amp, Yamaha RX-11 drum machine.

•••• CRAWFORD POST PRODUCTION
535 Plasamour Dr., N.E., Atlanta, GA 30324
(404) 876-7149
Owner: Jesse C. Crawford
Studio Manager: Mike Greene
Engineers: Steve Davis, Tom Race, Carl Maduri, Bruce Irvine.
Dimensions of Studios: Studio A: 32 x 25 x 14; Studio B: 6 x 8.
Dimensions of Control Rooms: Studio A: 34 x 27 x 14; Studio B: 12 x 12.
Tape Recorders: Studio A: Studer A-80 MKIV, 24-track; Ampex ATR-102, 1/4" 2-track; Studer A-80, 1/2" 2-track. Studio B: Studer A-80 MKIV, 24-track; Ampex ATR 102, 101, 104, 2-, 1-, 4-track.
Mixing Consoles: Studio A: Neve 8128, 48 channel with Necam II automation. Studio B: Trident Series 70, 24 channel.
Monitor Amplifiers: Crown, Haller, AB.
Monitor Speakers: Custom design, Yamaha NS-10M, Auratone, MDM-4.
Echo, Reverb & Delay Systems: Audio A: (2) Lexicon 224X, AMS RMX 16 reverb, Lexicon PCM 42 DDL, Eventide Harmonizer, Super Prime Time DDL.
Other Outboard Equipment: Cypher digital, dbx, Neve, Aphex, ADSR, Klark-Teknik, Teletronix, Valley People.
Microphones: Neumann, AKG, Sennheiser, Beyer, Milab, Crown, Shure, Schoeps, E-V.
Instruments Available: Yamaha C7, LinnDrum, Tama drums, Simmons drums, Prophet-T8, Rhodes, Marshall amp.
Video Equipment & Services: Full video post services. (2) 1" on-line suites with ADO. Video graphics: Bosch, Dubner, AVA. Rank-Cintel film transfer. Satellite up-link and downlink.

•••• CRESCENDO RECORDERS
125 Simpson St. N.W., Atlanta, GA 30313
(404) 223-0108
Owner: Bill Ray
Studio Manager: Amy Rambow



criteria recording studios

CRITERIA RECORDING STUDIOS
Miami, FL

•••• CRITERIA RECORDING STUDIOS
also REMOTE RECORDING
1755 N.E. 149th St., Miami, FL 33181
(305) 947-5611
Owner: Mack Emerman
Studio Manager: Margie Curry
Engineers: Michael Fuller, senior engineer; Andy Pechenik, chief maintenance engineer.
Dimensions of Studios: A: 46 x 67 x 22; B: 30 x 40 x 16; C: 25 x 32 x 16; D: 14 x 22 x 10; east wing downstairs: 50 x 50 x 17; east wing upstairs: 15 x 16 x 8.
Dimensions of Control Rooms: A: 14 x 17; B: (not in service at this time); C: 15 x 16; D: 17 x 19; E downstairs: 23 x 26; E upstairs: 23 x 26.
Tape Recorders: Mitsubishi (digital) X-800, 32-track; (2) Otari MTR-90-III 24-track; (4) MCI/Sony JH-24 (with extra 8/16-track heads), 24-track; (2) MCI/Sony JH-110B-4, 4-track; (7) MCI/Sony JH-110B, 2-track; (2) Mitsubishi X-80, digital 2-track; Ampex/MCI mono; Yamaha and Denon cassette decks.
Mixing Consoles: (2) Solid State Logic (in east wing) SL

6000E, 48 x 32; MCI (A dub stage) JH-556/48 D, 48-32; (3) MCI JH-532 B (in studios A, C, D) 32 x 32; MCI Custom 600 (in remote truck) 48 x 24.

Monitor Amplifiers: McIntosh, UREI, APT.

Monitor Speakers: A: Criteria custom tri-amp; C: Criteria/Ed Long; D: Criteria/custom Tri-amp; E wing: Criteria/Ed Long.

Echo, Reverb & Delay Systems: (3) stereo live chambers, (4) Ecoplates, EMT 250, UREI Cooper Time Cube, (4) Lexicon 93 Prime Time, (2) Lexicon PCM 41, (2) EMT 970 delays, EMT ST140 plate EMT 251, Lexicon 224XL, (2) MICMIX IIIs, (4) Eventide 1745, (3) Lexicon 940.

Other Outboard Equipment: UREI: (3) LA2A tube limiters, (2) 527A graphics, (2) LA4 dual limiters, (6) 1176 limiters, metronome/click. dbx: (6) 165 Overeasy limiters, (4) 160 dual limiters, 900 rack w/8 units. Also: ADR Vocal Stresser, (8) Pultec EQs, (4) Trident CB9066 parametrics, MXR phaser, Valley People TR804, (2) Sontec ME5430B, (3) Mutron phasers, (2) MXR flanger.

Microphones: AKG, Altec, Beyer, Crown, E-V, Fender, Neumann, PLM, Schoeps, Sennheiser, Shure, Sony.

Instruments Available: (2) 9' Baldwin SD10X concert grand pianos, 9' Mason Hamlin piano, MicroMoog, PolyMoog, MiniMoog, ARP Omni, Baldwin harpsichord, tack piano, (3) Fender Rhodes, Wuritzer electric pianos, (2) Hammond B-3s, Rogers and Ludwig drums.

Video Equipment & Services: Complete audio for film/video services. Equipment includes: Audio Kinetics Q. Lock, Sony BVU800, JVC CR8200, Magna-Tech 35/16mm systems, (2) projectors, 3-track recorder, 7' Sony projection system 4 dual dubbers, various color monitors.
Rates: Please call for information.

•••• CUSTOM SOUND INC.

6105 Youree Dr., Shreveport, LA 71105
(318) 865-4003

Owner: Bill Moseley and Lewis Norton
Studio Manager: George Hancock

•••• DAWN RECORDS, INC.

also REMOTE RECORDING
56 Ravenscroft Dr., Asheville, NC 28801
(704) 254-8000

Owner: Richard A. McBrayer
Studio Manager: Eddie Swann

•••• DISK PRODUCTIONS

1100 Perkins Rd., Baton Rouge, LA 70802
(504) 343-5438

Owner: Joey Decker
Studio Manager: Joey Decker

•••• DOC'S PLACE

394 West Main, Hendersonville, TN 37075
(615) 822-0290

Owner: Doc (Billy) Burke
Studio Manager: Denny Knight

Dimensions of Control Rooms: A: 20 x 25, B: 15 x 17, C: 10 x 15, D: 15 x 13, E: 26 x 28.

Tape Recorders: Otari MTR-90-II, 24-track; 3M M-79, 24-track; Otari MTR-12, 2-track; Otari MTR-10, 2-track; Ampex ATR-102, 2/1-track; Scully 280, 4/2/1-track.

Mixing Consoles: SSL 4000E, 32 x 32; Sphere Eclipse C, 40 x 24; Sphere A, 28 x 24; Audiotronics 110-A, 20 x 4; Custom 8 x 8.

Monitor Amplifiers: Crest, UREI, Hafler, Yamaha.

Monitor Speakers: UREI 813, EAW MS-30, JBL 4311, Auratone.

Echo, Reverb & Delay Systems: Lexicon 224XL, Eventide 969, Eventide 1745M, Lexicon Prime Time II, Lexicon Prime Time, EMT 140 Plates, DeltaLab Effectron II, Marshall Time Modulator.

Other Outboard Equipment: dbx 160, 163, 165 and UREI 1176LN limiter/compressors, ADR Vocal Stresser, Aphex Compellor, Kepex II, Gain Brain II, dbx noise reduction, Orban parametrics and de-essers.

Microphones: Neumann, AKG, Studer, Sennheiser, Shure, E-V.

Instruments Available: Steinway and Baldwin grand pianos, Ludwig and Rogers drums, Hammond B-3 w/Leslie, Fender amps.

Video Equipment & Services: Video sync with (2) BTX Softtouch systems, Sony 5850 3/4" VCR's with address track SMPTE, 16/35 mm mag, layback to Sony 1" type C.

Rates: Upon request.

•••• EBS, INC. (EVANS BROS. STUDIOS)

1125 Moore Duncan Hwy. P.O. Box 66, Moore, SC 29369
(803) 574-6104

Owner: Duane Evans, Joseph Evans
Studio Manager: Lyndon Vestal
Engineers: Duane Evans, Denver Wright, Babe Williams, David Rochester

Dimensions of Studios: 50 x 60.

Dimensions of Control Rooms: 24 x 20.

Tape Recorders: MCI JH-24, 24-track; MCI JH-110B, 2-track; Ampex 2-track; TEAC 3340, 4-track; (2) TEAC cassettes; Recordex CS-4000, GT4-A duplicator 5 bays, 8:1.

Mixing Consoles: MCI JH-600, 28 x 24.

Monitor Amplifiers: (3) Crown DC-300A, (2) Crown D60.

Monitor Speakers: UREI 839A, JBL 4331, JBL 4311, JBL 4301, Auratone Cubes.

Echo, Reverb & Delay Systems: Yamaha Rev-1, Lexicon PCM60, plate, Master-Room stereo reverb, Eventide H-949, Electra EP-500, DDL, MXR digital time delay.

Other Outboard Equipment: dbx 165a, dbx 160s, Teletronix LA-3As, UREI 1176s, Audioarts stereo parametric EQ, Aphex Exciter, Furman QN-4.

Microphones: Neumann U47s, AKG 414s, E-V RE20s, AKG-D202s, Sennheiser MD-421s, Neumann KM-84s, Shure 57s, 58s, 53s, E-V PL77s.

Instruments Available: Vintage Mason and Hamlin grand, Hammond B-3000, Leslie 722, PolyMoog, MicroMoog, Yamaha DX7, Emulator II, Tama Techstar electronic drums, Fender Strat, Gibson Les Paul, Fender Precision, congas, assorted rhythm instruments.

Video Equipment & Services: Available at extra charge.
Rates: \$80/hr., call for day and block out rates.

•••• ELEVEN-ELEVEN SOUND STUDIO

1111 17th Ave. S., Nashville, TN 37214
(615) 329-1111

Owner: Larry Butler

Studio Manager: John Abbott

Engineers: Independents

Dimensions of Studios: 34 x 36, 1200 sq. ft.

Dimensions of Control Rooms: 12 x 14.

Tape Recorders: Mitsubishi 850, 32-track (digital); Studer A-80, 24-track; Mitsubishi X-80A, 2-track (digital); Studer A-80, 2-track; Studer B-67, 2-track; Studer A-67, 2-track.

Monitor Consoles: Harrison MR-2, 32 x 32 x 32 aux returns.

Monitor Amplifiers: McIntosh 2500, BGW 600, BGW 250s, Crown 150 & 60s, Sony.

Monitor Speakers: Sierra Audio with oak dispersion horns, Yamaha NS-10M.

Echo, Reverb & Delay Systems: Lexicon 224XL with Larc, Lexicon 224, EMT 140, EMT 162.

Other Outboard Equipment: Lexicon Prime Time, UREI LA2Ab, Harmonizer, Allison Research 65k automation, Dolby A-type 24 package.

Microphones: Neumann: 249 tube, 67 tube, 47 FET, 87s, KM84s; AKG: 462, 414; Sennheiser 421; Electro-Voice; Sonys.

Instruments Available: Steinway 9' grand, Yamaha DX7, Rhodes piano, Wuritzer piano, Hammond B-3, congas.
Rates: \$120/hr., digital extra.

•••• BERT ELLIOTT SOUND INC.

2080 Peachtree Ind. Ct. #114, Atlanta, GA 30341
(404) 452-1140

Owner: Bert Elliott

Studio Manager: Bert Elliott

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DOPPLER

DOPPLER STUDIOS, INC.
Atlanta, GA

•••• DOPPLER STUDIOS, INC.
1922 Piedmont Circle, Atlanta, GA 30324
(404) 873-6941

Owner: Pete Caldwell
Studio Manager: Pete Caldwell
Engineers: Bill Quinn, chief engineer; Joe Neil; Jeff Brugger; Curt Bush; Granger Beem; Mitch Eaton; Steve Schwartzberg.

Dimensions of Studios: A: 35 x 50, B: 25 x 35, C: 15 x 20, D: 12 x 15, E: 35 x 50.

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1033 16th Ave. S., Nashville, TN 37212
(615) 321-0511
Owner: David Malloy, Even Stevens
Studio Manager: Kerry Kopp, Ken Cribiez, Jeff Coppage

•••• FAITH PRODUCTIONS
also REMOTE RECORDING
1441 Guthrie Dr., Cleveland, TN 37311
(615) 472-3361
Owner: Church of God
Studio Manager: Mike Baker

•••• FANTA PROFESSIONAL SERVICES
also REMOTE RECORDING
1213 16th Ave. S., Nashville, TN 37212
(615) 327-1731
Owner: Johnny Rosen
Studio Manager: Robin Victor

•••• FIRESIDE RECORDING STUDIO
813 18th Ave. S., Nashville, TN 37203
(615) 327-1150
Owner: Leo Andrews/Music Artist Corporation
Studio Manager: Doyle Gnsam

•••• FLAMINGO STUDIOS
2195 Lake Bradford Rd.
P.O. Box 2434, Tallahassee, FL 32316
(904) 576-4741
Owner: Charles E. Roberts
Studio Manager: Reg Furlough

•••• FLORIDA SOUND STUDIO
3350 Ulmerton Rd., Clearwater, FL 33520
(813) 577-7113
Owner: Florida Sound Recording Inc.
Studio Manager: Paula DeStefano

•••• G.E.M. RECORDINGS
2825 Millwood Ave., Columbia, SC 29205
(803) 256-3413
Owner: Gordon R. Goodwin, Richard L. McMahan, John V. Epps
Studio Manager: John Epps



SOUTHEAST STUDIOS

•••• GLASER SOUND STUDIOS, INC.
916 19th Ave. S. Nashville, TN 37212
(615) 327-0005
Owner: Thomas P. Glaser, Charles Glaser, James Glaser
Studio Manager: June Johnson Glaser

•••• GOLD MINE STUDIO
2020 Sunnyside Dr., Brentwood, TN 37027
(615) 373-8840
Owner: Chris Christian
Studio Manager: Richard Headen

•••• THE GRAND
920 19th Ave. S., Nashville, TN 37212
(615) 321-0088
Owner: Glen Fox

•••• GRAND CENTRAL STUDIO
1708 Grand Ave., Nashville, TN 37212
(615) 327-0520
Owner: Pat Patrick
Studio Manager: Kent Madison
Engineers: Kent Madison
Dimensions of Studios: 33 x 24.
Dimensions of Control Rooms: 21 x 13.



GRAND CENTRAL STUDIO
Nashville, TN

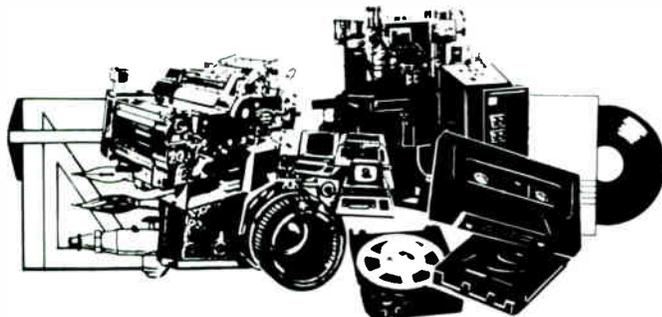
Tape Recorders: MCI JH-2424, 24; Studer A-810, 2-track; Mitsubishi digital X-80, 2-track; Studer A-67, 2-track.
Monitor Consoles: AMEK M2500, 36 x 24.
Monitor Amplifiers: BGW 750, BGW 250.
Monitor Speakers: JBL 4430 Bi-Radials.
Echo, Reverb & Delay Systems: Lexicon 200, live chambers, Roland DDL.
Other Outboard Equipment: UREI limiters.
Microphones: Neumann 87, 47; AKG 414, 451, 460; Sennheiser 421, 441.
Instruments Available: Yamaha DX7, Roland Jupiter 6, grand piano, Fender and Music Man guitar amps.
Video Equipment & Services: 3/4" playback.
Rates: \$75/hr. or block rate of \$60/hr.

•••• GREAT CIRCLE SOUND
365 Great Circle Rd., Nashville, TN 37228
(615) 256-1763
Owner: The Benson Co.
Studio Manager: Bob Clark
Engineers: Bob Clark, David Murphy
Dimensions of Studios: 40 x 60.
Dimensions of Control Rooms: 18 x 21.
Tape Recorders: Studer A-800 24-track; MCI JH-110; Studer A710 cassette; Studer A-80 VU 1/2" 2-track Nakamichi RX-505 cassette.
Mixing Consoles: MCI JH-528, 28 in x 28 out.
Monitor Amplifiers: McIntosh 2300, Crown D-150, Yamaha P-2200.
Monitor Speakers: UREI Time Aligned 813, Auretone SC, Technics SB-F2, Yamaha NS-10M.
Echo, Reverb & Delay Systems: Lexicon digital delay 102 Delta; EMT 240 Gold Foil; AKG BX-20; spring echo.
Other Outboard Equipment: Eventide flanger; (4) UREI 1176 limiters; (2) UREI LA3A limiters; (2) dbx 160 limiters; Orban parametric EQ; Orban de-esser; Harmonizer; Kexpex, Dolby, (2) ADR Vocal Stressers; Dimension-D; SDE-3000 DDL; Korg SDD-3000 DDL, UREI bandpass filter.
Microphones: Neumann U87, U47, KM84; Sennheiser 421, 441; AKG 414, 224E, D202; Shure SM56, 57; E-V RE16; Beyer 160.
Instruments Available: Yamaha 7'4" grand piano, ARP String Ensemble, Hammond C3 organ & Leslie, Wurliizer electric piano, clavinet, Music Man bass & guitar amps.
Rates: Available upon request.

•••• GROUNDSTAR LABORATORY
12 Music Circle S., Nashville, TN 37203
(615) 256-3785
Owner: Ronnie Milsap
Studio Manager: Ben Harris

•••• HAYES RECORDING STUDIOS
2406 So. MacDill Ave., Tampa, FL 33629-5999
(813) 837-6384
Owner: John Uhrig
Studio Manager: John Uhrig
Engineers: Paul Fenton, John Uhrig, Bob Bodell (maintenance). Independents welcome.
Dimensions of Studios: A: 20 x 24 x 12; isolation rooms 8 x 9 and 8 x 10.
Dimensions of Control Rooms: A: 20 x 15 x 9; B: (video) 12 x 22.
Tape Recorders: Ampex MM1200, 24-track; Studer A80RC, 2-1/2" and 1/4"; Ampex 440-B, 2-track; Scully 280-B, 2-track; Ampex 351, mono; Studer A710, cassette.
Mixing Consoles: Sphere A-Custom 32 x 16.
Monitor Amplifiers: Crest P3500, 2501S, McIntosh 2105 (phones).
Monitor Speakers: E-V Sentry III, MDM4, Auretone 5c, Fostex 6301, E-V Sentry 1A.
Echo, Reverb & Delay Systems: Lexicon Model 200.

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Tampa, FL

BAE LP 140 Plate, DeltaLab DL-2 Eventide H910, MXR delay system II, DeltaLab Super Time Line ADM2048.
Other Outboard Equipment: 24 channels dbx NR, Audio Kinetics 310 controller and 410 brain (SMPTE), dbx 160 compressor (2), Audioarts 4200 parametric (2), Orban 516EC de-esser, ADR Vocal Stresser, EXR 3 Exciter, UREI 539 room EQs, USAudio GateX (8), Symmetrix SG200 noise gates, UREI 964 Digital Metronome, Technics SP-25 turntables, Countryman direct boxes, Symmetrix TI-101 Telephone Interface, Spectra Sonics 601 limiters.
Microphones: Neumann U87, U47 (tube); AKG 414/P48, 452EB, 451E, D202; Beyers M16ON; E-V RE20, RE16, 666; Shure SM54, SM57, SM58; Sennheiser MD421 (6); RCA 77DK, 44 DX; Sony C37 (tube); Countryman 85; Wahrenbrock PZM (4).
Instruments Available: Emulator II w/ Macintosh edit interface, Oberheim OB8, DSX, DMX, Roland RX11, Marshall & Wendall grand piano, Hammond organ w/Leslie, Deagan electric chimes, Ludwig drums w/Zildjian cymbals, Fender Champ and Twin amplifiers, Yamaha CX5M music computer.
Video Equipment & Services: Half-inch & 3/4" videotape editing and location shooting, 2- to 24-track audio sweetening for video, computer generated graphics, videotape duplication and transfers, production and sound effects library. Equipment: JVC-210 camera, Sony VO5800-5850-6800 rec., Sony RM440 edit controller, JVC BR 8600 decks, JVC RM86U edit controller.
 Rates: Available upon request. Packages available.

•••• **HILL ENGINEERING ASSOCIATES, INC.**
 also **REMOTE RECORDING**
 807 S. Orlando Ave., Ste. O, Winter Park, FL 32789
 (305) 628-0552
 Owner: Amel L. Hill
 Studio Manager: Mr. Hillary (Mel) Smith

•••• **HUFF RECORDING STUDIO**
 Rt. 2 Box 122, Forest, MS 39074
 (601) 536-2255
 Owner: Rayborn, Clayborn and David Huff
 Studio Manager: David Huff



J.B.S. STUDIO
Avondale Estates, GA

•••• **J.B.S. STUDIO**
 106 N. Avondale Rd., Avondale Estates, GA 30002

(404) 296-0604
 Owner: Bradford B. Jones
 Studio Manager: Brad Jones
 Engineers: Brad Jones, chief engineer, Richard Wells, freelance engineer, Donal Jones, freelance engineer.
Dimensions of Studios: 40 x 50 with 22' ceilings. Two isolation booths 5 x 12. Performing stage 16 x 22.
Dimensions of Control Rooms: 21 deep x 25 wide, 12' ceiling.
Tape Recorders: (2) Otari MX-70 1", 16-track; Otari MX-5050 MKIII-8, 8-track; Otari MTR-12, 2-track; (2) Otari MX-5050-B, 2-track.
Mixing Consoles: Amek Angela, 32 x 24.
Monitor Amplifiers: Crest, Hafler, Adcom.
Monitor Speakers: Custom designed. Each cabinet has two Gauss 15" woofers, (1) Dynaudio 8" midrange cone, (1) Dynaudio dome tweeter. No room EQ.
Echo, Reverb & Delay Systems: Lexicon 200, Lexicon PCM60, Yamaha Rev7, Audio Digital TC-2, Effectron 1024, Effectron 64.
Other Outboard Equipment: Eventide 949H Harmonizer, Valley People Kepex, Valley People Maxi-Q, dbx 165A, 160X, 163, compressor/limiters (5); dbx 166, Dyna-Mite, Aphex Aural Exciter Type-B.
Microphones: Neumann U87, KM84; AKG 414, 452, 460; Sennheiser 441, 421; Electro-Voice RE20; Shure SM57, SM58; Beyers MD-400; Crown PZM; Sony ECM-50; Shure headpiece.
Instruments Available: 1928 5' Conover grand piano, drum kit, Music Man bass guitar.
Video Equipment & Services: Complete 3/4" video production services including: sync to 32-track, editing with character generator, recording with Sony M3-A camera, and complete pre- and post-consultation to make your video the best.
 Rates: Call for brochure and current rate schedule.

•••• **JOHN ST. JOHN & HIS 27 TALENTED FRIENDS INC.**
 1830 N.E. 153rd St., No. Miami Beach, FL 33162
 (305) 940-4656
 Owner: John St. John
 Studio Manager: Carlos Alvarez

•••• **KNIGHT RECORDING STUDIO, INC.**
 also **REMOTE RECORDING**
 3116 Metairie Rd., Metairie, LA 70001
 (504) 834-5711
 Owner: Corporation
 Studio Manager: Mr. Traci Borges

•••• **LIVE OAK SOUND RECORDERS**
 808 Live Oak Dr., Chesapeake, VA 23320
 (804) 420-7442
 Owner: Live Oak Sound, Inc.
 Studio Manager: Jim Mikles

•••• **LONDON MUSIC, INC.**
 5120 N. Florida Ave., Tampa, FL 33604
 (813) 238-3900
 Owner: Howard Conder
 Studio Manager: Howard Conder

•••• **LONE PINE PRODUCTIONS RECORDING SERVICES**
 5024-A Simmons Rd., Orlando, FL 32806
 (305) 281-6881
 Owner: Michael Hurley
 Engineers: Michael Hurley
Dimensions of Studios: 22 x 29.
Dimensions of Control Rooms: 17 x 21.
Tape Recorders: Soundcraft Series 760, 24-track; Tascam Model 42, 2-track.
Mixing Consoles: Trident Series 70, 28 x 24.
Monitor Amplifiers: Dynaco (modified), TAD.
Monitor Speakers: Auratone QC-166 3-way, Auratone Cubes.
Echo, Reverb & Delay Systems: Custom plate, ART 01a, Fostex spring, Fostex delay.
Other Outboard Equipment: Paragraphic EQ, Spectra-sonics & Symmetrix limiters, Aphex Aural Exciter, Aphex Compellor.
Microphones: Neumann KM84, U47, U89; AKG 414; Sennheiser 421, Shure SM57, Crown PZM, Radio Shack crystal mic.
Instruments Available: Kawai 6' grand piano, Yamaha drums (8", 10", 12", 14" power toms), Yamaha DX7 synthesizer, Fender Precision Bass, numerous percussion. 360 Systems, Prophet-600, and Fairlight available. Schoenhut toy piano.
Video Equipment & Services: Half-inch VHS for reference.
 Rates: \$90/hr., list with block discounts available.
 Extras: Studio is located on the edge of the woods, and the setting has an open feel. The proximity to Walt Disney
 —LISTING CONTINUED ON PAGE 152

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Direction: We specialize in two areas: advertising music (jingles, custom A/V scores, TV soundtracks, etc.) and MOR to contemporary pop music. Many artists have "found their sound" with the assistance of our on-call talent: keyboard, guitar, percussion, synthesizer, and orchestral players, plus excellent background vocalists.

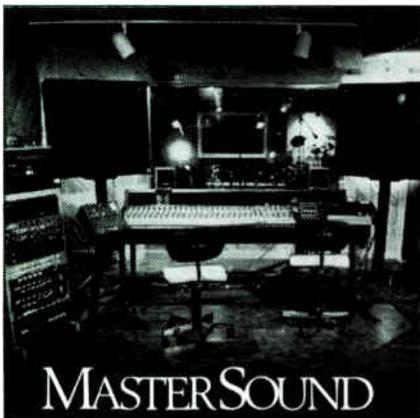
•••• **LSI RECORDING**
 1006 17th Ave., S., Nashville, TN 37212
 (615) 327-4565
 Owner: Pat Carter
 Studio Manager: Danny Dunkleberger

•••• **MAJESTIC SOUND STUDIO**
 also **REMOTE RECORDING**
 3800 Keith St. N.W., Cleveland, TN 37311
 (615) 472-8200
 Owner: Church of God of Prophecy
 Studio Manager: Thomas Duncan

•••• **MALACO RECORDING**
 3023 W. Northside Dr., Jackson, MS 39213
 (601) 982-4522
 Owner: Malaco Records
 Studio Manager: Wolf Stephenson

•••• **MARK FIVE RECORDING**
 P.O. Box 7084 10 Michael Dr., Greenville, SC 29610
 (803) 269-3961
 Owner: Joe Huffman, Bill Huffman, Harold Huffman, Michael Bumette
 Studio Manager: Eddie Howard

•••• **MASTER MIX**
 1808 Division St., Nashville, TN 37203
 (615) 321-5970
 Owner: Trio Ent. Co.
 Studio Manager: Hank Williams
Engineers: Tom Brown, chief engineer.
Dimensions of Studios: 625 sq. ft. overdub room.
Tape Recorders: Otari MTR-90, 24-track; Otari MTR-10 2-track (1/2" and 1/4").
Mixing Consoles: Neve/Necam II 38 & 24 x 24 (early 1970s discrete with 4-band 1081 equalizers).
Monitor Amplifiers: Bryston, Hofer, Yamaha.
Monitor Speakers: 4-way, all-cone, time coherent custom system by Dr. Claude Fortier with a proprietary 4-way active electronic acoustic Align crossover network by State-Of-The-Art Elektronik. Auratone, Rogers, Yamaha.
Echo, Reverb & Delay Systems: EMT 250/251, Lexicon 224LX with Larc, Super Prime Time, Eventide H-949.
Other Outboard Equipment: Compressors/Limiters: ADR, dbx, Neve, Sontec, UREI, Valley People, Equalizers: ADR, Sontec, Trident.
Microphones: AKG C-12.
Extras: Over-dub room, utilizing RPG diffusion, stereo disk mastering, Sony 1630, Sony DAE 1100.



MASTERSOUND

MASTER SOUND RECORDING STUDIO
 Virginia Beach, VA

•••• **MASTER SOUND RECORDING STUDIO**
 5249 Challedon Dr., Virginia Beach, VA 23462
 (804) 499-0000
 Owner: Robert Ulsh
 Studio Manager: Robert Ulsh



Engineers: Robert Ulsh, Bruce Buehlman, Brent Havens, Mark Olmstead, Tom Jones.
Dimensions of Studios: 35 x 45 with two isolation booths (10 x 12 and 10 x 8).
Dimensions of Control Rooms: 20 x 22.
Tape Recorders: Sony/MCI transformerless with Auto Locator III JH-24, 24-track; Otari MTR-12C, 2-track; (2) Tascam 52s, 2-track; (2) Tascam 2-7000, cassette decks.
Mixing Consoles: Amek Angela, 28 x 24 x 62 returns.
Monitor Amplifiers: Acoustat Trans Nova Twin 200 most-fet Kenwood Basic M-2 440 watts.
Monitor Speakers: JBL/UREI 4435s, JBL 4411, Yamaha NS-10s, Auratone, TOAs.
Echo, Reverb & Delay Systems: (2) Lexicon 200 stereo digital reverbs, Yamaha REV7 stereo digital reverb, Lexicon PCM-41 digital delay, Lexicon PCM-42 digital delay, Eventide 969 harm./delay.
Other Outboard Equipment: Orban 424A stereo compressor/limiter, Universal 175 tube limiter, LT Sound CLX-2 stereo comp./limiter/expander dual MXR 1/3 octave EQ, Aphex Aural Exciter, Rane 6-channel headphone, Eventide 969 Harmonizer/delay, Valley People 4-channel noise-gate (2) dbx 160X comp./limiter, dbx 166 stereo comp./limiter, USAudio Gatex 4-channel noise gates, Soundcraftsmen AE2420-R EQ.
Microphones: (2) Neumann TLM-170, (5) AKG 414 P-48, Neumann U-89, (8) AKG C-451-460, AKG "The Tube," AKG D-12E, (6) Sennheiser 421, Sennheiser 441s, assortment of 17 additional dynamic mics.
Instruments Available: Yamaha 74" C-7 concert grand piano, 7 piece Ludwig drum set, Oberheim DMX drum machine, Simmons drums, Emulator II digital sampling keyboard with extensive sound library, Fender Rhodes, DX7s, Prophet-600, Fender Precision Elite Bass Fender Stratocaster "Elite" guitar, Hamer-prototype guitar/Floyd Rose, Tama & Alvarez Yairi DY-78 acoustic guitars, Ampex B-15N amp, Yamaha G-100 amp, Laney-tube amp.
Video Equipment & Services: Sony BVU-800 3/4" with Sony 19" monitor with SMPTE time code lock-up.
Rates: 24-track \$85/hr., 16-track \$70/hr., video sweetening \$125/hr.
Extras: Atmosphere, studio arrangers & producers with a large pool of professional studio musicians at reasonable rates. Master Sound is geared up for the MIDI revolution with several computers and interlacing cards to run your programmed software with our Emulator II, drum machines and synthesizers. We also handle 45s and LP albums including layout artwork and album pressing. We do full production of radio and television music commercials with 24-track audio/video sweetening facilities.
Direction: Master Sound Recording Studio has over the past six years gained a reputation for high quality sound engineering and recording. We have engineers who know how to get the "sound" you want and the equipment to achieve it. We have a fully transformerless studio from our Amek Angela console to our Sony/MCI JH-24 recorder. We are offering high-tech recording with quality production of affordable rates and we're only 15 minutes away from the Virginia Beach resort oceanfront.

•••• **MASTER SOUND STUDIOS, INC.**
 also **REMOTE RECORDING**
 1227 Spring St. N.W., Atlanta, GA 30309
 (404) 873-6425
 Owner: Bob Richardson
 Studio Manager: Bob Richardson
Engineers: Bob Richardson, Ron Christopher, Buzz Richardson, and Bret Richardson.
Dimensions of Studios: Music 43 x 25; production 10 x 10.
Dimensions of Control Rooms: Music 23 x 25; production 10 x 10
Tape Recorders: (2) MCI JH-114 24-track, MCI JH-110 1/2" 2-track; (4) MCI JH-110 1/4" 2-tracks; (2) Ampex AG 440B 2-track, (2) Ampex AG 440B monos; MCI JH-110B 1/2" 2-track mastering.
Mixing Consoles: SSL 4000E 40 in x 32 bus out—full

automation plus total recall; Auditrone 110B, 20 in x 4 out.
Monitor Amplifiers: BGW 250, 500; Crown D150, 300.
Monitor Speakers: Audicon-custom; JBL 4313, Auratone.
Echo, Reverb & Delay Systems: EMT 140 mono and stereo, Lexicon 224, Lexicon 102; Marshall, Eventide, ADR.
Other Outboard Equipment: dbx 165, 160, UREI LA2, LA3, 1176; ADR limiters; Pultec, Orban EQ; ADR Vocal Stresser, Orban de-esser.
Microphones: Neumann U64, U68, U47, U47 FET, KM86 KM88, U86, U87, M49; AKG 414, C60, C61, 202; Shure (all types); E-V (all types); Schoeps (all types); Sony C37, ECM50; RCA 77DX; Sennheiser (all types); Altec; Telefunken; others.
Instruments Available: Baldwin 9' concert grand, Steinway 7' grand, Rhodes 7' stage, Hammond B-3 organ, Slingerland drums, Musser vibes, Ork bells, percussion kit, effects kit, Fender, Ampeg and Music Man amps.
Video Equipment & Services: MCI JH45 audio/video sync lock; Sony VP1000 3/4" U-Matic; (2) Panasonic 19" color monitors. BTX Softouch synchronizer, Sony BVU 8500 VCR.
Rates: On request.

•••• **MASTERTOUCH RECORDING STUDIO**
 also **REMOTE RECORDING**
 2714 Westwood Dr., Nashville, TN 37204
 (615) 297-2246
 Owner: Mable Birdsong
 Studio Manager: Joe L. Wilson

•••• **MASTER-TRAK SOUND RECORDERS**
 also **REMOTE RECORDING**
 P.O. Box 1345, 413 N. Parkerson, Crowley, LA 70526
 (318) 783-1601, 788-0773
 Owner: Jay Miller
 Studio Manager: Mark Miller

•••• **MAX RECORDING STUDIOS**
 326 Forrest Ave. W., Biloxi, MS 39531
 (601) 388-9073
 Owner: Krohn McHenry

•••• **MEDIA GENERAL BROADCAST SERVICES**
 1711 Poplar Ave., Memphis, TN 38104
 (901) 320-4254
 Owner: Media General Inc.
 Studio Manager: Glenn Crawford



MIAMI SOUND STUDIO
 Miami, FL

•••• **MIAMI SOUND STUDIO**
 697 N.W. 28 St., Miami, FL 33127
 (305) 635-4890
 Owner: Carlos and Angie Diaz-Granados
 Studio Manager: Angie Diaz-Granados
Engineers: Carlos Diaz-Granados, Jr., Paul Khouri
Dimensions of Studios: 17 1/2 x 13 3/4 x 28.
Dimensions of Control Rooms: 17 x 10 x 15.
Tape Recorders: Studer A-80 24-track, Ampex 440-B 2-track, Scully 2-80 24-track, Studer/Revov 77 2-track.
Mixing Consoles: Neve 8028 24 x 16-24.
Monitor Amplifiers: McIntosh 2300, 2105, 255.
Monitor Speakers: JBL 4343 (Gauss) JBL 4311, Auratone, SC Tannoy, Foxtex.
Echo, Reverb & Delay Systems: Echo delay tape, (2) EMT 140 echo chambers, Lexicon digital reverb 200. Lexicon Prime Time 93.
Other Outboard Equipment: Eventide Harmonizer, Scamp Rack, UREI Teletronix LA2A limiters, LA3A limiters,

Pultec equalizers/compressors, Neve limiters/vocal doubler, Electra digital delay, Roland phase shifter, Roland stereo flanger, Simmons Clap Trap, LinnDrum, Simmons electronic drums, Roland Dimension D.
Microphones: Neumann U87s, U67s, KM84s; AKG 451, E-V RE20; Sennheiser, Shure 57; Sony C-37P, RCA 77-DX, RCA 44.
Instruments Available: Yamaha grand piano, Fender Rhodes; Roland synthesizer, Rhythm Box harmonizer, Slingerland drums, Synare, Hammond B3.
Rates: Rates upon request.
Direction: Studio philosophy: simply that our engineers strive to treat every recording as if it were their own aspiration; to be categorized as a hit making quality studio. Logo: "We've got the sound you want!"

Engineers: Tom Morris, Jim Morris, Rick Miller.
Dimensions of Studios: 32 x 40 Studio A; 32 x 15 Studio C.
Dimensions of Control Rooms: 25 x 23 both.
Tape Recorders: Otari MTR-90 w/autolocator 24-track; Otari 5050 MKIII 8-track; Otari MTR-12 2-track; (2) Otari Mark II 5050B 2-track.
Mixing Consoles: Sound Workshop Series 34 with automation, 32 x 24; Soundcraft 400B, 16 x 8.
Monitor Amplifiers: (6) Hafler.
Monitor Speakers: UREI 811A; UREI 813B; JBL 4312; Yamaha NS-10M, EAW MS-50; E-V Sentry 100; Auratone 5C.
Echo, Reverb & Delay Systems: Lexicon PCM 41, PCM 42, Prime Time; Loft 450; Lexicon 224 and PCM 70; Ecoplate; Master-Room 305.
Other Outboard Equipment: DeltaLab DL5 and Eventide 910H Harmonizers; dbx 165 & UREI LA-4 compressor/limiters; Valley People Dyna-Mites; EXR EX-3 Exciter; Omni Craft noise gates; Audioarts stereo parametric equalizer; BTX Shadow synchronizer.
Microphones: Neumann; AKG, Sennheiser, Shure, Electro-Voice.
Instruments Available: Yamaha grand piano, Hammond C-3 w/Leslie, 5 piece Gretsch drum set with Tama snare, 5 piece Yamaha drum set, full range of rental synthesizers and drum machines, including Synclavier II.
Video Equipment & Services: Audio post-production for film or video.
Rates: 24-track \$115/hr., 8-track \$45/hr.

McIntosh MC-2500.
Monitor Speakers: 4311-JBL, 4411-JBL, MDM-4, ROR, Auratones, Yamaha NS-10M, TAD, Big Reds, Klipsch, E-V Sentry 100, B & W.
Echo, Reverb & Delay Systems: EMT plates, PCM60, Korg SDD-3000, Lexicon 200, 224XL, Eventide digital delay, multiple live rooms, Yamaha REV7.
Other Outboard Equipment: Drawmer gates, Dimension-D, Orban EQ, API 550 & 560, Kepex, Gain Brains, Scamp Rack, 1176 limiter, LA2A, dbx 160, 165, 160x, Audio Design Recording-Sweep EQ & Vocal Stresser, de-essers.
Microphones: Neumann 47, 87; Sennheiser 421, 441; AKG 451; Shure 57, 545, 58; PIM; P2M; various antique mics.
Instruments Available: Baldwin 9' grand piano, Rockman, Marshall and Peavey guitar amps, DX7 and ROM cartridges, assorted percussion instruments, clavinet, Hammond B-3 organ and Leslie.
Video Equipment & Services: Beta video for digital copies.
Extras: Muscle Shoals Sound Rhythm Section, Shoals Sisters Background Vocals, Muscle Shoals Horns.
Direction: Credits: Julian Lennon, Glen Frey, Paul Simon, Rolling Stones, Bob Dylan, Cher, George Michaels, Art Garfunkle, Bob Seger, Oak Ridge Boys, Willie Nelson, Helen Reddy, Dr. Hook Traffic, Steve Winwood, Johnny Rivers, Tony Orlando, Joe Cocker, Eddie Rabbit, Lynyrd Skynyrd, Blackfoot, Stephen Stills, Mink Deville, Billy Squier, Peter Dinklage, Mary Travers.



MORRISOUND RECORDING
Tampa, FL

•••• MORRISOUND RECORDING
 12111 N. 56th St., Tampa, FL 33617
 (813) 989-2108
 Owner: Morrisound Recording Inc.
 Studio Manager: Tom Morris

•••• MUSCLE SHOALS SOUND STUDIOS
 1000 Alabama Ave., Sheffield, AL 35660
 (205) 381-2060
 Owner: Malaco Records
 Studio Manager: Jimmy Johnson
 Engineers: Pete Greene, chief engineer; Paul Mann; Steve Melton; Jerrell Sockwell; Lee Daley.
Dimensions of Studios: Studio A 32 x 36 x 18, Studio B 22 x 36 x 18.
Dimensions of Control Rooms: Studio A 25 x 19, Studio B 25 x 19.
Tape Recorders: MCI 24-track; Studer B-67, 2-track; Studer A-80 1/2", 2-track; Sony PCM-F1, 2-track; Nakamichi BX-1, 2-track.
Mixing Consoles: Neve 8068, 32 input; Neve w/Necam 8088, 44 input.
Monitor Amplifiers: BGW, Yamaha, Peavey Deca 700.

•••• MUSIC CITY MUSIC HALL
 30 Music Square West, Nashville, TN 37203
 (615) 255-9084 studio; 244-1060 office
 Owner: Owen Bradley
 Studio Manager: Cecile Light
 Engineers: Bill Harris, Doug Crider.
Dimensions of Studios: 50 x 80 x 30 with walls up. 50 x 40 x 30 with walls down.
Dimensions of Control Rooms: 28 x 18 x 10.
Tape Recorders: Studer A-80 24-track; Studer A-80 master recorder 2-track; Studer B67 2-track; Ampex AG-440 4-track; Studer B710 cassette recorder.
Mixing Consoles: Neve 8038, 32 in x 24 out w/ Allison Research Fader Automation.
Monitor Amplifiers: McIntosh 2100s.
Monitor Speakers: UREI 813s, JBL 4313B, Auratones.
Echo, Reverb & Delay Systems: Lexicon 224XL, (3) EMT
 —LISTING CONTINUED ON PAGE 154



SPARS

Society of Professional Audio Recording Studios

Spring Administration

The SPARS National Studio Exam

by Professionals, for Professionals



WHAT IS IT?
 The SPARS National Studio Exam is designed to measure your knowledge in every area of studio operation. The exam has been developed by industry professionals and educators in cooperation with the Educational Testing Service of Princeton, New Jersey, authors of the well-known Scholastic Aptitude Test (SAT).

WHY TAKE ANOTHER TEST?
 The SPARS National Studio Exam will give you a clear picture of your own studio knowledge. What's more, you can elect to have your exam subsection scores reported to the professional studio community to affirm your mastery of specific knowledge and expertise... whether you are being considered for employment or advancement, or just want to share that information with your current employer. And, if you are applying to schools with an audio engineering program, you can request that your test results be sent to them as an aid to appropriate placement in basic or more advanced courses.

Your subsection scores will give you a diagnostic look at just how you compare with your peers in this fiercely competitive industry. In a market flooded with applicants, your results in the new SPARS National Studio Exam may give you just the edge you're looking for in advancing your own career.

SPARS manufacturing members have established scholarships to be awarded to individuals who demonstrate need and who demonstrate ability through their score on the SPARS National Studio Exam. Your score report will be totally CONFIDENTIAL, released only to those that YOU select.

WHAT DO I DO?
 Write or call the SPARS National Office and request the SPARS National Studio Exam Information Bulletin.

SPARS
 P.O. 11333
 Beverly Hills, CA 90213
 (213) 466-1244

Contact us soon, the Spring administration of the exam is scheduled for Saturday, April 26, 1986 at over 20 locations throughout the country. Deadline for registration is April 1st, 1986.

The SPARS National Studio Exam is sponsored by a grant from the Sony Corporation.

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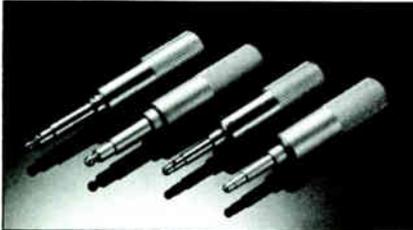
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S O U T H E A S T S T U D I O S

—LISTING CONTINUED FROM PAGE 153

plates, Gotham Audio digital delay, Eventide Harmonizer, Cooper Time Cube.

Other Outboard Equipment: (2) ADR Vocal Stressers; Scamp rack; Teletronix compressors; LA-2A, LA-3A limiters; BTX synchronizer and generator (32 tracks to 40 tracks possible); EXR Exciter; Dolby noise reduction, Eventide Phaser.

Microphones: Neumann U87s, U67s, U47s, U48s, M49s, KM84s, KM56s E-V RE16s RE20; Sony ECM50s, C500s, C55s; RCA 44s, 77s; ELA 251s; AKG 414, 105 mics total. **Instruments Available:** Baldwin 9' grand, Hohner D-6 clavinet, stereo Fender Rhodes, Wurflitzer electric piano, Celeste, Zucker electric harpsichord, Deagan vibes, marimba, Hammond organ with B-3 Leslie, Yamaha PF15 electronic piano.

Rates: Available upon request.

•••• MUSIC MILL

1710 Roy Acuff Pl., Nashville, TN 37203
(615) 254-5925

Owner: Harold Shedd and Donny Canada
Studio Manager: Paul Goldberg and Jim Cotton



NEW AGE SIGHT & SOUND
Atlanta, GA

•••• NEW AGE SIGHT & SOUND

Ste. 164, 120 Interstate N. Parkway, E.
Atlanta, GA 30339
(404) 956-7956

Owner: Media Associates, Ltd. William Allgood, President
Engineers: William Allgood, Mitchell Dorf, Jason Bonnette, independents.

Dimensions of Studios: Studio A: 40 x 50; Studio B: 14 x 17, Video shares Studio A.

Dimensions of Control Rooms: Control Room A: 20 x 23 (LEDE type); Control Room B: 14 x 12; Video Control/Editing, 14 x 16.

Tape Recorders: Sony 3324 24-track digital recorder with RM-3300 remote, Sony PCM-1610 digital audio processor, Sony BVU-800 DB 3/4" video recorder, Sony PCM-F1 digital audio processor, Sony Beta SL-2000, MCI 2-channel recorder JH-110B, Sony TC 854-4 4-channel recorder (2-channel 1/2 track R/P), 10 Nakamichi BX-100 cassette decks.

Mixing Consoles: Studio A: Sound Workshop Series 34, 50 inputs, 48 automated 50 x 24 x 48; Studio B: Sound Workshop Series 34, 28 inputs 28 x 24; Video: Sound Workshop Logex-8, 12 x 8; Remote: Panasonic WR-500 10 x 2

Monitor Amplifiers: (7) Hafler DH-220 power amps, (2)

Hafler P-500 power amps, Series 20 NAD preamp (1020), Series 20 NAD amp (3020).

Monitor Speakers: UREI 813-B, UREI 809 Time-Align, Tannoy SRM-15X, JBL 4411, (4) Electro-Voice Sentry 100-A, Yamaha NS-10M, Auratone 5C.

Echo, Reverb & Delay Systems: Lexicon 224X digital reverb, Klark-Teknik DN-780 digital reverb-processor, Lexicon Prime Time II digital delay, Lexicon PCM41 digital delay.

Other Outboard Equipment: (2) dbx 165 A compressor/limiters, (2) dbx 166 gain reduction units (compressor/noise gates), 4-channels GateX noise gates, LT sound vocal eliminator, Vector Research graphic equalizer VQ-100, (2) White 4400 1/3 octave equalizers, Lynx Time Line synchronizer modules.

Microphones: (6) Neumann KM 84, Neumann SM 2 (stereo microphone), (6) Sennheiser 421, (3) AKG 414 EB, (6) Shure SM57 (2) Sony C-35P, Sony C-535P, Sony C-536P, (5) Sony ECM-30, Sony ECM-22, Sennheiser K3-U, Sony ECM 22-P.

Instruments Available: 1943 D Steinway 9' grand piano, MiniMoog synthesizer, Slingerland drum set.

Video Equipment & Services: (2) Hitachi HR-200 1-inch video decks, (2) Hitachi TC-200 time base correctors, Sony BVU-800 3/4" video recorder, Sony BVU-800 DB 3/4" video recorder, (2) JVC CR 8250 U 3/4" video recorder, Panasonic NV-8500 VHS recorder, (4) JVC HR-D131 VHS video recorders, (4) Datatron 5250 SMPTE readers Datatron 5150 SMPTE time code generator, Datatron Vanguard editor, For-A FA-410 time base corrector, Microtime T-100 time base corrector, (3) Sony DXC-M3 color video cameras, Videotek TSM 5-A wave form monitor, Symtec PGS III character/graphics generator, JVC KM-2000 video switcher/color special effects generator.



NEW RIVER STUDIOS
Fort Lauderdale, FL

•••• NEW RIVER STUDIOS

408 South Andrews Ave., Fort Lauderdale, FL 33301
(305) 524-4000

Owner: New River Productions

Studio Manager: Virginia Cayia

Engineers: Staff: Ted Stein, Teresa Verplanck, Maintenance: Dale Peterson, independents as available.

Dimensions of Studios: 36 width, 35 length, ceilings from 13-18 feet.

Dimensions of Control Rooms: 35 width, 25 length.

Tape Recorders: (2) Studer A800 MKIII, 24-track; (2) Studer A80, 2-track; Revox B77, 2-track; (2) Revox B710, cassette; (2) Yamaha K1000, cassette.

Mixing Consoles: Neve 8108 w/Necam 96, 56 x 48.

Monitor Amplifiers: (5) Acoustal TNT-200s.

Monitor Speakers: UREI 813B.

Echo, Reverb & Delay Systems: AMS RMX16 digital reverb, Lexicon 224XL, EMT 251, EMT1405 tube plate, Lexicon PCM42 digital delays, Lexicon 97 Super Prime Time.

Other Outboard Equipment: Valley People Kepex II and Gain Brain, dbx 165, dbx 162, Neve stereo comp/limiter, Scamp Rack, Teletronix LA2A, API 550As, API 550s, Drawer noise gates.

Microphones: Neumann: M49, U87s, U89s, KM86, KM84, AKG: 414, D12, Beyer: M88, M101, Countryman Isomax, Crown PZM30, Electro-Voice RE20, Schoenher: CMTS501 CMO5, Sennheiser MD4210, Shure SM57 & SM81.

Instruments Available: Yamaha C7D grand piano, Hammond B3 w/Leslie, Dyno-My-Piano Fender Rhodes, drum set and various amps available.

Video Equipment & Services: Audio to video 3/4" post-production; JVC 6000 3/4" U-matic VCR and (2) JVC 2082 monitors.

Rates: Upon request.

Extras: We have established contacts with hotels, rental cars, yacht charters, etc., with special rates for our clients. We would be happy to structure a package to suit your

—LISTING CONTINUED ON PAGE 156

The AMPLIFIER: Hill Audio DX500

The POWER:

Dual channel (per channel)	Bridged MONO
280 watts into 8 ohms	825 watts into 8 ohms
425 watts into 4 ohms	1150 watts into 4 ohms
600 watts into 2 ohms	

The SPECS:

(within rated power)

Distortion	THD better than 0.01% at 4 ohms, 1kHz, IMD SMPTE better than 0.015% at 4 ohms
Damping Factor	650
Slew Rate	40V/microsec
Noise	-105dB A weighted

The TECHNOLOGY: 'total symmetry'

A unique transformer coupled driver stage, featuring identical ultra-linear NPN output devices connected in a 'Super A' sliding bias configuration, exhibiting a much more linear response than conventional amplifiers using NPN and PNP devices. The transformer coupled driver stage allows the amplifier to perform perfectly safely and reliably without any protection devices in the audio signal path, with significant sonic benefit particularly at or beyond clipping.

The FEATURES:

- '000' Series* power amplifier technology
- Toroidal power supply
- fully protected against persistent overdriving, component malfunction, short circuit etc. by activating a protection relay.
- balanced and unbalanced inputs
- 2 rack spaces
- mono bridging switch on front panel
- level controls on front panel
- LED indication of signal present, clip, power on and protect on
- 2 thermally tripped fans
- handles

The CHOICE: is yours!

*the '000' power amps - dx1000, dx1000A, dx2000 and dx3000



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Circle #117 on Reader Service Card

World Radio History

—LISTING CONTINUED FROM PAGE 154

needs. The studio has a private lounge, producers office and conference room for our clients. It is situated off the New River, only three miles to the beaches and airport. **Direction:** Having completed three years in business, New River has established itself as Florida's premier full-service facility. We are proud to have worked with the following: Peter Frampton, Cyndi Lauper, The Romantics, Miami Sound Machine, Jose Luis Rodriguez, Bob Seger and many other fine artists. We thank you for your support.

•••• **OMNISOUND RECORDING STUDIO**
1806 Division St., Nashville, TN 37203
(615) 321-5526
Owner: Esprit Sound, Inc.
Studio Manager: Nancy Westbrook

•••• **OSHEA RECORDS**
2407 W. Cornwallis Dr., Greensboro, NC 27408
(919) 288-8212
Owner: Phillip E. Jackson
Studio Manager: Russell Anderson

•••• **PACE RECORDING SERVICE**
also REMOTE RECORDING
2504 Bayou Rd., New Orleans, LA 70119
(504) 949-2414
Owner: Glen Himmough and Peter Schulman
Studio Manager: Rob Stennitt
Extras: Top equipment, top engineers, the only remote recording truck in the area. Add all this and the best attitude in the business, place yourself in the heart of the most inspiring city in the country (New Orleans) and you've got "Pace Sound Co." the only complete production center in the southeast. A first-class 48-track recording studio with equipment by MCI, Otari, NEOTEK, Soundcraft, Neumann, Yamaha and more plus the south's largest and most complete sound and lighting system. Credits include the Neville Bros., Adam Ant, Alan Landsberg Productions, Bill Graham Presents and more. Call us.



PARC STUDIOS
Orlando, FL

•••• **PARC STUDIOS**
also REMOTE RECORDING
P.O. Box 7877, College Park Sta., Orlando FL 32854
(305) 788-2450
Owner: Pat Armstrong/Parc Records, Inc.
Studio Manager: Andy deGanahl (for bookings: Pat Armstrong (305) 299-0077, Gary Jones (305) 788-2450)
Engineers: Andy deGanahl, Greg McNeily.
Dimensions of Studios: 40 x 30.
Dimensions of Control Rooms: 25 x 25.
Tape Recorders: Studer-Revox A800 24-track; Studer-Revox A80 4-track; Studer-Revox A80 2-track; Studer-Revox A80 2-track; (2) dbx 700 w/Sony Umatic 5800 VCR 2-track; Otari (mobile) MTR-90 24-track; Otari (mobile) MTR-10 2-track; Otari MTR-12 (1/2") 2-track.
Mixing Consoles: Solid State Logic 6000 E 56/32; Sphere (mobile) Eclipse Model A 32/24.
Monitor Amplifiers: Hafler DH 500(3); Hafler DH 220(3).
Monitor Speakers: Fostex LS-3, Fostex RM 780, Yamaha NS-10, UREI 811, Auratone.
Echo, Reverb & Delay Systems: AMS RMX-16 Reverb, Lexicon 224 XL reverb, (2) Lexicon 200 reverb, Micmix Super C reverb, AMS DMX 1580 delay, Eventide 969, Lexicon PCM 42 (2), PCM 41 (2) M 93 Prime Time.
Other Outboard Equipment: Drawmer DS 201 dual gate (2), Drawmer stereo tube compressor, dbx 900 rack w/2 compressors/2 de-essers/4 parametric EQ/Aphex compellor, Eventide flanger, Eventide phaser.



Microphones: Neumann U47 tube & FET, U89, KM84, AKG 460, 414 EB, C-12A, Sennheiser 421, 441 Sanken CU41, B+K 4000 Series, Shure SM 57, 58, 81, UREI direct boxes.
Instruments Available: Rental of any required instrument with 24 hour notice.

•••• **PATMOS PRODUCTIONS**
123 E. Slate St., Ridgeland, MS 39157
(601) 856-2525, 1-800-257-5539
Owner: James Griffin
Studio Manager: James Griffin



PERFECT PITCH RECORDING & PRODUCTION CO.
Statesville, NC

•••• **PERFECT PITCH RECORDING & PRODUCTION CO.**
Rt. 8 Box 433-A, Statesville, NC 28677
(704) 872-2360
Owner: Marcus Kearns
Studio Manager: Marcus Kearns
Engineers: Marcus Kearns, David York, (independents).
Dimensions of Studios: 12 x 20; isolation booth 8 x 10.
Dimensions of Control Rooms: 20 x 24.
Tape Recorders: Studer A80 VU MKIII 24-track; Studer A80 RC 2-track (1/2"), A810 (1/4") 2-track, Studer A710 cassette.
Mixing Consoles: MCI JH 636 30 x 24 automated, fully loaded.
Monitor Amplifiers: Banner 900 power amp, Banner 300 power amp, NAD 250.
Monitor Speakers: JBL 4430, 4401, 4311.
Echo, Reverb & Delay Systems: Lexicon 224X with LARC digital reverb, Lexicon Super Prime Time, Eventide H949 Harmonizer.
Other Outboard Equipment: Scamp rack (dual de-esser, comp/lim, exp/gate, dual gate), White equalizers.
Microphones: AKG, Sennheiser 421s, Neumann (87s and 89s), Electro-Voice, Shure.
Instruments Available: Bosendorfer 7'4" grand piano, Fairlight CMI (with AIC), Yamaha DX7, Oberheim OB-Xa, Oberheim DSX sequencer, ARP 2600, LinnDrum computer, Simmons drums, Sonor acoustic drums, Roland 350 Vocoder, Gibson Les Paul, Roland, Ampeg amps, Yamaha CP-70 electric grand, Fender Rhodes, Garfield Mini-Doc, Roland Juno 106, Roland 707 drum machine.
Rates: Upon request.

•••• **PICKIN'POST**
Watertown Hwy. Lebanon, TN 37087
(615) 449-1770
Owner: Nave Funeral Home
Studio Manager: Joseph Winston Nave

•••• **POLYMUSIC STUDIOS, INC.**
225 Oxmoor Cir. #812, Birmingham, AL 35209
(205) 942.3222
Owner: Daniel E. Whiteside
Studio Manager: Mike Panepento
Engineers: Mike Panepento, Andy Bray, Daniel Whiteside.
Dimensions of Studios: 25 x 23 main; 15 x 20 keyboard room, 12 x 8 isolation.
Dimensions of Control Rooms: 25 x 23 main; 15 x 8 edit/copy room
Tape Recorders: Otari MTR-90 24-track, ATR-800 2-track; ATR-102 2-track; ATR-700 2-track; TEAC 3340 4-track; Technics and JVC cassettes.
Mixing Consoles: Trident Series 70 28 x 16; Quantum QM-128 20 x 8.
Monitor Amplifiers: BGW and Yamaha.
Monitor Speakers: JBL 4411, 4311B, 4401; Auratones, Visonik 6000 and 9000.
Echo, Reverb & Delay Systems: Lexicon 224; Eventide Harmonizer and Flanger, Lexicon PCM 41 and 42 DDL; MXR DDL, Yamaha REV1 digital reverb, Roland Vocoder.
Other Outboard Equipment: Barcus-Berry 202R, Orban parametrics; UREI, Eventide and Ashly compressor/limiters.
Microphones: Neumann, Shure, E-V, RCA, Sennheiser, AKG.
Instruments Available: Synclavier II w/16 voices, digital music printing, sample-to-disk, DEC VT-100 monitor, Prism 80 printer, LinnDrum; Yamaha G-2 piano; Hammond B-3 w/128 Leslie; Fender Rhodes; Prophet 5; Roland MC-8; ARP 2600, Odyssey, Omni; Poly and MicroMoog; full Yamaha and Pearl drum sets; vibes and a complete array of Latin percussion; assorted guitars and amps.
Rates: \$50/hr. and \$1400/week.
Extras: Polymusic has a highly qualified, friendly staff of musicians, writers, lyricists, and arrangers to assist you. We also have an in-house jingle production company.
Direction: Our productions cover a broad range of musical styles, and our wide range of services is a definite plus. Polymusic has a growing list of loyal clients, and we invite you to become one of them.

•••• **THE PROCESS RECORDING STUDIOS**
also REMOTE RECORDING
3404-E W. Wendover Ave., Greensboro, NC 27407
(919) 855-1941
Owner: The Process Inc.
Studio Manager: Becky Smith
Engineers: Ron Schrank, Adrienne Hardy, Bob Kelly
Dimensions of Studios: A: 30 x 40 x 16 (isolation booth: 12 x 15 x 9; vocal booth: 10 x 9 x 9); B: 10 x 11 x 9.
Dimensions of Control Rooms: A: 22 x 22 x 14; B: 16 x 14 x 9; C: 14 x 12 x 9; D: 10 x 9 x 9.
Tape Recorders: Studer A-80, 24-track; Tascam-58, 8-track; Otari MX5050 BQII, 4-track; Otari MTR-12, 2-track; (2) Otari 5050 BII 2-track; Otari MX5050 full-track; Technics RS 1500US 2-track; (2) Studer/Revox PR-99, 2-track; (2) Tascam 122 cassette, Otari DP 4050 C-1 cassette duplicator; (2) Telex 1+1 cassette duplicator.
Mixing Consoles: SoundWorkshop Series 34 26 x 24 ARMS automation, Tangent 3216 18 x 16, Tascam M-50 12 x 8, Tascam 106, TEAC 2B/MB.
Monitor Amplifiers: UREI 6500, Crown Micro-Tech, Crown DC-150, Fender SRA 200, Marantz 240.
Monitor Speakers: JBL 4430, Fostex RM 780, Auratone, TOA, Bose, Altec.
Echo, Reverb & Delay Systems: Micmix XL-305, Delta-Lab ADM 1024, DeltaLab ADM 64, Loh 440, Lexicon PCM-60, (2) Yamaha REV-7.
Other Outboard Equipment: (3) Technics SL 1800 MK2, (3) TEAC V-35, Orban 526A, (2) Ashly SC-50, (2) Roger Mayer RM-68, Symetrix TI-101, Stanton 310, Soundcraftmen 20-12A, Dynaco SE-10, (2) dbx 160X, (2) dbx 166, Aphex Type B, dbx Type A on all recorders, Symetrix SQ-200, Audioarts 4100.
Microphones: AKG, Sennheiser, Electro-Voice, Crown PZM, Shure, Beyer.
Instruments Available: 5' grand piano, Fender Rhodes Stage, Crumar Performer, Crumar DS-2, Yamaha DX7, Yamaha RX11 drum computer, Tama Techstar drum kit, Rogers drums w/Tama hardware.
Video Equipment & Services: Panasonic AG-6800 Hi-fi synchronized to any multi-track recorder w/Fostex 4035-4030 SMPTE, 24, 25, 30, and drop frame.
Rates: Studio A: \$95/hr., Studio B: \$65/hr., Studio C: \$25/hr. Call Becky Smith for bookings and block rates.

•••• **PYRAMID RECORDING**
Box 331, 1228 Lula Lake Rd.
Lookout Mountain, TN 37350
(404) 820-2356
Owner: R.H. MacLellan
Studio Manager: Jim Stable

•••• **QUADRADIAL CINEMA CORP.**
 14203 N.E. 18th Ave., North Miami, FL 33181
 (305) 940-7971
 Owner: Robert Ingria and Mary Shehan
 Studio Manager: Robert Ingria and Mary Shehan

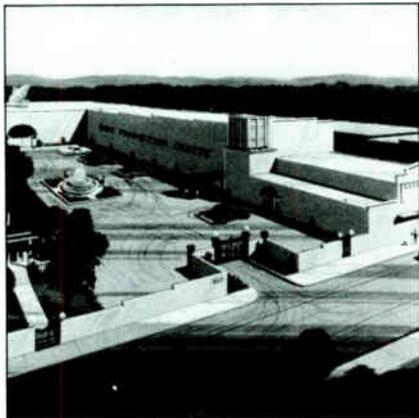
•••• **REFLECTION SOUND STUDIOS**
 also **REMOTE RECORDING**
 1018 Central Ave., Charlotte, NC 28204
 (704) 377-4596
 Owner: Wayne Jemigan
 Studio Manager: Mark Williams
 Engineers: Steve Haigler, Mark Williams.
 Dimensions of Studios: Studio A: 44 x 32 w/18' ceiling;
 Studio B: tape duplicating; Studio C: 28 x 24 w/12' ceiling.
 Dimensions of Control Rooms: Studio A: 18 x 16; Studio
 C: 18 x 14, plus alcove for recorders; 18 foot remote recording
 truck.
 Tape Recorders: Sony APR 5002, 2-track; MCI/Sony
 JH-110C (1/2"), 2-track; (2) MCI/Sony JH-24, 24-track;
 MCI/Sony JH-110C (1/4"), 2-track; Otari 5050, 1/4-track.
 Mixing Consoles: MCI JH-636 CM, 36 input; MCI JH-
 636, 24 input.
 Monitor Amplifiers: AB Systems, BGW
 Monitor Speakers: Custom TAD components, double
 woofer system, JBL 4401, ROR.
 Echo, Reverb & Delay Systems: Lexicon 224XL, EMT,
 DeltaLab delays. Super Time Line.
 Other Outboard Equipment: UREI comp. dbx 900 frames
 w/de-essers, gates, limiters, Valley People 610, Orban.
 Microphones: Neumann, AKG, Shure, E-V, Sennheiser,
 RCA, Sony.
 Instruments Available: Yamaha grand piano, Kawai
 piano, stereo Fender Rhodes, Wurlitzer electric piano,
 Farfisa, upright tack piano, Sonor drums and percussion,
 Musser vibes.
 Rates: Upon request.

•••• **THE REFLECTIONS**
 2741 Larmour Dr., Nashville, TN 37204
 (615) 269-0828
 Owner: Gene Lawson
 Studio Manager: Gene Lawson

•••• **R.I.M. SOUND STUDIO**
 M.T.S.U. Box 268, Murfreesboro, TN 37132
 (615) 898-2086
 Owner: Recording Industry Management, Middle Ten-
 nessee State University
 Studio Manager: Christian Haseleu

•••• **(ROYAL SHIELD'S) RIVER CITY RECORDERS**
 also **REMOTE RECORDING**
 1251 N. Acadian Thruway W., Baton Rouge, LA 70802
 (504) 383-8671
 Owner: (Royal Shield, Inc.) Homer J. Sheeler, Sr., Pres.
 Studio Manager: Rick R. Damell

•••• **RKM SOUND STUDIOS**
 1200 Spring St. N.W., Atlanta, GA 30309
 (404) 874-3667
 Owner: Kinder Music Corp.
 Studio Manager: Max Geiger



ROXY RECORDING STUDIO
 Nashville, TN

•••• **ROXY RECORDING STUDIO**
 827 Meridian St., Nashville, TN 37207
 (615) 227-0920
 Owner: RRT, Incorporated
 Studio Manager: Donna Bridges

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 JON MARETT, President JIM ZIMPAÑO, Studio Manager/Engineer

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•••• SAM'S TAPE TRUCK
 only REMOTE RECORDING
 2785 Osborne Rd. N.E., Atlanta, GA 30319
 (404) 237-9075
 Owner: Joe Neil, Larry Goode
 Studio Manager: Ruth Neil

•••• SCENE THREE, INC.
 also REMOTE RECORDING
 1813 8th Ave. S., Nashville, TN 37203
 (615) 385-2820
 Owner: Scene Three, Inc.
 Studio Manager: Nick Palladino

•••• SCRUGGS SOUND STUDIO
 2828 Azalea Pl., Nashville, TN 37204
 (615) 383-7994
 Owner: Randy and Steve Scruggs
 Studio Manager: Randy and Steve Scruggs

•••• SEA-SAINT RECORDING STUDIO, INC.
 3809 Clematis Ave., New Orleans, LA 70122
 (504) 949-8386
 Owner: Allen R. Toussaint and Marshall E. Sehorn
 Studio Manager: Mary Ledbetter

In A/B tests, this tiny condenser microphone equals any world-class professional microphone. Any size, any price.

Compare the Isomax II to any other microphone. Even though it measures only 5/15" x 5/8" and costs just \$189.95,* it equals any world-class microphone in signal purity.

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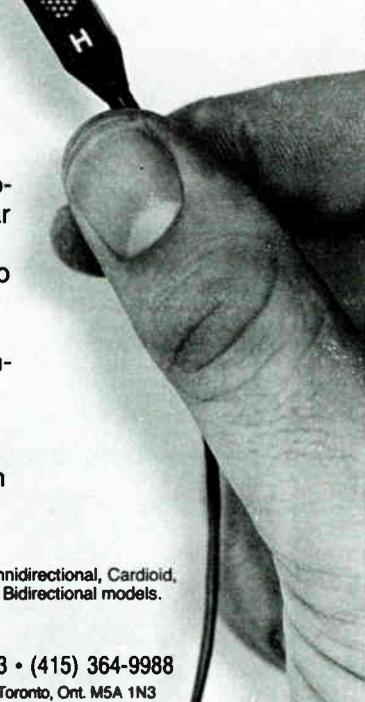
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Actual Size



SOUND CHECK
 Ft. Myers, FL

•••• SOUND CHECK
 1635 Jackson St., Ft. Myers, FL 33901
 (813) 334-4994
 Owner: Jim Becker
 Studio Manager: Jim Becker

•••• SOUND EMPORIUM STUDIOS, INC.
 3102 Belmont Blvd., Nashville, TN 37212
 (615) 383-1982
 Owner: C.A.C. Investments: Roy Clark, Curly Corwin, Jim Abercrombie
 Studio Manager: Rick Horton
 Engineers: Rick Horton, Gary Laney (staff), Mike Poston, Chad Hailey (independent).
 Dimensions of Studios: A 33 x 39 x 20 w/16 x 20 live alcove; B: 14 x 23 x 14 dog leg, and 10 x 7 isolation room.
 Dimensions of Control Rooms: A: 20 x 24; B: 15 x 17.
 Tape Recorders: Otari MTR-90 II, 24-track; Studer A 80vu MKII, 24-track; (2) Studer A 80 RC, (1/2" or 1/4") 2-track; (4) Studer B67, 2-track; (3) Studer B710 cassette; Mitsubishi

(digital) X-800, 32-track; Mitsubishi (digital) X-80, 2-track. **Mixing Consoles:** Studio A: Neve 8128 w/Necam 96 automation, 48 x 32; Studio B: Harrison 2828 c w/Allison automation 28 x 28.

Monitor Amplifiers: Perreaux, Tannoy 840s, BGW, Crown, McIntosh, Sony.

Monitor Speakers: A: E.M. Long/Synergetics Time-Align control room monitors, B: Sierra (Gauss, TAD), Auratone T6 & 5c, Yamaha NS-10, Fostex 780.

Echo, Reverb & Delay Systems: Quantec QRS room simulator, AMS RMS-16, Lexicon 224XL, Lexicon 200, EMT 140s, (2) acoustic chambers 8 x 10 x 35, AMS DMX-15805, Lexicon PCM 42.

Other Outboard Equipment: Limiters: Neve stereo, Trident stereo, UREI 1178 stereo, dbx 165-As, Vocal Stresser, Teletronix LA-2As, Pultec EQP-1A equalizers, Lexicon Prime Time, Prime Time II, Eventide 910 Harmonizers, 969 Harmonizer, Drawmer noise gates, Kexex II noise gates, Cyclosonic phaser-panner, Sony 3/4" video cassette player, Adams-Smith 2600 synchronizer system enabling synchronizing of audio and/or video machines.

Microphones: AKG, Sanken, Neumann, PZM, RCA, Sennheiser, E-V, Studer, Shure, etc.

Instruments Available: Fender-Rhodes, Wurflitzer, Hammond organs, clavinet, celeste, Chickering 9' grand, Steinway grand, tack piano, tympani, congas, vibes, marimba, orchestra bells, various percussion, Akai AX 80 synthesizer, MiniMoog, harpsichord.

Video Equipment & Services: 3/4" Sony 5600 video cassette player, Adams-Smith synchronizer system.

Rates: Hourly or daily rates upon request.

●●●● SOUND INTERNATIONAL CORPORATION

4730 E. 10th Lane, Hialeah, FL 33013
(305) 685-8409

Owner: Enzo Caputo

Studio Manager: Ayal Joshua

Engineers: Bruce Greenspan, Mark Boccaccio, Ayal Joshua.

Dimensions of Studios: 10' 10" x 13' 7"

Dimensions of Control Rooms: 12'4" x 25'6"

Tape Recorders: Otari MTR-90 II, 24-track; Otari MX5050B III, 8-track; Otari MX5050 II, 2-track.

Mixing Consoles: Soundcraft 2400, 52 x 24.

Monitor Amplifiers: BGW, Yamaha.

Monitor Speakers: JBL, Auratone.

Echo, Reverb & Delay Systems: Lexicon 200 digital reverb, Roland SDE-3000 DDL, Roland Space Echo.

Other Outboard Equipment: Eventide Harmonizers, Aphex Aural Exciter, Aphex Compellor, dbx compressors, Dyna-Mite gates.

Microphones: Neumann U87s, Sennheiser 441s, Sony ECM-50s, Sony ECM30s, E-V 635A.

Instruments Available: E-mu I and II, Yamaha DX1, MemoryMoog, Prophet-5, Yamaha RX11 drum machine, Simmons SDS-7 w/MIDI. All fully MIDI equipped + MIDI central switching.

Video Equipment & Services: We provide video production, post-production and all transfers. Equipment includes three 1-inch type C video machines, 3/4-inch machines with editing, VHS, Beta, and a Videola. Also Q.Lock 3.10 and BTX Shadow.

Rates: Please call for rates.

Extras: Language dubbing services including translation, adaptation, perfect lip synchronization. In-house producer/synthesist. Complete sound effects library on record, cart and floppy disk.

Direction: The studio is part of a facility that specializes in language dubbing and M&E production. Our highly trained staff coupled with the unique MIDI system provides a multitude of services from music recording to production of musical themes, M&E tracks and perfect language dubbing.

●●●● SOUND OF BIRMINGHAM STUDIOS

also REMOTE RECORDING

3625 5th Ave. S., Birmingham, AL 35222

(205) 595-8497

Owner: Donald H. Mosley

Studio Manager: Charles Harnach

●●●● SOUND LAB INC.

2319 Fernwood Dr., Greensboro, NC 27408

(914) 288-0185

Owner: Sound Lab, Inc.

Studio Manager: Thomas Rowan

Dimensions of Studios: Thomas Rowan, John Robbins.

Dimensions of Studios: 21 x 20, 10 x 12, 9 x 14.

Dimensions of Control Rooms: 10 x 15 (new 18 x 15 control room under construction).

Tape Recorders: Tascam MS-16, 16-track; Tascam 58, 8-track; Tascam 42, 2-track; Tascam 32, 2-track; TEAC A-3440, 4-track; Tascam 122, 2-track.

Mixing Consoles: Soundcraft Series 1600, 24 x 8 x 2.

Monitor Amplifiers: Crown DC-300A, 150A; BGW100B;

Soundcraftsman EQ.

Monitor Speakers: JBL 4411; Auratone; TOA 22ME; EPI. **Echo, Reverb & Delay Systems:** Ursula Major, Lexicon 200, PCM-41, PCM-70, Vesta 410, MXR doubler.

Other Outboard Equipment: Tascam AQ-65 autolocator, (3) LT sound NJR-8s, (2) dbx 160X, Drawmer noise gate, Symetrix SG-200 noise gates, Ashly stereo noise gate, LT sound CLX-2 compressor/limiter/expander, Ashly compressor/limiter SDR, Rockman X100, Ashly stereo Parametric EQ, UREI EQs Soundcraftsman EQs.

Microphones: Neumann U87s, AKG 414s, E-V RE20s, Sennheiser 421s, Shure 57s, 58s and 81s.

Instruments Available: Roland JX-3P, Oberheim OBSX, Yamaha DX7, Yamaha CP-70, LinnDrum, Korg Polysix, Wurflitzer acoustic piano, Slingerland drum kit, Fender P-Bass, Kramer Pacer both w/EMGs, Fender and Mesa Boogie amps.

Video Equipment & Services: Full broadcast quality pre- and post-production facilities. Remote recording.

Rates: Call for job quotes.

●●●● SOUND STAGE

10 Music Circle S., Nashville, TN 37203

(615) 256-2676

Owner: 8 owners—Incorporated

Studio Manager: Pat Meyer

Engineers: Maintenance Supervisor: Mike Porter.

Dimensions of Studios: Studio A (front stage): 48 x 30; Studio B (back stage): 30 x 20.

Dimensions of Control Rooms: Front stage: 15 x 30. Back stage) 24 x 24.

Tape Recorders: (3) 32-track Mitsubishi X-800 digital; (2) Studer A-800 24-, 16-track; Studer A-80 1/2"; Studer A-80 1/4" 2-track; Studer B-67 1/4" 2-track; upon request IVC digital system 2-track.

Mixing Consoles: Neve 8068 w/Necam, 32 in x 16 out; Trident w/65k automation TSM, 32 in x 24 out.

Monitor Amplifiers: AB Systems, McIntosh, BGW, Crown.

Monitor Speakers: George Augspurger custom monitors, JBL 1176s, Auratone, Bolivar, JBL 4311, Yamaha NS10.

Echo, Reverb & Delay Systems: EMT 251 digital reverb, (4) EMTs, EMT Gold Foil, Lexicon Delta T, Lexicon Prime Time, Eventide digital delay, Cooper Time Cube.

Other Outboard Equipment: Eventide Harmonizer, UREI, Teletronix, dbx, Neve limiters, ADR Vocal Stressers, ADR Scamp Rack; Kexex; Gain Brain; Pultec tube EQ; Orban De-esser; UREI, Soundcraft parametrics, AMS delay, etc.

—LISTING CONTINUED ON PAGE 160

Attention:

Recording Schools & Programs

The July issue of *Mix* will include our annual *Directory of Recording Schools and Programs*. If your school was not listed in our 1985 Directory, you can ensure a listing by completing and returning the coupon below by April 4th.

A questionnaire will be mailed to you.

Name of School or Program _____

Chief Administrator _____

Address _____

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Telephone (_____) _____ Best Time to Call _____

Return coupon to: **Mix Publications, 2608 Ninth Street, Berkeley, CA 94710.**
For more information, call Lauri Newman at (415) 843-7901.

—LISTING CONTINUED FROM PAGE 159

Microphones: Neumann, U47, U87, KM86, KM84, KM54, AKG 414, 451, 452, D12, D224; Sennheiser 421, 441; Sony 33P, 22; Beyers M69, Studer SKM5U, SKS-501; Crown PZM plates; E-V RE16, RE20.
Instruments Available: 9' C. Bechstein, 7' Steinway, Hammond B-3, Rhodes stereo 88, 73; Hohner clavinet, Wuritzer Star Tack piano.
Rates: \$130/hr. w/engineer, \$160/hr. mixdown w/Necam.

◆◆◆◆ **SOUND SHINE PRODUCTIONS**
 also **REMOTE RECORDING**
 723 W. Sunrise Blvd., Ft. Lauderdale, FL 33311
 (305) 463-9882
 Owner: Tom Graefe
 Studio Manager: Paul Napolitano

◆◆◆◆ **SOUND SHOP RECORDING STUDIOS**
 1307 Division St., Nashville, TN 37203
 (615) 244-4149
 Owner: Wm. D. Killen
 Studio Manager: Patrick McMakin



SOUNDTREK RECORDING STUDIO
 Pensacola, FL

◆◆◆◆ **SOUNDTREK RECORDING STUDIO**
 P.O. Box 18566, Pensacola, FL 32523
 (904) 434-0052
 Owner: Glen Fowler & C.B. Fowler
 Studio Manager: Glen Fowler
 Engineers: Glen Fowler, Paul Garcia. Video engineer: Mike Fowler.
Dimensions of Studios: Approximately 700 sq. ft.
Dimensions of Control Rooms: 15 x 16
Tape Recorders: Studer A-80 MKIII, 24-track; Studer B-67, 2-track; Tascam 32-2B, 2-track; Tascam 122, 2-track; Akai GX-77, 2-track.
Mixing Consoles: Sound Workshop 3028 MB w/automation and super group 28 inputs.
Monitor Amplifiers: Hafler P500, Crown PS-200
Monitor Speakers: JBL 441I, 431I; Auratones.
Echo, Reverb & Delay Systems: Lexicon 224XL, Ecoplate 2, AKG BX-5, Loft 440.
Other Outboard Equipment: Orban 424 stereo compressor, (2) dbx 160X compressors Omni Craft noise gates (4-channels), Valley People Dyna-Mites, Aphex Aural Exciter, Countryman direct boxes, Tama percussion computer, Dynacord Percuter.
Microphones: AKG 414-P48s, 451s, D-12E; Neumann-U87, Sennheiser MD-421s; Crown PZMs, Calrec cm1051C, CC56; Countryman 250 MAXs.
Instruments Available: Baldwin 6'3" grand piano; 7 piece drum kit Fender and Yamaha amps; various types of synthesizers, 7 piece Tama electric drums.
Video Equipment & Services: Panasonic ¾" U-Matic and A500 Editor 8500½" Editor cameras by Panasonic and Hitachi, complete video service.
Rates: Please call for rates.

◆◆◆◆ **SOUTH COAST RECORDING COMPANY**
 1975 N.E. 149th St., No. Miami, FL 33181
 (305) 945-7272
 Owner: Paul Kaminsky, George Blackwell
 Studio Manager: Jenny Blackwell
 Engineers: Paul Kaminsky, Vince Oliveri, George Blackwell.
Dimensions of Studios: 27 x 16.
Dimensions of Control Rooms: 14 x 11.
Tape Recorders: Otan MTR-90II 24-track, JH110-A, 2-track; JH110, 2-track; Sony PCM-10 digital 2-track.
Mixing Consoles: Sound Workshop Series 1600 with au-



S O U T H E A S T S T U D I O S

tomation 28/24.
Monitor Amplifiers: APT Model 1, Crown.
Monitor Speakers: JBL 4430, 431I, Auratone, Yamaha NS-10.
Echo, Reverb & Delay Systems: AKG BX-10, Lexicon 224XL, Lexicon Prime Time, Eventide Harmonizer, Klark-Teknik analog processor, Lexicon 200, (2) Lexicon PCM 42.
Other Outboard Equipment: UREI 1176N, dbx 165, ADR stereo complex limiter, (2) Allison Gain Brain II, (2) Kepep II, ADR Scamp rack incl. (4) F-300 gates, parametric EQ, Orban de-esser, Drawmer 1960 stereo tube compressor.
Microphones: AKG, Neumann, Sennheiser, Sony, Shure E-V, Beyers.
Instruments Available: Yamaha grand.
Video Equipment & Services: BTX Shadow, BTX Reader/Generator, Sony VP Series ¾" video, providing interlock with 24-track.
Rates: Upon request, blocks available, video interlock extra, PCM digital extra.

◆◆◆◆ **SOUTHERN TRACKS RECORDING**
 3051 Clairmont Rd., Studio Complex
 Atlanta, GA 30329
 (404) 329-0147
 Owner: Bill Lowery
 Studio Manager: Mike Clark
 Engineers: Doug Johnson, Mike Clark.
Dimensions of Studios: George Augspurger designed—Main room 25 x 40, isolation booth 1-15 x 18, 2-16 x 20, dead alcove 12 x 12, vocal booth 8 x 10.
Dimensions of Control Rooms: George Augspurger design—22 x 26.
Tape Recorders: Ampex 1200 24-track, Studer A80 2-track, (2) Ampex 440 2-track.
Mixing Consoles: Harrison 2824 with automation.
Monitor Amplifiers: Crest, Hafler, BGW, Crown, AB.
Monitor Speakers: Custom George Augspurger system—JBL 431I, 430I, AR and Auratones.
Echo, Reverb & Delay Systems: Lexicon 224, EMT, Super Prime Time, Eventide Harmonizer.
Instruments Available: Dolby, Orban parametric EQ, Vocal Stresser, Kepep, Auto Flanger, dbx 165 and 160 limiters, UREI EQ, AudioTec Exciter.
Microphones: Neumann 87s, 47s, AKG 414s, Sennheiser 441s, 421s, E-V RE20, Wright mics.
Instruments Available: Ludwig drums, Yamaha grand, Rhodes.
Rates: \$175/hr., call for block rates.

◆◆◆◆ **SOUND TRAX, INC.**
 also **REMOTE RECORDING**
 1626 Glenwood Ave., Raleigh, NC 27608
 (919) 832-9953
 Owner: Sound Trax, Inc.
 Studio Manager: Don Stone.

◆◆◆◆ **SOUNDS UNREEL STUDIOS**
 also **REMOTE RECORDING**
 1902 Nelson Ave., Memphis, TN 38114
 (901) 278-8346
 Owner: Jon Hornyak and Don Smith
 Studio Manager: Jon Hornyak
 Engineers: Don Smith, Jack Holder, Andy Black, Evan Rush, John Hornyak.
Dimensions of Studios: 44 x 19 x 12.
Dimensions of Control Rooms: 19 x 15½ x 11¼.
Tape Recorders: Otan MTR-90-II, 24-track; Otan MTR-10, 2-track; Otari MX5050B, 2-track.
Mixing Consoles: Soundcraft TS24, 32 x 24.
Monitor Amplifiers: Yamaha, Crown, BGW, McIntosh.
Monitor Speakers: Steven Durr custom monitors (JBL, TAD), Yamaha NS-10M.
Echo, Reverb & Delay Systems: Lexicon 224XL, Lexicon 200, AMS RMX 16, Ursula Major 8 x 32 digital reverb, AMS DMX 15-80s digital delay/harmonizer, Korg programmable digital delay.

Other Outboard Equipment: dbx 900 mainframe w/limiter/compressors, noise gates, and de-esser, Symetrix 501 limiter/compressor, LA-2A, Fairchild 660, Roland Dimension-D, EXR Exciter, Marc MXI and MXE.
Microphones: AKG Tube, 414, 451, D12E, 224; Neumann U87, KM84; Shure SM7, SM57, SM58, SM81; Sennheiser 421; E-V RE20, RE16; Crown PZM; Beyers M500.
Instruments Available: Steinway grand piano, Hammond B-3, Yamaha DX7, PPG 2.3 w/Waveterm, Fairlight CMI, Emulator II, Roland JX-8P, JX-3P, MSQ700, Juno 60, Oberheim DMX, 4 voice, Rhodes, Prophet 5, MiniMoog, LinnDrum, Marshall amps, Strings & Things, custom guitars and basses.
Rates: Upon request.



SOUNDSCAPE STUDIOS, INC.
 Atlanta, GA

◆◆◆◆ **SOUNDSCAPE STUDIOS, INC.**
 677 Antone St. N.W., Atlanta, GA 30318
 (404) 351-1003
 Owner: Jon Marett
 Studio Manager: Jim Zumpano
 Engineers: Larry Turner, Jim Zumpano, independents welcome.
Dimensions of Studios: Studio A: 60 x 50 x 22, isolation A 19 x 14 x 10, isolation B 30 x 20 x 10, isolation C 25 x 19 x 10.
Dimensions of Control Rooms: 29 x 28 x 12.
Tape Recorders: Studer A80 MKIII, 24-track; Studer A80, (½") 2-track; Studer A810, (¼") 2-track; Studer A710, cassette; Tascam 122, cassette; Technics RS-1500, (¼") 2-, 4-track.
Mixing Consoles: NEOTEK Series IIIc, 28 x 24.
Monitor Amplifiers: Control room—Farfield, FM acoustics 800A (low end) FM Acoustics 300A (top end); Nearfield, Hafler 500; Studio, BGW 5000 and BGW 2500.
Monitor Speakers: Custom Steven Durr cabinets with TAD drivers and JBL15"; Nearfield, choice of Tannoy SRM10B, AR8B, Minimus 7.
Echo, Reverb & Delay Systems: Lexicon 224X with Larc, Super Prime Time, PCM 70, PCM 41, PCM 42, Eventide H910 and H249 harmonizers.
Other Outboard Equipment: dbx 165As, LT sound compressor/limiter/expanders, Valley People Dyna-Mites and Kepep IIs, LT Sound, Ashly, AudioArts and UREI equalizers, EXR SP-1 Exciters, Goldline RTA.
Microphones: Neumann: U47, U67s, U87s, KM84; TLM 170s; AKG: 414s, D12s 460s; Sennheiser: 421, 441; Shure; Crown PZMs, Electro-Voice; RCA Ribbon.
Instruments Available: Yamaha C-7 grand piano, Gretsch acoustic drums, Gallien-Krueger preamp, Marshall and JBL cabinets all available at no extra charge. Yamaha DX7, Prophet-5, Oberheim OB-8, Emulator II, LinnDrum, and Simmons SDS5 available.
Video Equipment & Services: Sony 5850 ¾" video recorder; Panasonic 6800 ½" VHS recorder, Sony monitor, BTV shadow; SMPTE time code.
Rates: Available upon request.
Extras: Extensive lighting system includes 50 PARs (500-1000 watts); (3) Far-cycs; Strand Century console with programmable dimmer assignment; assortment of 1.5-10 kw Mole-Richardson and McAllister lights; stage for band rehearsals and showcases upon request. Developing MIDI system and room. Large drive-in door and comfortable lounge facilities with kitchen, bedroom and private bathroom with shower.
Direction: Soundscape Studios is a state-of-the-art multimedia complex which combines a qualified, amiable staff to serve a client's full spectrum of needs. The flexible 3,000 sq. ft. Studio A allows for a simple transition from a recording studio to a soundstage for video or movie production. The built-in comfort of the control room and lounge facility provides the perfect complement to a quality industrial, commercial or album production.

•••• SPECTRUM RECORDING STUDIO
 also REMOTE RECORDING
 999 S. Federal Hwy., Deerfield Beach, FL 33441
 (305) 428-0119
 Owner: James Kalamasz
 Studio Manager: James Kalamasz

•••• STARGEM
 43 Music Square East, Nashville, TN 37203
 (615) 244-1025
 Owner: Wayne Hodge
 Studio Manager: Dan Hodge

•••• STARKE LAKE STUDIOS
 275 N. Lakeshore Dr., Ocoee, FL 32761
 (305) 656-8989, 656-1535
 Owner: Glen and Kelly Gettings
 Studio Manager: Glen Gettings



STRAWBERRY JAMM
 West Columbia, SC

•••• STRAWBERRY JAMM
 3964 Apian Way, West Columbia, SC 29169
 (803) 356-4540
 Owner: Bob and Mary Curlee
 Studio Manager: Mary Curlee
 Engineers: First, Ron Hollins, Chief, Bob Curlee.
 Dimensions of Studios: Main room, 484 sq. ft., 10 ft. ceiling.
 Dimensions of Control Rooms: 17 x 14 (Irby acoustics).
 Tape Recorders: MCI (w/autolocator III) JH-24-24, 24-track; Sony TC-788-4, 4-track; Ampex AG-440B, 2-track Nakamichi 581Z, 2-track.
 Mixing Consoles: MCI (automated w/plasma) JH-636-28-AF-LM, 28 x 24.
 Monitor Amplifiers: Haller DH-500, Haller DH-200, Crown D-150-A (2), Crown D-150-JOC.
 Monitor Speakers: JBL 4435 Bi-Radial, Yamaha NS-10, Auratone 5-C cubes.
 Echo, Reverb & Delay Systems: Lexicon 224 digital reverb, Lexicon 93 delay w/memory extension, others available.
 Other Outboard Equipment: Aphex type-B Aural Exciter, Thompson Vocal Eliminator, UREI 1176 compressor/limiter (2), UREI 1176-LN compressor/limiter, dbx 162 stereo compressor/limiter, gates "Level Devil" compressor, MXR "line driver" gate, telephone audio feed, anything available by rental!
 Microphones: Neumann U47 (2), Sennheiser MD-441U, Sennheiser MD-421U (2), AKG C-451E Omni (2), Shure SM-7, Shure SM-57 (2), Superscope EC-9-P (4), Electro-Voice 635-A, Jensen, Sescam, and Triad direct boxes.
 Instruments Available: Kurzweil 250, E-mu Emulator II, Synclavier, LinnDrum computer w/Simmons chips and Alternate Sounds, vintage Fender Jazz Bass, Ludwig trap drum set, additional rentals.
 Video Equipment & Services: By contract.
 Rates: \$90/hr. (discounts for pre-paid bookings).

•••• STUDIO FOUR
 also REMOTE RECORDING
 1918 Wise Dr., Dothan, AL 36303
 (205) 794-9067
 Owner: Jerry Wise
 Studio Manager: Steve Clayton

•••• STUDIO 19
 821 19th Avenue South, Nashville, TN 37203
 (615) 327-4927
 Owner: Larry Rogers, Pat Brewer
 Studio Manager: Larry Rogers

•••• STUDIO ONE
 3864 Oakcliff Industrial Ct., Doraville, GA 30340
 (404) 449-5147
 Owner: Georgia State University
 Studio Manager: Gregory M. Quesnel
 Engineers: Gregory M. Quesnel, freelance.
 Dimensions of Studios: 30 x 50.
 Dimensions of Control Rooms: 20 x 30
 Tape Recorders: Studer A 80 VU, 24-track; Studer A-80 RC, 2-track; MCI JH-110, 2-track; Scully 280, 2-track; Technics 1500, 2-track; Studer A710, cassette.
 Mixing Consoles: Harrison 32/32 32 x 32.
 Monitor Amplifiers: BGW, Crown.
 Monitor Speakers: JBL 4350, UREI Time-Align 809, Visonik "Little Davids" 60s, JBL 4313.
 Echo, Reverb & Delay Systems: (3) live chambers, Lexicon 224, Lexicon Super Prime Time.
 Instruments Available: ADR Vocal Stresser, dbx 165s, dbx 160s UREI 1176s, ADR noise gates, ADR de-esser, custom Aural Exciter, Orban stereo parametric, White RTA, UREI 545 parametric, Eventide Harmonizer, Loft 450 flanger, Roland stereo flanger/chorus, etc.
 Microphones: Neumann, Sennheiser, E-V, Shure, etc.
 Instruments Available: Simmons with rack-mounter patchable trigger, Hammond B-3 w/Leslie, Yamaha baby grand.
 Video Equipment & Services: We do it all and we're the best.
 Rates: Call.

•••• STUDIO "7"
 only REMOTE RECORDING
 P.O. Box 57, Smith Station, AL 36877
 Owner: Frank B. Gowan
 Studio Manager: James Gregory Jenkins

•••• STUDIO SOLO
 P.O. Box 230, Slidell, LA 70459
 (504) 643-5952
 Owner: Morrow Solo
 Studio Manager: David Farrell

•••• STUDIO SOUTH
 2510 Peach Orchard Rd., Augusta, GA 30906
 (404) 793-7800
 Owner: Howard Lovett
 Studio Manager: Howard Lovett

•••• STUDIOEAST
 5457 Monroe Rd., Charlotte, NC 28212
 (704) 536-0424
 Owner: Don Lawrence and Tim Eaton
 Studio Manager: Tim Eaton and Don Lawrence
 Engineers: Doug Hawthorne, Hank Poole.
 Dimensions of Studios: 45 x 42 x 25(H).
 Dimensions of Control Rooms: 20 x 24.
 Tape Recorders: MCI JH-114, 24-track; MCI-110 1/2-inch master 2-track; Otari Mark III, 8-track; (3) Scully 280B 1/4-inch 2-track.
 Mixing Consoles: 1986 AMEK Angela 36 x 24 with Audio Kinetics Master Mix MX644 floppy disk drive; AMEK Scorpion, S3-16-, 8-, 2-track.
 Monitor Amplifiers: Tannoy 840, Crown DC-300A, (2) Crown DC-150.
 Monitor Speakers: Tannoy FSMs. 4411 JBL studio monitors. Auratone.
 Echo, Reverb & Delay Systems: Lexicon 224XL, EMT 140 stereo reverb plate, EMT 140 mono reverb plate, Eventide instant flanger, Eventide Clockworks Harmonizer.
 Other Outboard Equipment: dbx limiter/compressor equalizer.
 Microphones: Neumann U87, Neumann U47s, Neumann KM-84, Neumann KM-86, Sennheiser MKH 405, Sennheiser MD421-U-5, AKG, and E-V.
 Instruments Available: Kurzweil 250 with Macintosh 512K, Yamaha 74" grand, Hammond C-3 w/Leslie tone cabinet, (1) Gretsch drum kit, Ludwig Octaplus Vistalight drum kit, MiniMoog, Hohner D-6 clavinet, Baldwin harpsichord, Fender 88 electric piano, Fender amps, Music Man amp.

•••• SUN TRACS RECORDING STUDIO
 also REMOTE RECORDING
 1211-B Hamlet Ave., Clearwater, FL 33516
 (813) 447-0238
 Owner: Melvin Freeman
 Studio Manager: Melvin Freeman

•••• SYMPHONYSOUND STUDIOS
 8514 Woodall Ct., Tampa, FL 33615
 (813) 886-4333
 Owner: Symphonysound Studios Co.
 Studio Manager: Gary L. De Michele
 Engineers: Gary L. De Michele.
 —LISTING CONTINUED ON PAGE 162

Peabody Conservatory Of Music

Recording Workshops

Basic Recording Techniques

June 30 - July 4 Alan P. Kefauver

Advanced Recording Techniques*

July 7 - 11 Alan P. Kefauver

Recording Systems Design*

July 14 - 18 Alan P. Kefauver

Recording and Sound Reinforcement Seminar*

July 21 - 25 John Eargle

All workshops are M - F 9 a.m. - 4 p.m. and offer 2 graduate credits. Fee: \$250.

*Prerequisite Required

For further information:
 Peabody Conservatory of Music
 1 E. Mount Vernon Place
 Baltimore, MD 21202-2397
 (301) 659-8146

Circle #122 on Reader Service Card

Attention! Studios of the Southwest U.S.:

SOUTHWEST STUDIOS DIRECTORY

The annual *Mix* Directory of Southwest Studios will be published in July, 1986. If you have not received a questionnaire for your FREE *Mix* listing, call Lauri Newman at (415) 843-7901.

FINAL DEADLINE:
 APRIL 15th

—LISTING CONTINUED FROM PAGE 161

Dimensions of Studios: 15 x 17 x 10 with variable acoustics and 9 x 9 drum/isolation booth
Dimensions of Control Rooms: 15 x 19 x 8'6" live end/dead end style using a custom designed diffusion system
Tape Recorders: Otari MTR 90, 24 track, Tascam 32, 2 track, (3) JVC DD7, cassettes
Mixing Consoles: NEOTEK Elite, 28 x 26 x 2
Monitor Amplifiers: Crown DC 300, Onkyo TX 4500
Monitor Speakers: JBL 4411 E V Sentry 100 Auratone, JBL 140
Echo, Reverb & Delay Systems: Lexicon 224 digital reverb, Roland SDE 3000 digital delay, DOD RB80 stereo analog delay
Other Outboard Equipment: (2) Symetrix 501 compressor/limiters, EXR Exciter, dbx type 1 noise reduction DOD R870 stereo analog doubler/flanger
Microphones: Neumann, Sennheiser, AKG E V, and Shure
Instruments Available: Piano Rhodes Juno 60, Fender Strat & P Bass Ludwig drums Zildjian cymbals

•••• TELSTAR

also REMOTE RECORDING
 2074 17th St., Sarasota, FL 33580
 (813) 365-0337
Owner: Rick Moulton
Studio Manager: Lynn Nieder
Engineers: Rick Moulton, Jerry Jordan
Dimensions of Studios: 25 x 30
Dimensions of Control Rooms: 20 x 16
Tape Recorders: Sony/MCI JH-24, 24- and 16-track, Sony/MCI JH-110 (1/2"), 2-track; Sony/MCI JH-110 (1/2") 2-track; Sony PCM-F1, 2-track; Otari Tascam Real Time Duplication
Mixing Consoles: Sony/MCI JH-636, 30 x 24
Monitor Amplifiers: BGW, JBL, SAE, Yamaha
Monitor Speakers: JBL 4430, Yamaha NS-10, Auratone
Echo, Reverb & Delay Systems: Lexicon 224XL, Lexicon PCM60, Lexicon PCM-42s, Prme Time; Eventide Harmonizer
Other Outboard Equipment: UREI 1176s, LA-3s, dbx 160s; Allison Research Gain Brains, Kepex's, Valley People Dyna-Mites, Dyna-Mic's; 610; Orban 516EC; Audioarts parametrics, AXE direct boxes
Microphones: U87s, 414s, PZMs, SM-85s, 81s, 57s, 56s, Beyer 160s, etc.
Instruments Available: Kawai 6' grand piano, Hammond B-3 w/Leslie; LinnDrum computer
Rates: Upon request

•••• THE TERMINAL

426 Bradford Dr., Jackson, MS 39208
 (601) 932-2627
Owner: Rick Garner
Studio Manager: Randy Everett
Engineers: Randy Everett and Rick Garner (Technical Engineer Grady Moates)
Dimensions of Studios: 34 x 24 x 17, 12 x 14 x 8 isolation, 8 x 12 x 18 isolation
Dimensions of Control Rooms: 22 x 22 x 12 LEDE type design
Tape Recorders: Stephens 821-B, 24- and 16-track, Studer A80, 2-track; Scully 280-B, 2-track, Otari 5050-B, 2 track, Nakamichi 500, cassette, Pioneer CT-F800, cassette
Mixing Consoles: Sphere Eclipse A 28 x 24
Monitor Amplifiers: Yamaha, Crown & BGW
Monitor Speakers: UREI 813 Time Aligned, JBL 4311, Auratones
Echo, Reverb & Delay Systems: EMT 240 Gold Foil Plate; (2) Lexicon Prme Time; Lexicon Delta I, Ursa Major digital reverb, Eventide 174s DDL, Eventide pitch change, phaser; flanger; Orban 111-B
Other Outboard Equipment: (2) UREI 1176 LN, (2) LA3A, (2) dbx 160 compressor (2) dbx 163 compressor, dbx 160x comp; UREI digital metronome; 28 channels dbx noise reduction, loft flanger, (6) Kepex, (2) Gain Brains; (2) Roger Meyer gates; Moog Parametric EQ; White 1/3 octave EQ; MXR graphic EQ
Microphones: (4) Neumann U87, (8) Sennheiser 421, (2) Sennheiser 441, E-V RE20, AKG D12E, 452, 422, 414, D1000E, Shure SM57, 58. All others available
Instruments Available: Yamaha DX7 digital synth, Juno 60, Oberheim DX digital drummer, Marshall 50 watt amp, Lab L-5; Gibson and Fender guitars, many effects, Tomi Scholz Rockman, large Pearl deluxe drum set, Kawai 6'8" grand piano
Video Equipment & Services: Upon request
Rates: Available upon request

•••• TREASURE ISLE RECORDERS

2808 Azalea Pl., Nashville, TN 37204
 (615) 327-2580
Owner: Treasure Isle Recorders, Inc
Studio Manager: Fred Vail David Shipley, Richard Stevens
Engineers: Tom Harding, Richard Moutant Chief engi



neer David Shipley.

Dimensions of Studios: 42 x 30 with 24 ft. ceiling; 12 x 14 isolation booth; plus vocal booth
Dimensions of Control Rooms: 22 x 24
Tape Recorders: 3M 32-track digital; Studer A80, 24-track, Studer A80, 2-track, Studer B67, Ampex ATR 800 2-track, (5) cassette decks
Mixing Consoles: Trident 80A 42 in, 56 out (10 A-Range modules)
Monitor Amplifiers: UREI Quad, McIntosh; Studer, Crown, BGW, Sony
Monitor Speakers: Double woofer JBL with TAD drivers, Tannoy SRM 10B, Yamaha NS-10, Electro-Voice Sentry 100, MDM
Echo, Reverb & Delay Systems: 2200 cubic ft. 'live' chamber, Studio Technologies Ecoplate, AKG BX 20, Sony DRE 2000 digital reverb
Other Outboard Equipment: ADR Scamp rack (12 modules), Vocal Stresser, 949 Harmonizer, Super Prme Time, Prme Time 93; (8) Kepex noise gates; (2) Gain Brains; (2) dbx 160 limiters; 165 dbx limiters, (2) LA3A; (2) LA4A; 1176LN UREI, LA2A Teletronics, de-essers, Aphex.
Microphones: (3) U87; 47, (3) 414; (4) KM 84; (10) AKG 452, (4) SM57; RE20; 421, D-12, D 1000E; (2) Bruel & Kjaer; AKG C12A tube; AKG "The Tube," U67 tube; (2) PZM; RE15s, Sony ECM 50; (3) RCA 77 nbn
Instruments Available: Baldwin grand, Fender Rhodes; Fender amps, Pearl drums, Hammond B3; Multi-Moog, Korg Polysix, Yamaha DX7
Video Equipment & Services: Available for video use, the studio has spacious rooms and high ceilings, and an impressive interior decor.
Rates: Analog and digital from \$100 to \$160 per hr. Call for block rates. Contact Richard Stevens or David Shipley

•••• TWELVE OAKS STUDIO

3830 S. Cobb Dr., Atlanta, GA 30080
 (404) 435-2220
Owner: Sonny Lallerstedt and Randy Bugg
Studio Manager: Randy Bugg

•••• ULTRASONIC STUDIO

also REMOTE RECORDING
 7210 Washington Ave., New Orleans, LA 70125
 (504) 486-4873
Owner: Jay Gallagher
Studio Manager: Scott Goudeau

•••• UNCA MUSIC ENGINEERING STUDIOS

also REMOTE RECORDING
Music Department—University of North Carolina
 Asheville, NC 28804
 (704) 258-6432
Owner: University of North Carolina—Asheville, Music Dept
Studio Manager: Dr. Wayne J. Kirby

•••• VIDEO TAPE ASSOCIATES

1733 Clifton Rd. N.E., Atlanta, GA 30329
 (404) 634-6181, (800) 554-8273
Owner: Ken Chambliss
Studio Manager: Mike McNally

•••• VIDEOFONICS, INC.

1101 Downtown Blvd., Raleigh, NC 27603
 (919) 821-5614
Owner: Larry Gardner, Pres
Studio Manager: Bill Blankinship, Operations Mgr
Extras: 24- and 16-track audio studios, 1-inch and 3/4-inch video edit suites, 40 x 50 video production studio, Bosch FGS 4000 computer animation/graphics system, Ultimate 4, ADO 2000, E-Flex II, CCD camera, video color correctors, and more
Direction: Complete services and facilities for production

and post-production of music, audio, video, film, audio/video duplication, and computer animation/graphics. Strong emphasis in special effects/audio and compositing live action video with computer generated images.

•••• VIRGINIA ARTS RECORDING

also REMOTE RECORDING
 Box 800, Louisa, VA 23093
 (703) 967-2245
Owner: R. Paul Bner
Studio Manager: R. Paul Bner

•••• WEB IV

2107 Faulkner Rd., N.E., Atlanta, GA 30324
 (404) 321-5993
Owner: Ilene Berns
Studio Manager: Tom Cooper
Engineers: Tom Cooper
Dimensions of Studios: 70 x 35 x 14
Dimensions of Control Rooms: 20 x 20
Tape Recorders: Studer A-80, 24 track, Studer A 80 VU, 2 track, Studer A 80RC, 2 track, Ampex 440B, 2-track
Mixing Consoles: Sphere Eclipse C, 32 x 24
Monitor Amplifiers: Crest, AB, Yamaha, Studer
Monitor Speakers: JBL 4350, JBL 4313, AR 18-B, ROR, Auratone
Echo, Reverb & Delay Systems: EMT 250 digital reverb, EMT 140 plate reverb, Lexicon Super Prme Time, Lexicon PCM 41 delay, Lexicon Delta T delay, Eventide Harmonizer H949, Eventide Instant Phaser, MXR flanger/doubler, Roland chorus/echo, Marshall Time Modulator
Other Outboard Equipment: Compressor/limiters: UREI 1176s LA 3As, dbx 160, 165, 162, ADR Vocal Stresser, Orange County Vocal Stresser, Pandora LM 402, Allison Gain Brains, Kepex noise gates, outboard EQ, Audioarts, Orban, Pultec UREI
Microphones: Neumann U87s, U89s, U47 FETS, DM 84s, KM 86s, KM 88, AKG 414s, 451s, 452s, 224s, C-24 (stereo tube), Sennheiser 421s, 441s, Shure SM 56, 57s, 58s; E-V RE 20s, RE 15s, Schoeps SKH54 U
Instruments Available: Baldwin 9' concert grand piano (SD 10) Hammond B3 w/Leslie, Oberheim OB X synthesizer, MiniMoog, Fender Rhodes, Wurliizer electric piano, Oberheim DX drum machine, vibes, xylophone, full kit of drums, assorted percussion, Honner D 6 clavinet, Fender Twin Reverb, Deluxe amps, Marshall 50 watt amp w/2 x 12 cabinets, Ampeg B 15 bass amp
Rates: Please call

•••• WILD TRACKS

805 18th Ave. S., Nashville, TN 37203
 (615) 327-3900
Owner: Steve Singleton
Studio Manager: Steve Alexander

•••• WISHBONE RECORDING STUDIO

P.O. Box 2631/Webster Ave. across from airport
 Muscle Shoals, AL 35662
 (205) 381-1455
Owner: Terry Woodford
Studio Manager: Richard Butler

•••• WOODLAND SOUND STUDIOS

1011 Woodland St., Nashville, TN 37027
 (615) 227-5027
Owner: Ernie's Record Mart
Studio Manager: Glenn Snoddy

•••• WRENPRO CORP/OPUS PRODUCTIONS

also REMOTE RECORDING
 665 36th Ave. S., St. Petersburg, FL 33705
 (813) 823-8604
Owner: Roy F. Nilson
Studio Manager: Bernard Philf

•••• ZEBRA RECORDS

also REMOTE RECORDING
 575, N.E. 29th St., Ste. 45, Miami, FL 33137
 (305) 573-0945
Owner: Alan Steward
Studio Manager: Alan Steward



Ardent's completely remodeled Studio B now features a 40x32 Solid State Logic SL-6000E console and Mitsubishi X-850 32-track digital system.

—FROM PAGE 117, SOUTHEAST STUDIOS

At the Oak Ridge Boys' facility, Acorn Studios, in Hendersonville, Curtis Bradley reports that business is much better than last year. "We're booked three months in advance now," he says. Dedicated nearly exclusively to record projects, Acorn has been visited recently by such artists as Steve Cropper, Razy Bailey, R.C. Bannon, and the Oak Ridge Boys were also in working on three cuts from *Step On Out*. This past year, a custom cue system was acquired to allow up to four vocalists to have their own individual mixes while singing.

And with one giant leap in a southwest direction, our story ends up in Bogalusa, Louisiana at the appropriately named Studio in the Country, where owner Eugene Foster reports that it's mostly album projects that are keeping him busy. Mason Rufner, Scotty

Anderson, and King Floyd are among some artists in recently at the facility. Because of the growing demand for synthesizers, Foster added eight MIDI-interfaced keyboards. "Instead of the first question being 'What kind of machine or console do you have?' it's been 'What kind of synths do you have?'" he says. In addition to the new keyboards, Foster has added Studer multi-track and half-inch mixdown machines, Lexicon digital reverb, AMS digital reverb, several pieces of dox and Orban equipment, and ten classic tube mics. "I'm looking to get into digital," Foster adds. "By the end of this year, I'll be recording digital as well as analog." But for now, Studio in the Country is doing just fine as an analog facility. "We're busy doing lots of music projects," says Foster, "and we're loving every minute of it." ■

New Trident Series 80 console at Cotton Row Recording in Memphis.



—FROM PAGE 108

video production package—"the Mac-Video Production Center." The size and cost of the various elements of this system put it within the range of most independent producers. High schools and colleges, beleaguered by the perennial budget problems that independent producers deal with, could also benefit by an appropriate version of this low cost/high yield system.

Such a package would provide the ability to do preproduction planning, storyboarding, sketch edits, and off-line digital audio and video editing. Currently, there are a number of music systems that offer MIDI capability through the Macintosh. As the IEEE peripheral manufacturers introduce the appropriate hardware, the Macintosh will have the ability to control all of these devices and be able to generate an on-line edit decision list.

We would like to hear from *Mix* readers currently using the Macintosh in innovative and creative applications in the studio.

Macintosh Software and Peripheral Sources

Apple Computer, Inc., 20525 Mariani Ave., Cupertino, CA 95014. Lotus Development Corp., 55 Cambridge Parkway, Cambridge, MA 02142. Living VideoText, Inc., 2432 Charleston Rd., Mountain View, CA 94943. Magnum Software, Suite 337, 21115 Devonshire St., Chatsworth, CA 91311. Hayden Software Company, 600 Suffolk St., Lowell, MA 01854. Great Wave Software, P.O. Box 5847, Stanford, CA 94305. Hayes Microcomputer Products, Inc., 5923 Peachtree Industrial Blvd., Norcross, GA 95014. Thunderware, 21 Orinda Way, Orinda, CA 94563. Koala Technologies Corporation, 2065 Junction Ave., San Jose, CA 95131. National Instruments, 12109 Technology Blvd., Austin, TX 78727. ■

Electronic
MUSICIAN

... the first magazine devoted exclusively to the new technology that's revolutionizing the industry, covering MIDI, computer music applications, SMPTE/synchronization, video, music sampling/synthesis, and much more! See page 98 for complete information.

A Mix Publication



—FROM PAGE 94, HAL WILNER

doing Lou Reed. The tune has an upbeat, danceable tempo and is underscored by that signature monotone that permeates all Lou Reed music. It sounds like an outtake from *The Blue Mask* or *Legendary Hearts*. "It's not only a perfect example of how Weill's music adapts to rock and roll very well; it's also an example of Lou making the song his," Willner comments. "It is a Lou Reed song now. It's just a coincidence that the Maxwell Anderson lyrics happen to relate to him."

"It's important that the artists sound like themselves," Willner notes. "I always tell them, 'Do it as if you were doing your own album.' That's why Tom Waits' version of 'What Keeps Man Alive?' from *The Three Penny Opera* sounds like a tune from his *Rain Dogs*, or Marianne Faithfull's rendition of 'Ballad of the Soldier's Wife' sounds as if it could've been on *Broken English*."

Elsewhere on *Lost in the Stars*, Sting sings "Mack the Knife" (a tune popularized in this country by Bobby Darin and Louis Armstrong) and Todd Rundgren sings with chilling intensity on "Call from the Grave/Ballad in Which Macheath Begs All Men for Forgiveness" (both songs from *The Three Penny Opera*, lyrics by Bertolt Brecht); German-born avant-gardist Dagmar Krause sings a stark rendition of another Weill-Brecht collaboration, "Surabaya Johnny," from *Happy End*; Richard Butler of the Psychedelic Furs teams up with jazz vocalist Bob Dorough and Ellen Shipley on the haunting "Alabama Song" from *Mahogany* (previously recorded by The Doors). Quite an eclectic package. As Willner sees it, that's good.

"These tribute records could work a few different ways," he says. It could be fans of Thelonious Monk hearing Joe Jackson for the first time or fans of Kurt Weill hearing Tom Waits or Marianne Faithfull for the first time. Or it could be fans of the Psychedelic Furs hearing Carla Bley or John Zorn for the first time and picking up on what they do. That's really not the intention of these records. I'm not trying to change the world. But I have received quite a few letters from kids who are hearing Monk's music and Weill's music for the first time. I love getting those kinds of letters. A few people have written that they weren't able to understand this music and now they do. It's nice that those things happen."

Lost in the Stars has been hailed as a triumph from here to Holland. Willner modestly confides that they're going crazy for it in France (where Weill sought refuge from the Nazis in 1933) and in his native Germany. And, of course, the Brits are mad for this album, due in no small part to the presence of Sting and Marianne Faithfull.

Just how did Willner get started on this esoteric path? He has no musical education to speak of, though he confesses to having a bit of facility on piano and guitar. "I know how to read music and opera scores," he says, "but I prefer the other side of the glass. I'm not a frontman. I'm only producing. My knack is in getting the right combination of people with the right music and the right feeling in the room at the session. When that happens, I'm just there to coach it along."

A lifelong record listener, Willner fell under the spell of The Beatles when he was seven or eight years old. "That

was life for me," he explains. "So it was rock and roll until I was about 15. Then it was jazz for a few years, then it was classical for a few years. Now it's a bit of everything."

He made the leap from music appreciation to music producing gradually, beginning as an apprentice with New York record producer Joel Dorn. During his term at New York University, Willner served under Dorn on sessions with Roberta Flack, Roland Kirk, Leon Redbone, and The Neville Brothers. "He [Dorn] used to come in to my father's deli all the time. I got to know him and later he just let me hang around. So through my whole college period, I was around every session he did. The only way to learn how to make records is to be around the records being made and watch the making of them. Then you make your own and with each record you'll get better."

Willner's first project on his own, the tribute album to Nino Rota (principal composer for the films of Federico Fellini), started as a whim. "I was always a big, big fan of Fellini's and I used to play the soundtrack records at home all the time. You put on *La Dolce Vita* and it instantly changes the atmosphere of the room."

"So I got the idea to do a *Sketches of Rota* type record with one horn player . . . sort of like what Gil Evans did with Miles Davis on *Sketches of Spain*. But it didn't pan out. I couldn't get the artist. And shortly after that, Rota passed away, and that motivated me to go full speed ahead with a tribute project to this great artist. So I began thinking, 'I'd really like to hear Carla Bley do '8½.' And I'd really like to hear Jaki Byard do 'Amarcord.' And that kind of speculating got the ball rolling."

He had no track record of his own, but that didn't deter Joe Boyd, who picked up the project for his Hannibal Records. Other artists on that 1981 album included Chris Stein and Deborah Harry, who performed on "Valzer (Parlami Di Me);" guitarist Bill Frisell, who performed a solo acoustic rendition of "Juliet of the Spirits;" vibist Dave Samuels, who performed a solo on the theme from *La Dolce Vita*; and soprano saxist Steve Lacy, who did a solo take on "Roma." Elsewhere, such stellar jazz musicians as Wynton Marsalis, Kenny Barron, Ron Carter, Mulhal Richard Abrams and David Aram appear on evocative versions of Rota's music.

"The Hannibal record is still my favorite," Willner confesses. "We have a second volume of Nino Rota music, which I hope to put out in the future. There's a great version of 'Theme from the Godfather' with Frisell, Lacy and

Paul Motian. It's so good."

The recording of the Rota tribute took one year, during which time Willner also managed to produce a few side projects. "I did a few projects for small labels, like an album by The Swollen Monkeys for Cashalot Records, and a Gary Windo album for Europa Records. And an album with Beaver Harris and Don Pullen that I put on my own label, Shemp Records, named after [who else?] Shemp Howard. That's a label I've developed for certain jazz projects and very off-the-wall projects. If I can't get a label interested right away, I'll just put it out myself on Shemp. I don't like to have records sit in the can for a long time."

The idea for the Thelonious Monk tribute album hit Willner in 1982 while attending a Monk memorial concert in New York. "It was shortly after he died," he recalls. "And all the regular jazz guys were playing at this thing. But I started thinking, 'Why isn't NRBQ here? Why isn't Donald Fagen here? Why isn't Joe Jackson here?' So I left that concert knowing that I would do a tribute album to Monk like the one I had done on Rota."

For that LP, which garnered rave reviews and six major awards from critics (*Downbeat*) and the industry (Academy du Jazz in Paris, Montreux Diamond Prize in Switzerland), Willner assembled an extraordinary cast. Steve Khan and Donald Fagen perform a touching rendition of Monk's "Reflections." Terry Adams and the boys from NRBQ tear it up on "Little Rootie Tootie." Todd Rundgren does a wacky, hi-tech dance version of "Four in One." Joe Jackson leads a band through a haunting version of "Round Midnight," while guitarists Chris Spedding and Peter Frampton team up for a rousing rendition of "Work." It's the ultimate fusion album, a triumph in cross-fertilization.

As Willner wrote in the liner notes: "Throughout the making of this album I sensed a great feeling of mutual respect between the jazz and rock musicians. Everyone was supportive of one another and the different styles worked together because the love for Monk's music was ever present."

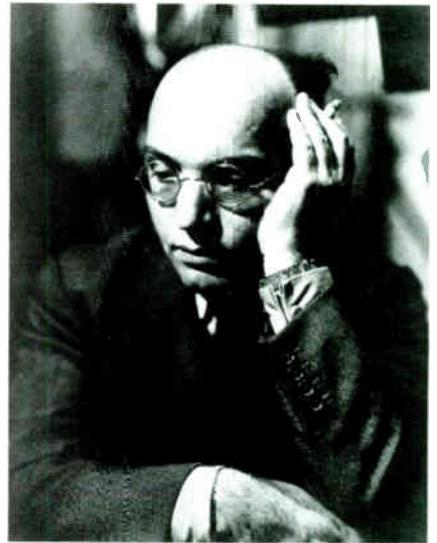
The same could be said of the Weill project. Such intelligent lyricists as Tom Waits, Lou Reed and Marianne Faithfull have a deep respect for such historic figures as Bertolt Brecht and Maxwell Anderson. And such devoted musicians and ethnomusicologists as John Zorn and Carla Bley have a healthy respect for the brilliance of Weill's compositions. Whether fans of Prince and a-ha will buy the record is another matter.

But Willner is not too concerned with that. As he put it, "I buy very few

records nowadays. Once you get a little older, you have real-life things to deal with, and you have a thousand records already. You just kind of stop buying them. So now I'm making the kind of records that I think I would've gone crazy for and still would buy if I wasn't doing this."

Willner is hopeful, though, that his various and upcoming tribute albums will catch some new ears along the way. And he believes that the industry (particularly radio) is opening up a bit more to his unorthodox ideas. "They're more accepting of alternative music, and that's very inspiring to me. Maybe we'll get back to where it should be. The industry was never really against me, just indifferent. But now it seems that a lot of these industry people are really getting into these tribute albums. I'm getting calls from people in the mainstream who are enjoying them. It's strange. . . I went to a Stephanie Mills record party the other night and people were talking to me about the Weill record. So that makes me feel very good. I think it's going to be a good time for music again."

Meanwhile, Willner is being bombarded by requests from big-name rock artists to appear on the upcoming Mingus tribute album. He's not revealing any names yet, but you can bet that this clever matchmaker will



Kurt Weill

come up with some combinations that you'd never dream of. Maybe Eddie Van Halen and Stanley Jordan doing a duet on "Better Git Hit in Your Soul," or Stevie Ray Vaughan and Stevie Wonder doing "Haitian Fight Song." How about Morris Day and Prince reuniting for a funkified dance version of "Pithecanthropus Erectus." Thomas Dolby teaming with Laurie Anderson for a futuristic take on "Fables of Faubus"? Your turn. ■

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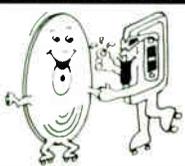
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F E E D B A C K

Dear Mix,

Congratulations on a superlative publication. Your overall editorial goals are high, and you appear to be hitting the mark. Each issue continues to be informative, enlightening, and entertaining.

The feature with photographs in the October issue, "50 Years of Magnetic Recording" by Peter Hammar is excellent, as is David Huber's associated piece, "The Pre-tape Years."

In the opening paragraph Mr. Hammar writes 1986 is an important anniversary as it was in 1956 that saw "the unveiling of the first practical videotape recorder, the Ampex VRX-1000 in Chicago." The only words in this statement that may need closer examination are the words, *practical*, and *first*.

I recall that Bing Crosby Enterprises produced a fixed head wide band magnetic recorder which in fact did successfully record and play back television pictures and sound. The limitation of this wide band recorder was the length of time a roll of tape would last as it had to be transported over the fixed head at a high velocity, something the Ampex machine avoided in part via a quadrating head in synch. I recall seeing in *Audio* magazine's September 1984 issue part II of their History of Magnetic Recording a photograph of Bing Crosby standing in front of several racks of vacuum-tube electronics, with charac-

teristic pipe in mouth and hat on head, extending his arm over the tape transport of just such a television tape recorder. As I recall, this machine employed a kind of closed loop past the heads somewhat like the sound drum used in sound pickup in motion picture projectors.

As Mr. Hammar states, "Bing Crosby sold his Electronics Division to 3M in 1957 when the group became the Mincom Division." The 3M audio recorders used a similar closed loop tape transport, the Isoloop, as the Bing Crosby Enterprises' video tape recorder. Did not, in fact, one follow the other? It would appear to be so.

In summation, Bing Crosby Enterprises' successful and operable video magnetic tape recorder did pre-date the Ampex VRX-1000 unveiled in 1956 by several years. It would seem that the machine or machines produced by Bing Crosby Enterprises truly deserve the prize for being first with a workable video magnetic tape recorder.

Cordially,
Robert Rosenow
Great Empire Productions

Dear Mix,

I would just like to clear up an error that appeared in George Petersen's "News from the North" article in the

November 1985, issue of *Mix* Magazine. The article states that the new Platinum Blonde LP, *Alien Shores*, (which is currently close to double platinum in this country), was recorded at Phase One Studios. The album was, in fact, recorded and mixed at our studio, The Metalworks Recording Studio. The only work done at Phase One was the mixing of one track on the LP.

Other clients who have worked at the Metalworks this year include Triumph, Kick Axe, Luba and many other Canadian and international artists. I deeply appreciate this opportunity to clear the matter up.

Sincerely,
Andy Holland
Assistant Manager
Metalworks Recording Studio

CORRECTION: In last month's listings of Independent Engineers and Producers, we published an incorrect telephone number for *John A. Pergamo* of Brooklyn, N.Y. The correct phone number is (718) 622-7524. Also, a production error in last month's Digital By Dickinson advertisement resulted in a misspelling of the company's name. Our sincere apologies to Mr. Frank Dickinson.

—CONTINUED FROM PAGE 105
ripheral Visions, which is less than a year old, has changed its name to *Studio Systems Journal*. Full color pages and splashy layouts make SSSJ fun to read, and editorial covers a lot of territory—from "pure art" to commercial success stories. Here's the address: P.O. Box 13859, San Luis Obispo, CA 93406. (805) 543-7394.

Video Publishing: Random House Flies with Big Bird:

Random House Home Video has signed a long-term agreement with *Children's Television Workshop* for the home video rights to 17 years of *Sesame Street* programming. The first six cassettes should be in the stores this month.

During the past 15 years, according to chairman and president *Robert Bernstein*, Random House has sold 17 million Sesame Street books, and

now it looks as if the company could score a hit with all those VCR-toting, child-bearing Yuppies we keep reading about.

New Approach to Stop DUI—Prime Time Commercials:

As public sentiment swells against drinking and driving, the federal government is experimenting with a sophisticated public service campaign to push the point home to younger people. *The Driver Project* will run in the two California counties with the worst DUI offense records: Kern County (which comprises Bakersfield north of Los Angeles), and Sacramento County.

The government will for the first time actually buy prime commercial TV time in Kern County, while in Sacramento, the three 30- and two 10-second spots will run as public service announcements. Upon completion of the flight schedule, a study will be

conducted to measure comparative exposure success in each location. The National Highway Traffic Safety Administration plans to use the campaign nationally after the study is completed.

The spots use the same kinds of production techniques that young people are used to seeing in beer and car commercials. *Chris Blum* (best known for his work on Levi's 501 Jeans commercials) directed, with *Lucy Phillips* of *One Pass's Group One* producing for the *Roanoke Company*. *Joe Murray* acted as director of photography. Peter and Mary Buffett of San Francisco's *Independent Sound* created the audio by recording live on location, and loading the sounds into the Kurzweil 250. As a member of MADD (Mothers Against Drunk Driving), Mary Buffett took a special interest in the project. ■



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