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# MIX

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THE RECORDING INDUSTRY MAGAZINE



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# THE SAMPLER THAT DOES MORE TOMORROW

## The Benefits of Open Architecture

There's no question, digital sampling is one of the most rapidly developing technologies in music today. So when you buy a sampler today, you don't want it to be made obsolete by some new development tomorrow. That's why there's one line of samplers that not only provides top quality today, but allows for future developments tomorrow. Naturally, they're from Roland, the company who always has one eye on the future.

Roland samplers are based around a "clean computer" design of open architecture. This means that the main performance data of Roland samplers is resident in software — software that can be updated with new features and performance just by loading a new disk. Neat trick? That's exactly what our customers think. They've already benefitted from one software update, giving their samplers loads of new features. And more updates will follow.

## Professional Performance Sampling

But before we get too far into the future, let's talk about today. The Roland S-50 Digital Sampling Keyboard and S-550 Digital Sampler Module deliver the professional-quality sound and extensive editing capabilities found only in instruments costing many times as much, all thanks to Roland's breakthroughs in proprietary VLSI Sampling technology. The S-50 offers a wave oscillator, amplifier, LFO, and an eight-stage envelope generator for each of its sixteen voices. Although the S-50's features list is far too extensive to be listed here, among its chief attributes are a 512k word of Wave Memory and 16-bit processing, sampling time up to 14.4 seconds at 30kHz, multi-timbral capabilities, and four polyphonic voice outputs.

The S-550 provides all of the S-50's performance with the addition of a 1.5M Byte memory (for up to 64 tone memories and 16 patch memory banks), and expands upon the S-50 by providing eight polyphonic voice outputs.

## Quality Sound in the Roland Bank

But we think the best way to judge a sampler is with your ears. That's where the Roland Samplers really shine. Play any Roland Sampler and you'll hear a warm and full sound, with a better bandwidth and greater headroom that especially shows up in dynamic instrument samples. You'll experience an evenness of sound across the entire keyboard without the problems other samplers have of obvious split points. And you'll never run out of sounds, because the purchase of a Roland Sampler gives you access to the Roland Sound Bank — a continuously growing library of great sound samples. Plus, the S-50 is already enjoying one of the fastest-growing bases of third party software support.

## Quality In Means Quality Out

When it comes to user interface, Roland Samplers are simply unrivalled. Both the S-50 and S-550 allow the connection of a video monitor to greatly facilitate sampling process and use such new features as Wave Draw. The S-550 even allows the flexibility of mouse-style input by connecting the new DT-100 Digitizing Tablet. This kind of interface makes the experience of sampling sounds as fun as it is productive.

## Today's Updates

The new 2.0 Software Update (available to all owners for a small handling charge) can now add in loads of new features — including twice as many tones, Automatic Loop Search, combined Wave Data, Polyphonic Multi-timbral performance, and much more. Not just new sounds, entirely new performance. Another new software program — the SYS-503 Director-S — can turn the S-50 or S-550 into a sixteen-channel MIDI sequencer, playing its own sounds as well as those of other MIDI instruments.

Put all this together and you can see why Roland Samplers are the choice of so many top pros. And why shouldn't they be? Because if Roland Samplers do this much today, imagine what they'll do tomorrow.

*RolandCorp US, 7200 Dominion Circle, Los Angeles, CA 90040 (213) 685-5141.*



# MIX

OCTOBER 1988

THE RECORDING INDUSTRY MAGAZINE

VOL. 12, NO. 10



ANDY SUMMERS



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# FROM THE EDITOR



Cover: Sisapa Studios in Columbus, Ohio, features a 60-input Neve V Series Mk 3 console with GMT automation, two Studer A820s with 48 channels of Dolby SR, and Genelec 1025-A main monitors. The facility was designed by Gary Hedden and built by John Kanuth. Photo: D.R. Goff. Quick-silver Photography. John Lennon Photo: Bob Gruen.

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**A**s a member of Business

Publications Audit (BPA), every year *Mix* requalifies its subscribers, a process which updates us on the demographics of our readers. If you are a subscriber, you'll probably recall issues with questionnaires attached to the front asking for specifics about your job and business activities. We use this information to help make our editorial, advertising and other services of greatest value to you.

Another way we get feedback from readers is through a service called Readex. This is an independent organization that samples a number of our subscribers on a particular issue to determine what elements in that issue caught their attention, and to what degree.

This month happens to be a Readex issue. If you are one of those readers who gets a Readex survey in the mail, we thank you for taking the time to go through the process. You're helping us to give you a better and more effective magazine.

Sometimes surprising information comes out of these investigations. For example, in comparing this year's qualifications results to last year's, we found that almost a thousand fewer readers define their *primary* occupation as being the operator of a recording studio. Yet at the same time, nearly two-thirds of our subscribers listed "recording studio" as a business activity. What does this tell us?

On further examination, we found that studio operators have expanded more and more into related fields and spin-off services, many to the degree that the *majority* of their time and energy is being applied in these new areas. Many of last year's studio chiefs are now production entrepreneurs, with track recording being less of their main emphasis, or their studio being but one of their component businesses.

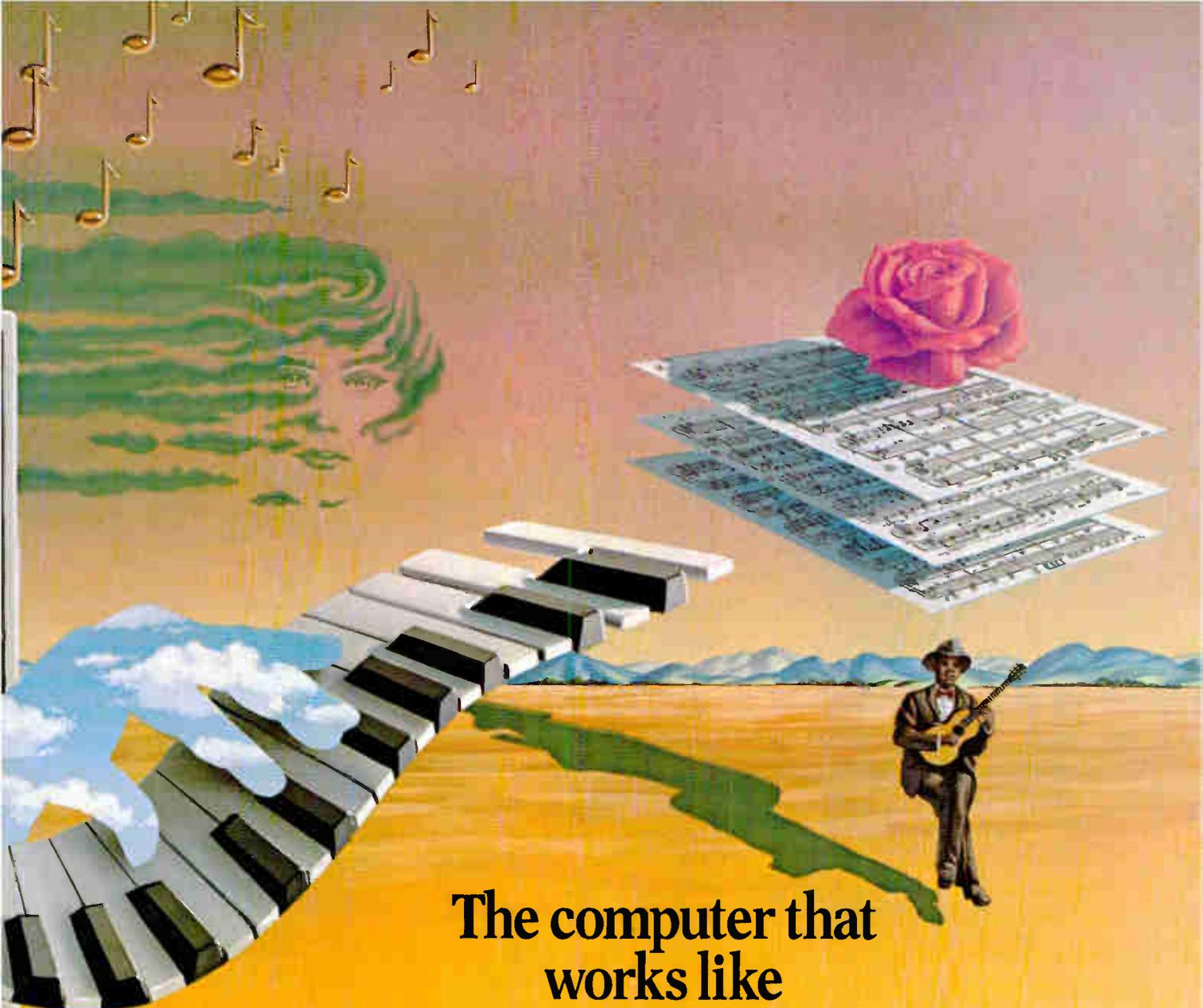
Through these surveys we see you moving quickly in your careers and getting involved in many new and exciting offshoots of sound and recording. We want you to know that we are interested in where you are heading and will continue to investigate ways to give you the information that best fits your combination of needs today. After all, they don't call us *Mix* for nothing.

Keep reading,

David Schwartz  
Editor-in-Chief



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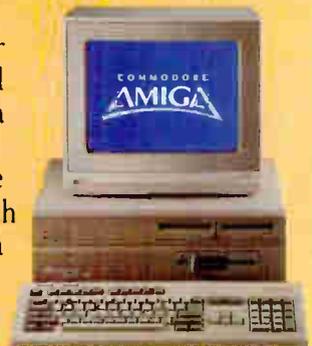
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# CURRENT

## Phil Proctor Headlines at TEC Awards

Phil Proctor of Firesign Theatre fame will take center stage on Thursday, November 3, when *Mix* magazine presents the 1988 Technical Excellence and Creativity (TEC) Awards at The Biltmore in Los Angeles.

Proctor, who has received national recognition as an award-winning actor, writer and producer in both comedy and drama, will emcee the evening's festivities. This year's Awards will also introduce the first TEC Awards Hall of Fame, with inductees Les Paul and Bob Liffin.

Other celebrity presenters will include former Doors keyboardist Ray Manzarek, three-time TEC winner Bob Clearmountain, sound designer Frank Serafine and sound designer/recording artist Suzanne Ciani.

For information, call Karen Dunn at *Mix* magazine, (415) 653-3307.

## SMPTE Sells Out

All the available exhibit space has been reserved for the 130th SMPTE Technical Conference and Equipment Exhibit, to be held October 15-19 in New York City.

A total of 186 companies in 715 booths will occupy 71,750 square feet at the Jacob K. Javits Convention Center. The equipment on display represents the industry's latest advances and includes cameras, editing systems, signal and time code generators and processors, audio and video equipment, mixers, monitors and projectors.

In addition to equipment exhibits, the SMPTE Conference features a five-day series of technical sessions. For more information, contact SMPTE at (914) 761-1100.

## Interactive Entertainment Conference

More than 100 speakers and panelists have been organized into 28 panel sessions for InterTainment '88, to be held October 24-25 at the Vista Hotel in New York City.

"We took great care to create a conference that reflects the diverse talents of participants from a dozen industries and two dozen companies," says Howard Ballon, a senior consultant with Alexander & Associates, one of the conference's sponsors. "Panelists and speakers have been drawn from home video, cable television, computer software, motion pictures, record production, toy manufacturers, game developers . . . in fact, just about every industry that is involved with developing new forms of interactive entertainment."

Panel discussions, featuring 28 topic areas, will cover issues that are important to interactive entertainment: critical product development, production, marketing, financing and inter-industry matters. The conference also includes product demonstrations and new product reviews. Nolan Bushnell, the founder of Atari and now chairman of Axlon, a high-tech toy company that produces "toys with a purpose," will be the keynote speaker.

Limited space is available for product exhibitions. The two-day conference cost is \$550. Contact Sally Chin, Alexander & Associates, Inc., 28 West 44th Street, New York, NY 10036; (212) 382-3929; Fax: (212) 382-3964.

## Group Forms to Support HDTV Production Standard

A number of manufacturers of production equipment for High Definition Television (HDTV) program

production have formed an organization to support the application of the ATSC/SMPTE 1125/60 HDTV production standard in the U.S. Called HDTV 1125/60 Group, the organization will be headed by William G. Connolly.

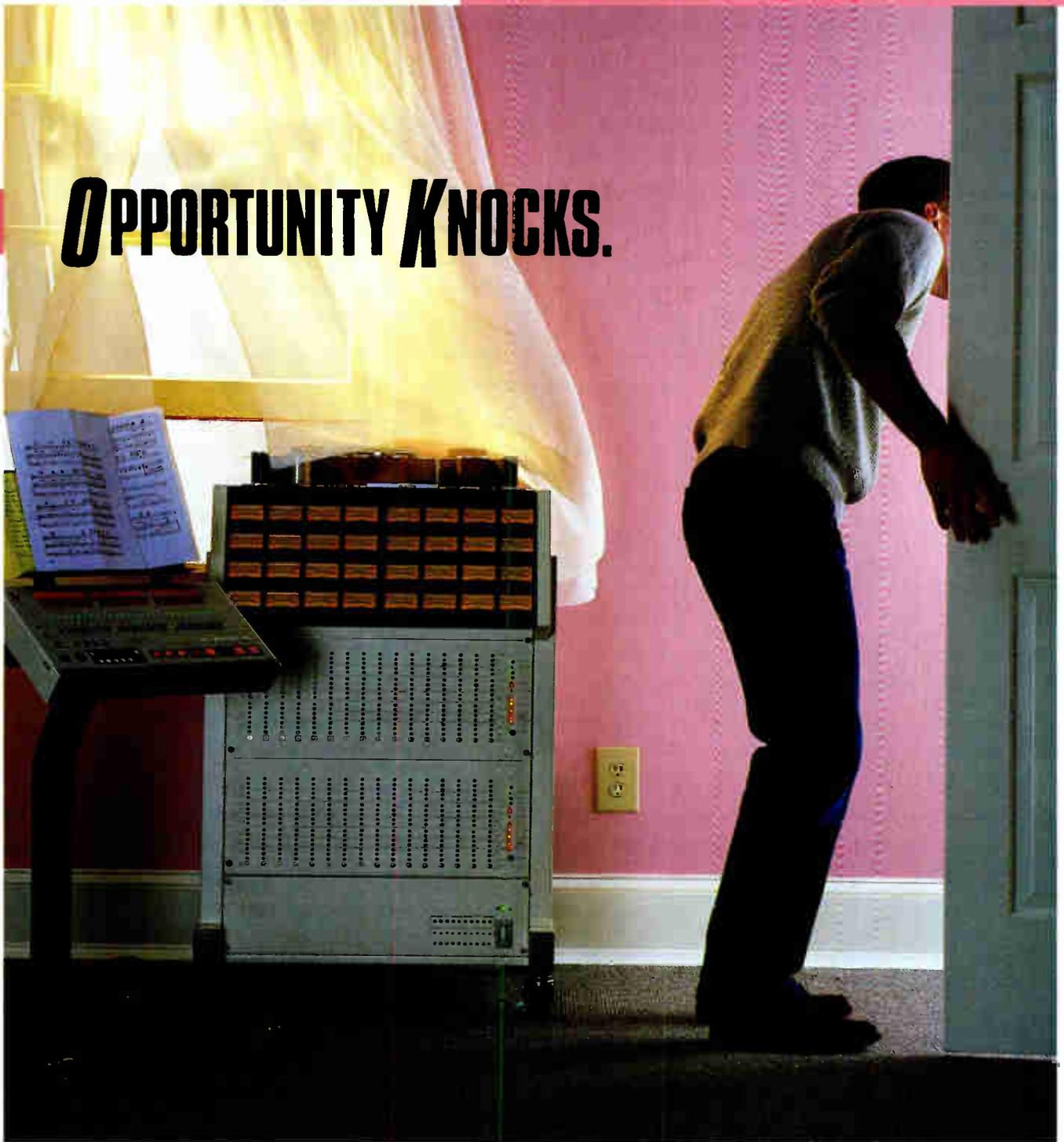
"The Group seeks to promote the expansion of the HDTV production standard to a wide range of entertainment, educational and closed-circuit applications," says Connolly. "We feel that a clear separation of the technical issues of production from those of transmission are in the best interests of all."

The Group includes advisers from U.S. video and motion picture production and post-production companies, broadcasters and cable system operators. For membership information, call Alec Shapiro at (212) 686-9000.

## TEC Nominee Withdraws

Engineer Bob Ludwig of New York City's Masterdisk has withdrawn his name from the ballot for the 1988 Technical Excellence and Creativity Awards. A two-time TEC winner, Ludwig was inadvertently given incorrect credits on the ballot, which was included in the August issue of *Mix*. The proper credits show that Ludwig has recently mastered records by artists such as Sting, Bryan Ferry, Robbie Robertson and Bruce Springsteen. The printed credits—Run-D.M.C.'s *Raisin' Hell*, the Beastie Boys' *License to Ill*, L.L. Cool J's *Bigger and Deffer* and Phillip Glass' *Powqatsi*—were engineered by Howie Weinberg and Bill Kipper of Masterdisk. We regret the error, and we offer our sincere apology. ■

# OPPORTUNITY KNOCKS.



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**OTARI**

# INDUSTRY NOTES

The **Entertainment Facilities Management Institute** opened its doors in August. For information, call (305) 371-6111, or write to 1460 Brickell Ave., Suite 200, Miami, FL 33131. . . **Reel-Tek** now offers tape machine service for home recording studios and small-track format production facilities in New Jersey, New York and eastern Pennsylvania. . . **Limelite Video, Inc.** announced three staff appointments to its L.A. digital facility. **Patrick Marty** is VP of marketing, **David Weir** is chief engineer and **Matt Mooney** is the Paintbox/Harry artist. . . **Gannett Broadcasting** recently purchased systems from New England Digital for KIIS-FM in L.A. and WGCI-FM in Chicago. . . **Music Expo '89** will be held May 12-14 at the Pasadena Center in Pasadena, CA. For information, contact MUSEX, Inc., 723½ N. La Cienega Blvd., Los Angeles, CA 90069; (213) 659-0701. . . **NARAS** is creating a new position—Chapter Services/Education Coordinator—to track membership and educational programs. . . **Lighting Dimensions International** plans to host its first annual entertainment technology show at the Infomart in Dallas, November 18-20. For information, contact Linda Snelham-Moore, 135 Fifth Ave., New York, NY 10010; (212) 677-5997. . . Also on the convention circuit, **Video Expo Orlando** puts on its fourth show December 13-15. Interested parties call Barbara Stockwell at (914) 328-9157. . . **Soundtracs** announced a joint venture with **Samson Technologies Inc.** for the sales and marketing of Soundtracs consoles in the U.S. . . **Richard K. Ploss** has been appointed VP of engineering at **New England Digital**. . . **NARM** and **NARAS** representatives were in L.A. in July discussing problems of censorship in the recording industry. It was the first of a regular series of meetings. . . **Patti Mauck** has been named director of sales at **Editel/LA**. . . **Laura Foti Cohen** was promoted to director of title development and editorial services at **American Interactive Media**. In her new position, Ms. Cohen will guide AIM's Compact Disc-Interactive

titles through pre-production. . . The eighth annual **CMJ Convention** will be held October 27-30 at the Vista Hotel in New York City. The focus this year is "How to Break in New Talent." For information, call (516) 248-9600. . . **Allen & Heath** has appointed a new chief executive, **John Ball**, who comes most recently from the **Robert Luff** organization. . . **Bruce Swedien**, recording engineer best known for his work with **Michael Jackson**, will lead a one-day discussion of his philosophy and technique at UCLA Extension on Saturday, Oct. 15. For further details, call (213) 825-9604. . . **Sam Spennachio** has joined **Klark-Teknik** as national sales manager. . . **Renkus-Heinz, Inc.** announced the appointment of three manufacturer's reps. **Joe Etrick** will service Northern California and Nevada. **Michael Welch** will cover Florida and **Shelly Goodman** is in charge of upstate New York. . . For the second year in a row, **DDA** has won the Queen's Award for Export Achievement from the British government. . . **The Museum of Broadcasting** recently received a \$3.5 million donation from **Sony Corporation of America Foundation, Inc.** The contribution came in the form of state-of-the-art electronic equipment to fill up the museum's new building in NYC. . . New faces at **Electro-Voice**: **Mike Joseph** is now pro audio market development manager, and **Scott Null** is a project engineer. . . **Alan Hershner** moved up from Western regional sales manager to director of sales at **Shure Brothers Inc.** Also, **Lottie Morgan** has been promoted to vice president of sales, after 26 years with the company. . . **Matrix Corporation**, an Orangeburg, NY-based producer of electronic systems, has merged with a subsidiary of **Agfa-Gevaert, Inc.**, under the latter's name. . . **Harrison Systems, Inc.** is expanding its dealer network to include reps in Tokyo, Istanbul, Brussels, Jamaica and Seoul, among other locales. . . Pittsburgh-based **Production Masters, Inc.** announced the purchase of the Phoenix

—CONTINUED ON PAGE 75

## STAFF

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NATIONAL EDITORIAL, ADVERTISING AND BUSINESS OFFICES:  
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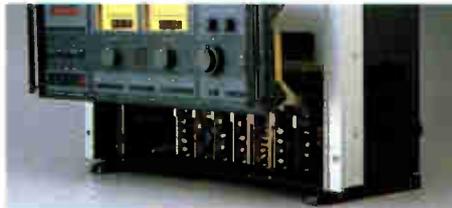
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- Built-in variable speed allows -33% to +50% range
- Selectable library wind and record inhibit
- Optical End-of-Tape Sensor
- 1-year parts and labor warranty

Plus, other features *standard* on the C270 Series that are available *only* as options on other machines . . .

- Fader start circuitry
- RS 232 serial port allows full control of *all* machine functions
- Rack mount adapters

The C270, 274 and 278 all have 3 tape speeds (3 3/4, 7 1/2 & 15 ips), any pair of which can be selected and quickly changed in the field.

Low speed versions (15/32, 15/16 & 1 7/8 ips) of the C274 and C278 – especially suited for logging applications – come with a built-in time and date code generator and reader with search capabilities.



All audio electronics fully accessible through front panel.

The C270 Series is designed to give you what you need, *included* on every machine . . . pro transport functions, pro audio quality and pro construction (rugged die-cast deck-plate, head assembly and chassis). Add overall value to because that's very much what the C270 Series is about – giving the professional more for less. (Accessories and options, you need them, *are* available – autoloading motors, remote controls, floor consoles and SMPTE center track time code.)

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## STUDER REVOX

# SESSIONS AND STUDIO NEWS

## SOUTHEAST

**John Prine** was in Nashville's **Suite 2000** mixing a live double album for Oh Boy Records, with **Jim Rooney** and **Dan Einstein** sharing the producer's duties and **Rich Adler** engineering. . . At **Criteria Recording Studios** in Miami, PolyGram recording artists **The Everly Brothers** were editing on the AMS AudioFile; **Ted Stein** engineered with assistance from **Andrew Byrd**. . . Over in Atlanta, **Ben Friedman** cut and mixed five tunes for MCA at **Musiplex**, with **George Pappas** engineering and **Thomas Pee** assisting. . . **K. T. Oslin** was in Nashville's **Music Mill** to finish mixing her new LP for RCA; producing was **Harold Shedd**, engineering were **Jim Cotton** and **Joe Scaife**. . . Former chief engineer at **Air Montserrat**, **Michael Stavrous**, was cutting tracks at **The Flood Zone** in Richmond, VA, for a project by **Bruce Olsen** and **Alan Weitzman**. . . **Human Radio** continues to work at **Memphis Sound Productions** (boasting violin, mandolin and uncontrollable hair in the band), with **Dan Pfeifer** and **Robert Jackson** engineering. . . Elsewhere in town, at **Cotton Row Recording**, **John Kevin** was called in to sing on a demo for **New Memphis Music**, produced and engineered by **Niko Lyras**. . . **Barry Beckett** was in Nashville's **Digital Recorders** cutting tracks for **Etta James** of Island Records, with **Scott Hendricks**, **Rich Schirmer** and **Howard Steele** engineering. . . At **Southern Tracks** in Atlanta, **John Jansen** was producing **The Producers** for MCA. . . Nashville's **Soundtrax Recording** has been busy with a **John Stewart** project, with help from **Rick Monday** at the console. . . Progressive dance group **Another Nation** has been working on a new single at Miami's **SKD Studio**. . . **Frank Cornelius** produced and engineered a reunion release by **Cornelius Brothers & Sister Rose** at **SoundShine Studio** in Fort Lau-

derdale, FL. . . **Bobby Goldsboro** was working on a demo at Nashville's **Soundshop Recording Studios**, with co-producer **Timmy Tappan** and engineer **Mike Bradley**. . .

## NORTHEAST

At New York City's **Counterpoint Studios**, producers **Paul Simpson** and **Winston Jones** were in doing remixes for **Chaka Khan**, with **David Darlington** engineering. . . Across the water in Hoboken, NJ, producer **Paul Hamingson** is recording **The Neats** at **Waterfront** recording studio for Coyote/Twin Tone Records. . . Folk legend **Odetta** was working on a folk/jazz Christmas album at **White Crow Audio** in Burlington, VT, with **Rachel Faro** producing and **Lincoln Clapp** engineering. . . In Manhattan, Canadian artist **Hugh Ball** was at **Record Plant** to record his debut album with help from producer **Yank Barry** and engineer **Tom Swift**. . . **Henry Gross** was recording for Sonet Records with co-producer **Anthony Battaglia** at **Studio 900** in NYC, with **Julio Pena** assisting. . . **TCR Productions** of Charlotte Hall, MD, and the **Wizard Works Studio Mobile Truck** were at Wilmer's Park Rock Fest 88 cutting a live concert album, with **Tabby Crabb** producing and **Bill Harrison** at the controls. . . At **Mediasound Studio** in New York **Frehley's Comet** recently completed their album for Megaforce Records, with **Scott Mabuchi** engineering and **Michael Reiter** assisting. . . Congratulations to Philadelphia's **Baker Sound Studios**, which served as the production facility for ten of this year's Philadelphia Advertising Club Creative Award winners. . . Producer **Ric Wake** has been at **Cove City Sound Studios** in Glen Cove, NY, working on songs for **Jennifer Rush** on CBS Records. **Bobby Cadway** handled the engineering. . . Over at NYC's **Chung King House**

of Metal, producer **Kyle West** and engineer **Jay Henry** are finishing the debut album by **The Gyrz** for Capitol Records, with **Ken Kohen** assisting. . . At Long Island City's **Power Play Studios** artist/producer **T. LaRock** was working with producer **Todd Terry** and engineer/co-producer **Norty Cotto** on a song for Sleeping Bag Records. . . Legendary producer **Ed Stasium** was in Glen Cove, NY's **Tiki Recording Studios** cutting tracks for **Crossfire Choir**, with highlights of the recording process broadcast over radio station WDRE during the recent New Music Seminar. . . **Little Louie Vega** has been in NYC's **D&D Recording** working with Sleeping Bag artist **HI-C** on her latest single, with **Mike Rogers** engineering and **Bill Mansfield** assisting. . . In Stamford, CT's **Blank Production** facility, **Dave Shaw** and **Winston Jones** were doing overdubs for **Chaka Khan**'s new album, with **Bob Blank** engineering. . . Island Records brought the sound of **Buckwheat Zydeco** to **SounTec Studios** in E. Norwalk, CT. . . **Sheffield's** audio remote truck from Phoenix, MD, recorded **Guadalcanal Diary** and **Howard Jones** at the recent Animal Rights Music Festival in Washington, DC. . . **Paul Lehrman Productions** of Arlington, MA, has finished **The Celtic Macintosh**, an album of folk songs from Ireland and the British Isles. . . Salsa artist **Willie Colon** heads into **Fania Studios** in NYC to finish his LP scheduled for an October release. . . **Teddy Pendergrass** was remixing his new single with **Mitchell Goldfarb** at **Victory West** in Gladwyne, PA. . . At **Ready or Not Studios** in NYC, **K-Real** was mixing his rap single with hip-hop producer **Sweets**. . . Producer **Wayne Brathwaite** was in New York's **39th Street Music** tracking for **Jennifer Holiday**, with help from **Rick Kerr** at the controls and **Gregge Tupper** assisting. . . **Peter Moffitt** is cutting his second LP at Manhattan's **Calliope**, with **Sue Fish-**

er, **Shane Faber** and **Chris Julian** at the board. . . **Jeannie Gagne's** song for animal rights was recorded at **WizardWolf Studios** in Jackson Heights, NY. . .

## NORTH CENTRAL

Producer **Michael Powell** was working at **Studio A** in Dearborn Heights, MI, on rhythm tracks for **Anita Baker's** release on Elektra, with **Randy Poole** engineering. . . **JAMR Project** is working on tracks for a full album of original music at **Brown & Brown Recording** in Portage, MI. . . **Producers Color Service** in Southfield, MI, was used by Los Angeles artist **Gregory Clayborn** for recording his demo LP. . . At Chicago's **Time Zone Recording** producer/arranger **Tom Tom 99** completed the mix for Count Basie Band vocalist **Carmen Bradford** for the Major Label Record Company. . . One of Chicago's favorites, **The Vanessa Davis Band**, is recording tracks at **Paragon Studios** for their next LP; the sessions are being engineered by **Mark Richardson** with **Scott Barnes** assisting. . .

## NORTHWEST

Producer **Bill Cutler** is at San Francisco's **CD Studios** working on an EP for **Show and Tell**, with co-producer **Mark Myers** and engineer **Andrew Gray**. . . Across the Bay at **Starlight Sound** in Richmond, CA, producers **Thomas McElroy** and **Denzil Foster** are working on the debut album of **Channel II** for Wing/PolyGram, with engineers **Steve Counter** and **Ken Kessie** tracking and mixing. . . At **Ironwood Studio** in Seattle, WA, engineer **Jay Follette** was working with local rockers **Paisley Sin**. . . At **Savage Studios** in San Francisco are **The Sneetches**, working with **Steve Savage** on their debut LP for Alias Records. . . **Tony Papa** and **The Theory** finished an album project for Summit Records at Vancouver, B.C.'s **Ocean Sound**, with producers **Tony Papa**, **Daryl Burgess** and **John Webster**, and engineer **Howard Rissin**. . . The first ultra-stereo mix at San Francisco's **SRO** was mixed by **Luther Greene**, with assistance from **Lisa Baney** for a documentary on the now defunct USFI called *Gridders, The Last Season*. . . **Sandy Geller** is cutting tracks at S.F.'s **Dave Wellhausen Studios** for her new EP, produced by **Norman Landsberg** and engineered by **Fred Catero**. . . **Terry Date** recently recorded an EP with **Crisis Party**

for Capitol Records at Seattle's **Steve Lawson Productions**. . . A PBS production featuring **Judy Collins** and **Bobby McFerrin** was sweetened and mixed at San Francisco's **Russian Hill Recording**, with help from re-recording mixer **Samuel Lehmer**. . . Remote truck **Le Mobile** was up from Hollywood at Lucasfilm's **Skywalker Ranch** in Marin County to capture tracks for the upcoming **Grateful Dead** album. . .

## SOUTHWEST

Jazz producer **Dennis Gonzalez** was in Dallas' **Omega Audio** with engineer **Paul Christensen** to record three projects for Swedish label Silkheart, one featuring the **Charles Brackeen Quartet**. . . Visiting Dallas after a year-long run at Harvey's in Lake Tahoe, **Rage** completed a vocal session at **Downtown Sound**. . . Local favorites **The Flaming Lips** stopped in at **Goodnight Dallas** to record a Neil Young cover for a compilation album release by Caroline Records; **Ruben Ayala** engineered the session. . . A&R director **Michael James Murphy** was producing a choral project at **Future Audio** in Dallas, with **Randy Adams** engineering. . . **Princess Tex** has been working at **Planet Dallas** with co-producer **Patrick Keel** and engineer **Rick Rooney**. . .

## SOUTHERN CALIFORNIA

English popsters **XTC** remain camped out in Sunset Blvd.'s **Summa** with producer **Paul Fox** and engineer **Ed Thacker**, creating a follow-up LP to their well-received *Skylarking*. . . **Buddy Miles** (The California Raisin) is currently recording tracks at **D.M.O. Productions** in Van Nuys with co-producer **Gary McLaughlin** and engineer **Ophir Shur**. . . **Fred Maher** was at **The Enterprise** in Burbank working on mixes for **Matthew Sweet's** debut on A&M Records; **David Leonard** engineered with **Lori Fumar** assisting. . . **Anita Baker** was recording with producer **Michael Powell** at Burbank's **Encore Studios**. **Barney Perkins** was engineering with **Milton Chan** assisting. . . **Dan Friedman** was at **NRG Recording Services** producing **Tin Star** for Rhino Records, with **Joe Borja** at the console. . . The new fab four, **U2**, and producer **Jimmy Iovine** were working at **Conway** in Hollywood on a soundtrack album for

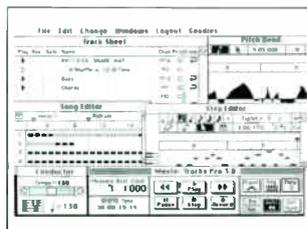
their movie; **David Tickle** engineered, with **Richard McKernan** and **Gary Wagner** assisting. . . **Berlin** was at **Secret Sound** cutting tracks with producer **Chas Sandford**, engineer **Gary McGachan** and second **Daren Chadwick**. . . At **Total Access Recording** in Redondo Beach, **Michael Lardie** and **Alan Niven** remixed tracks by Aussie band **The Angels** for Chrysalis Records. . . Producer **Nancy Jeffrey** and engineer **Guy Charbonneau** were at **Skip Saylor Recording** working on tracks for Virgin Records artist **Ziggy Marley**, with **Joe Shay** assisting. . . North Hollywood's **Entourage Studios** welcomes **David Byrne**, who is working on a new venture called *The Forest*, with **Mark Wolfson** engineering and **Brad Cox** as technical assistant. . . Motown legend **Wally Cox** was at **Valley Center Studios** in Van Nuys to produce a "secret project" with help from engineers **Kevin Reeves** and **Jim Albert**. . . Yamaha Soundcheck contest winners **The Ventilators** were at the **Music Grinder** with producer **David Pahoia** and engineer **Burt Battaglia**. . . Producer **Louil Silas Jr.** and engineer **Taavi Mote** were mixing the new **Ready for the World** LP at **Larabee Sound**. . . **Michael Jay** was producing pop princess **Martika** at **Trax Recording**, owned by engineer **Michael J. McDonald**. . . Rhyme Syndicate/Sire Records group **Low Profile** was at **The Rock House**, with **DJ. Alladin** producing and **Sherman York** at the board. . . Grammy-winning songwriter **Louis A. Johnson** was recording at **Audio Achievements** in Torrance with help from session players **Ray Fuller**, **Charles Meeks** and **Eric Gale**. . . **Mach 1** was working on an EP at **Hit City West** with engineer **Kevin O'Connor** and second **John D. Hiler**. . . **Yolanda Bufford** and **the Hathornes** were at **WEC Recording Studios** in North Hollywood working on tracks with producer/engineer **Ken Allen**, with **Ed Guzman** assisting. . .

## STUDIO NEWS

**Craig Harris Music** in Studio City, CA, reports that a 2-gigabyte optical disk drive has been added to their Synclavier Digital Music System. . . **Blue Light/Illusions in Sound** unveiled their new Lexicon Opus digital audio post-production system for film and TV. Located in Burbank, Blue Light is the site of the first Opus installation on the West Coast. . . Work on an SSL-equipped Studio B at Tarzana's **CAN-AM Recorders** has been completed.



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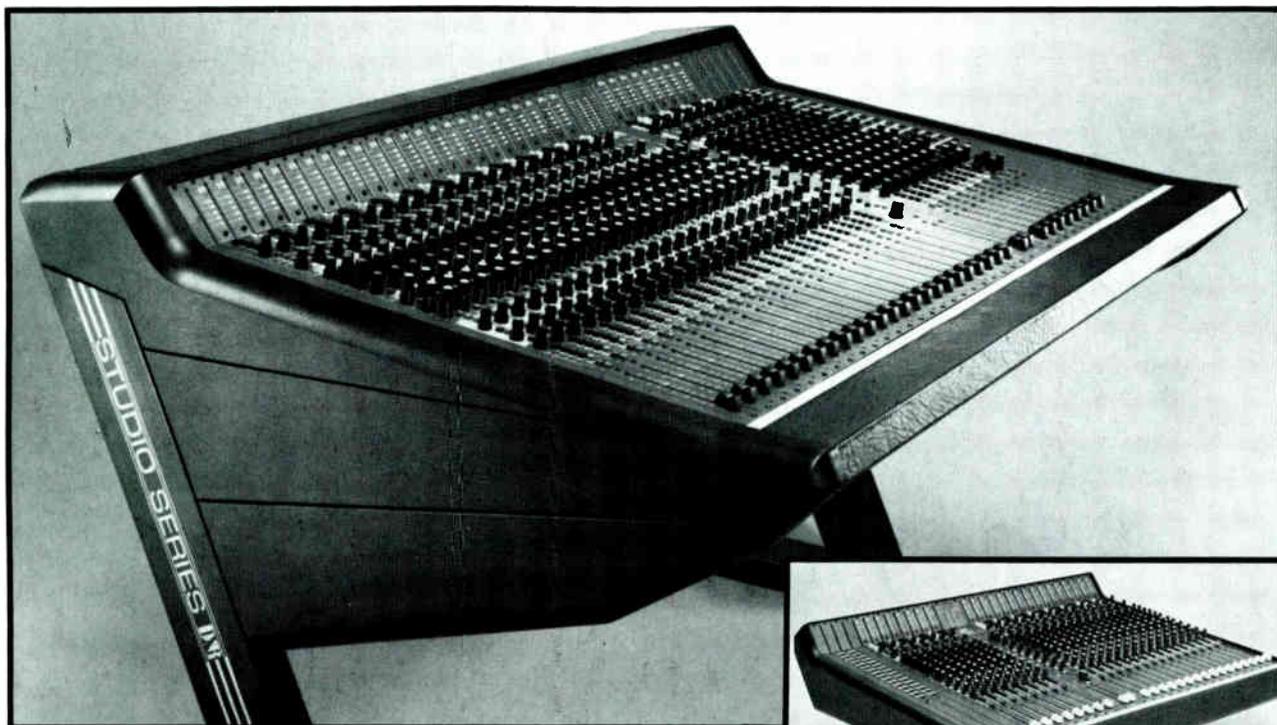
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by Ken Pohlmann

# AUDIO'S NEW FRONTIER

## READ/WRITE OPTICAL STORAGE SYSTEMS

**L**ast month we discussed several optical disk technologies, including the new Philips/Sony CD-WO (Compact Disc-Write Once) format and the Tandy THOR-CD (Tandy High-intensity Optical Recording) recordable format. But CD-WO is *not* erasable (and hence, of limited utility to the recording industry) and is yet to be marketed, and THOR-CD is still vaporware—merely a technology announcement, with any product introductions at least two years away. However, I pointed out that fully recordable/erasable optical formats are already available, and enormously affordable as well. With that cliff-hanging bit of information,

Magneto-optical technology, as the name suggests, uses a combination of magnetic and optical methods. This is how it works: heat from a laser lowers the coercivity of a magnetic recording layer (for example, coercivity may fall from 400,000 amperes per meter to almost zero as the temperature rises to 150 °C). This allows data to be written with a weak field, reorienting the magnetic polarization (as with conventional magnetic media). However, since the data area can be finely focused by the laser beam, a much greater data density can be achieved. Data is read by shining a laser on the recorded surface. The orientation of

**Maxtor's Tahiti I erasable optical disk drive features removable, 5.25-inch, 1-gigabyte data cartridges.**



we ran out of space. This month, let's discuss a practical optical format utilizing magneto-optical technology and speculate a bit on where we're heading from here.

the magnetic particles affects the plane of polarization of the reflected beam; this is detected, and hence, data is read.

Data may be erased and rewritten

# Every sound engineer needs a silent partner.

An investment in a recording console represents a partnership you plan to live with for some time. Which is why the Sony MXP-3000 series console is a sound business decision.

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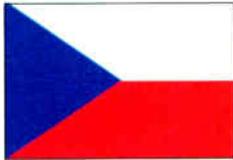
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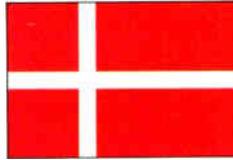
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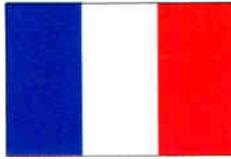
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10 million times or more, equivalent to conventional magnetic media. Accelerated life measurements suggest they will last at least ten years. In one test, when exposing them to 95°C at 95% humidity for 1,000 hours, magneto-optical disks survived better than conventional hard or floppy disks; it is generally agreed the latter last only a few years. Since the coercivity required to write or erase data is very high at room temperature, it is virtually impossible to alter data accidentally. Thus, magneto-optics are a great deal more stable and reliable than other magnetic media.

One drawback to current magneto-optical disks is that data writing first requires that the media be erased. The data points to be written to are first heated with a zero-polarity magnetic field, resulting in 0s being written everywhere. Data can then be stored by switching the magnetic field and writing all the data points that are 1s. A problem stems from the fact that this is a two-step operation, so a *write* operation requires two disk revolutions. Hence, a write operation is slightly slowed. A *read* operation, of course, can be done in one revolution. On the other hand, direct overwrite (in which erasing and writing is done in the same revolution) is under development. This would double system recording data rates.

One example of a magneto-optical system is manufactured by Maxtor, a San Jose, California, company. They manufacture a line of erasable optical disk drives with removable media. Their access times rival that of Winchester's, and their storage capacity beats them cold. Fiji I is a 3.5-inch drive with 160 megabytes of storage, an average seek time of 100 milliseconds and data transfer rate of 1.9 Mbits per second. The Tahiti I is a 5.25-inch drive with 600 MB of storage, an average seek time of 30 ms and data transfer rate of 10 Mbits per second. A standard ANSI optical cartridge is used, so portability from one studio to another is ensured. Alternatively, a higher-density cartridge developed by Maxtor can be used; it stores 1 gigabyte. The Fiji uses a stand-alone SCSI controller. The Tahiti I has an embedded SCSI controller, offering increased flexibility. Sectors can be

set at either 512 or 1,024 bytes per sector, and different storage cartridges (the 600 MB or 1 GB) can be selected.

These Maxtor drives both use magneto-optical technology, but have solved the bane of earlier incarnations: slow seek times because of bulky laser heads, and slow data transfer rates due to delays in delivering laser power to the media. Although not implemented in this technology, future optical disk systems may use holographic heads to eliminate most or all of the glass optics found in present-day pickups. The result will be even lower mass and even faster access times.

Maxtor's high-capacity disk uses constant density formatting in the same way

watts for the Tahiti I. Price? The 3.5-inch drive sells in volume for less than \$1,000, and the 5.25-inch drive sells for around \$2,500. Volume prices for 3.5- and 5.25-inch blank media are \$49 and \$175 respectively. Availability? Now. Of course, Maxtor is not alone in this field. Other companies, such as Sony, have also introduced erasable optical drives.

Surely the price is right, but is the capacity? One gigabyte sounds like a lot (and it is) but music is incredibly information-hungry. A compact disc stores around 650 megabytes of formatted data—about an hour of 2-channel audio. Barring the distinct possibility of using data compression methods,

*All the advantages of hard disk-based digital audio workstations, such as random access and editing, would be available to optical recorders; surely they would displace that form of storage.*

that a compact disc uses constant linear velocity to increase density. A linear bit method limits density due to the capacity of short inner tracks. On the other hand, the inner tracks have the highest linear velocity and highest data rate. With constant density, the greater capacity of the outer tracks is utilized by buffers in the SCSI controller. The drive's data rate is varied to match the constant transfer rate of the host interface. As tracks move outward, there is additional room, hence higher data rates and improved overall capacity. Specifically, a data sector is added to each next outer (concentric) track, and a 40% increase in capacity is achieved.

Total power consumption, including spindle motor, actuator and field coil is 17 watts for the Fiji I and 35

that amount of storage isn't really enough for most professional applications, particularly in the case of multi-track recording. In that case, a larger diameter optical disk may be more appropriate. For example, a 12-inch disk can store about 2.6 GB of data, and a retrieval autochanger holding 64 disks would result in a system capacity of 166.4 GB. Not enough? How about an autochanger with a 204-disk capacity? That would yield one-half *terabyte* of storage!

Above all, such an optical disk system would feature *removable* disks—an important consideration in audio applications, and a distinct debit in the hard disk column. (Optical disks also have longer lifespans, higher reliability, suffer less wear and tear, and

## INSIDER · AUDIO

are immune to head crashes.) Moreover, developers expect that capacity of optical disks will increase tenfold over the coming years, with a capacity some 30 times that of hard disks.

In addition to its other assets, optical storage is extremely space and cost efficient. The cost of storing 1 MB on a 64-disk optical system is less than \$1, whereas a hard disk system may cost \$100. The costs of both systems are declining, but the cost of optical storage (as with any new technology) is declining faster. In other

words, optical storage is already cheaper and will soon be a steal.

But where are the practical applications in the uniquely defined requirements of the entertainment industry?

Several companies have already introduced tabletop, relatively inexpensive video disk recorders using differing standards and recording technologies. For example, the Pioneer DD-8001 uses 8-inch disks (\$13,000), the DD-U5001 drive (\$2,800) uses 5½-inch disks, and the DD-U5001 is a 5½-inch drive and subsystem (\$3,500). Pioneer also markets the DJ-1 and DJ-2 autochangers (\$40,000), storing 20

disks with a capacity of 30 GB. The Sony CSS-100 is a color still system (\$25,000) using 12-inch disks. How many recording engineers noticed the introduction of the TEAC LV-200A at the AES convention last October? However, clearly, none of these are suitable for the audio market.

However, it is equally clear that the appropriate optical recording technology is here, albeit in bits and pieces. The optical drive market is expected to surpass \$1 billion within four years and, unquestionably, audio recording will be part of that market. The costs, capacities and features of current generation read/write optical disk systems are both desirable and highly feasible for professional audio applications. Two-track optical recorders could be constructed to be cost-competitive with magnetic tape digital recorders, yet offer advantages such as smaller media and lower media cost. Likewise, multi-track optical recorders, perhaps using drives linked in tandem, could compete with tape-based digital multi-tracks.

Of course, all the advantages of hard disk-based digital audio workstations, such as random access and editing, would be available to optical recorders; surely they would displace that form of storage. In addition, other advantages inherent in optical disk will create new opportunities for the designer. Ultimately, the advent of optical storage may finally redefine the nature of audio storage, which began with digital audio tape recorders and was furthered by hard disk systems. In short, the next generation of audio storage devices may be both optical disk-based and significantly different from current magnetic media in terms of user perception.

It will be interesting to see which entrepreneuring company will be the first to package recordable optical technology as a professional recording studio storage medium. Watch the ads here in *Mix*. When you see a picture of an optical disk recorder with old-fashioned magnetic tape strewn about on the studio floor, you'll know the future has arrived. ■

*Ken Pohlmann is an associate professor of music and director of music engineering at the University of Miami. His numerous published works include Principles of Digital Audio and The Compact Disc Handbook.*

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by Stephen St.Croix

# THAT WAS THEN THIS IS NOW

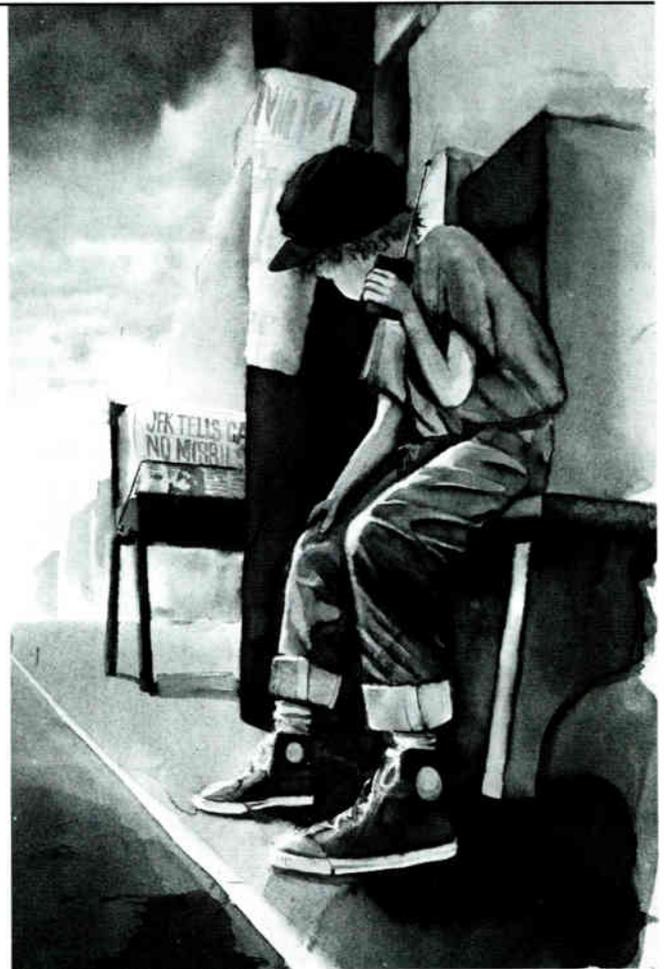
**F**or many years I have tried to do enough assorted things for a living concurrently, so I would never have to do the same thing twice in a row. This does not mean I am a professional transient. I have tried to arrange my life so there is enough going on that each project I am involved with is unique; or if it is similar to the last one, I at least perform a different function on it.

I have taken a lot of careers and interlaced them to this end. I consult for several manufacturers in the music or recording industries, I do automotive engine and turbo research and design, I am a session player, an engineer. . . well, you know, different stuff for different days. I also write from time to time. I travel quite a lot, so I see different things when I wake up and look out the window in the morning, such as other oceans, snow-capped mountains in the summer or maybe traffic signs in a new language.

I do all of this to avoid stagnation, and I do it because technology makes it possible.

When I discover something new, I immerse myself in it, stay with it until I develop the chops to compete, and then I integrate it. I suspect a lot of you out there do the same. All of us in this industry have learned to do this, to some extent. If we hadn't, our industry would be advancing at the snail's pace of, say, the car industry.

Further, it turns out that I do not much care for the stuff that people call "security" when it means stability at the cost of new input. I have, however, come to realize that there is one stable, constant pattern in my life that I have not even come near to changing in the last 20 years. It both amuses and alarms me.

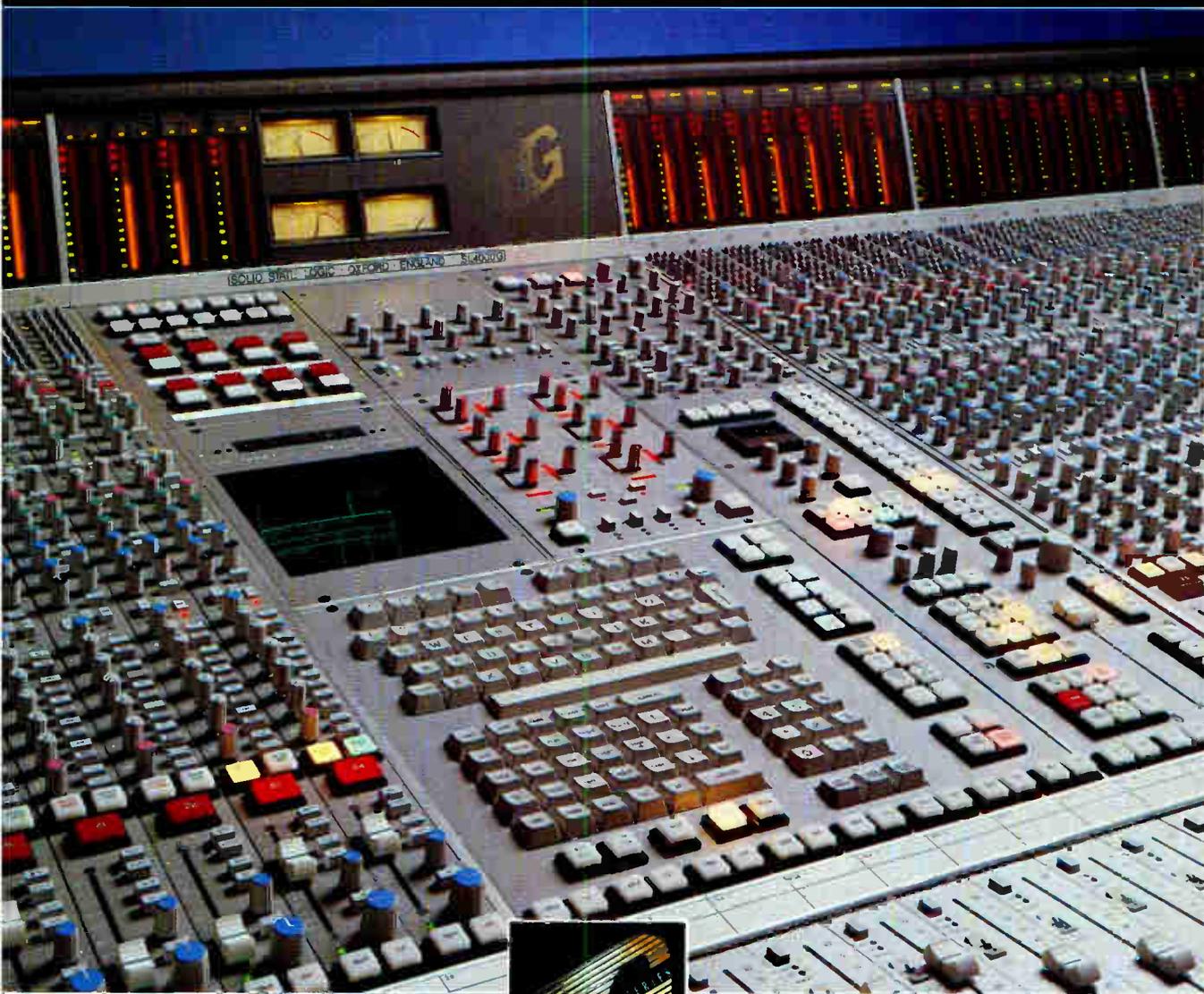


I like almost all kinds of music, except disco and its descendants or mutations. I *never* listen to "background" music. If I am listening to music, it is *all* that I want to hear. Rock is a unique case. It seems I have two different modes for listening to rock and roll.

### Mode One

I buy about 20 CDs a month, and I actually listen to most of them. I listen for engineering, for effects, for

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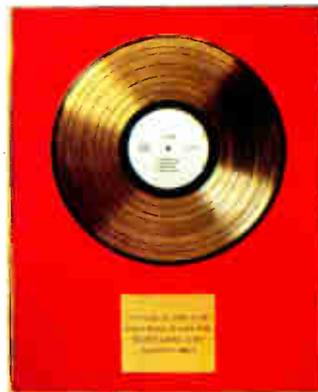
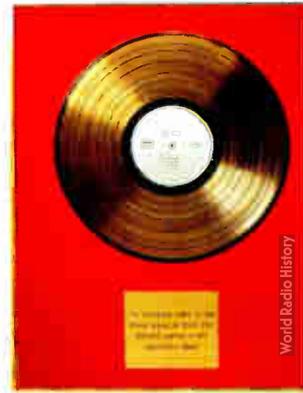
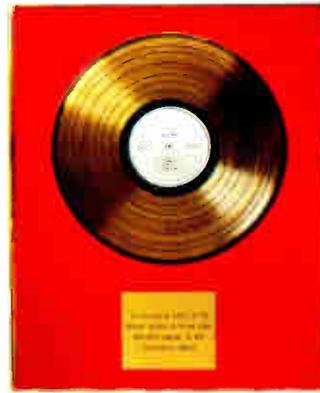
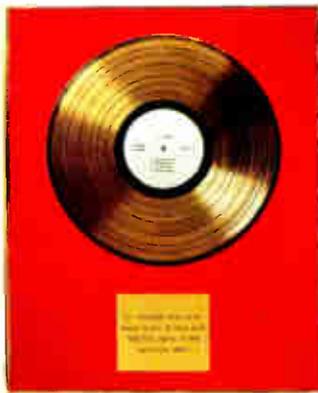
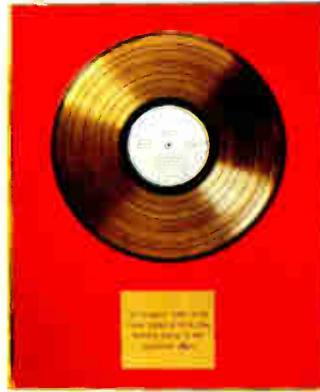
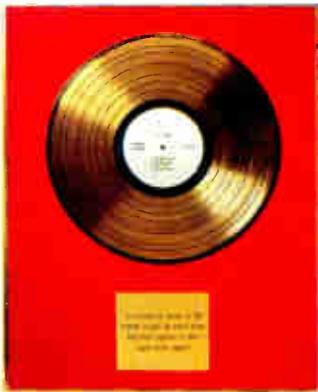
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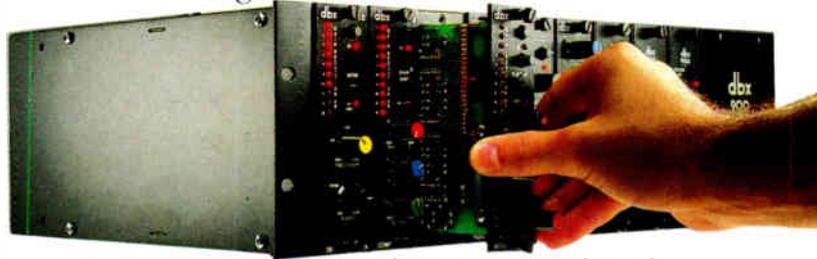
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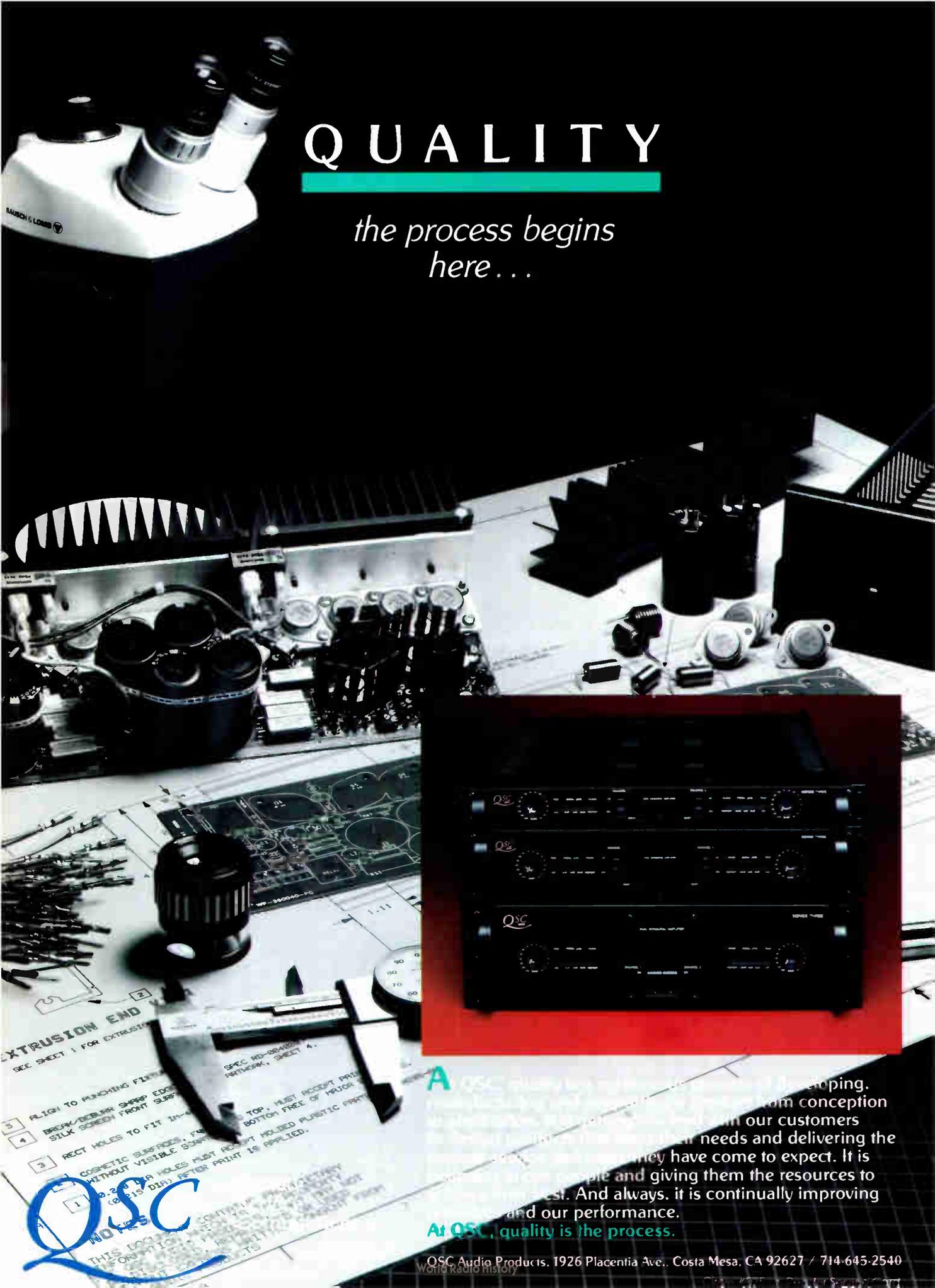
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noise, punch, tightness, cleverness, bottom, top and mixing trends. I listen to learn, perchance to be amused, entertained, to hear old buddies kick and sometimes to hear my work and see if it still sounds okay after 40 days. If I happen to be in the studio or the car, I might listen to see if I can move enough air to make breathing difficult without losing bottom punch.

Tight, punchy, pro work with innovative synthesizer voicing and intimate miking attracts me enough that those CDs will get played again, especially if they are startlingly clean with transients that approach scary. Noiseless is nice. Three-dimensional mixes are nice.

Some of this stuff is great with trick earphones on those long flights to places with different oceans.

### Mode Two

When I was a kid, I saved for a year for my first radio. This AM wonder was stuck to my ear from the time I got it until the day it died. It was battery-operated, so it went everywhere with me. It sounded like a cheap telephone, but that really didn't matter. The songs that I wanted to hear came out of it, more or less when I wanted to hear them, too. The radio may have sounded bad, but the songs didn't lose their *sound*.

### Official Mode One/ Mode Two Overview

So Mode One is for listening to modern rock music. I listen *technically*. Mode Two is for listening to old rock from the '50s and '60s (and recently, the '40s). I actually listen to the *song* as an event. I *feel* this stuff. I smile inside, I smile outside. I sing along. I remember every word, after 20 years. I remember exactly how the saxophones sounded.

Listen to Dion's "The Wanderer," Del Shannon's "Runaway," the Four Seasons' "Sherry," the Everly Brothers' "Wake Up Little Susie" or the Beach Boys, The Surfari's and all that Motown! There is no bottom. There is no top. There *is* plenty of noise and distortion; and, there is *music*. Technically, they were terrible by today's standards, but these songs survive because they are musically valid. Some of the lead guitar work on my favorites would get a player jailed today in Los

Angeles, or killed in Nashville (I believe that Tennessee still enforces capital punishment for incompetence on stringed instruments).

Granted, some of the deep, satisfying rush that comes when I hear one of these tunes may be due to attached memories. *Some*, that is. The rest is simply because that stuff is damned good music. About half of these songs came along at a time in my life that produced no good memories, but I still love them. For me, these songs are as close to magic as you can get.

For the last couple of years I have been involved with the reconstruction of old recordings using a computer process that we invented. I originally got into this by request to do *Gone*

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## For me, these songs are as close to magic as you can get.

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*With The Wind*, and I stayed in it because it allowed me to do some serious work on a lot of old rock and roll. The film work pays so well that it finances the rock and roll work, which I bill out at a loss. I bill it at a loss so I can remain at the high end of the competitive window. The result is that the most damaged stuff finds its way to me.

And the end result is that I now have a serious collection of the quietest, cleanest old rock tunes that exist; all on 16-bit masters and also in 32-bit on hard disk. *This* is what it is about for me.

Friends who hear some of my reconstructed masters in the car usually ask, "Why is a guy like you allowed to drive?" More to the point, they also ask, "Why can't we make music like *that* anymore?"

Well, why *can't* we? We have hardware now that people then never even dreamed of dreaming of, and we have raised a generation of players with chops that can kill. We can do anything, and we can make any sound that we can think of. We have already

*heard* this old stuff, and we can go get a copy of any one of these tunes and hear it again. Why can't we make music that makes us *feel* that way again?

In the rush to advance the art, have we lost the art of making music that gives us that rush?

To those of you who doubt that these tunes actually are good, as opposed to just making one feel good because of associations and memories, I present the following information: right now, in Japan, one of the hottest things going is old stuff, served up live and raw. No, not dangerous sushi, but good old American rock and roll from the '60s. Many nightclub venues feature American '50s and '60s rock exclusively. The groups treat these songs as most covers are treated, with every effort to sound as close to the original as possible. They pack the rooms every night.

Now as we all know, the '50s were not particularly wonderful in Japan. It was still rebuilding after the war, and its relationship with America had not been going well. Add to that the fact that the current audience for this stuff is an average age of 17, and we can pretty much rule out nostalgia. But we can't rule out the phenomenon. It is there and it is hot.

Back in the USA, there is also a strong market in the revival and re-release of these old tunes. Take it from one who rebuilds the most damaged of these, money is spent on them by the labels. There is at least one successful label that releases *only* these tunes. Most of the major labels are involved in some way. There are more and more oldies-only stations on the air. Wolfman Jack is back, and it's *not* because of that smooth, FM DJ voice.

Why should this stuff be popular at all to new audiences when they have our newest techno offerings available in every conceivable flavor? Perhaps they really *aren't* available in *every* conceivable flavor.

Good tunes are good tunes. Technology is technology. So the question is, with all our advancement, why can't we use some of our cool technology to make new good tunes? The kind that you *feel*. ■

---

*St. Croix likes those tunes. He spends all his work time making this cold techno perfection that he is complaining about. He spends all his other time listening to the past.*

by Mel Lambert

# MIXING FOR THE VISUAL MEDIA

**I**n the increasingly complex world of audio production, the conventional wisdom at a growing number of facilities around the country is that the road to fame and fortune lies in diversification. Besides ensuring that you and your staff enjoy a diverse assortment of audio sessions, and a more interesting bookings schedule,

owners, while recording and production engineers are looking to gain experience with a wider palette of sound projects. "We'll just add a U-Matic deck, a time code synchronization system, a large-screen video monitor, some effects CDs, and off we'll plunge into the heady land of audio-for-video sweetening. And if engineers brush

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## Technical chops alone probably aren't going to get you too far down that "Golden Path to Fame and Fortune."

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developing an expertise in more than just music recording might allow you the luxury of keeping open some viable options.

(Just in case, for example, the record industry and its watchdogs decide to place a high-speed projectile in another of their appendages, Copy Code and the pending anti-piracy legislation might just turn out to be the proverbial straw that snaps that dromedary's vertebrae. More than a few consumers are perplexed at the high cost of commercial releases, let alone the internal squabbling going on within the record biz, which, if it continues for much longer, could put the shrinking consumer dollar into the pockets of another sector of the megabuck leisure industry—maybe 3-D holographic television will catch our attention?)

Meanwhile... "Let's try to attract a wider client base," argue the facility

owners, while recording and production engineers are looking to gain experience with a wider palette of sound projects. "We'll just add a U-Matic deck, a time code synchronization system, a large-screen video monitor, some effects CDs, and off we'll plunge into the heady land of audio-for-video sweetening. And if engineers brush up on their techniques for recording dialog and processing music for replay over miniature TV speakers in a noisy living room, we should be off and running." All of which is fine and dandy, except for one fundamental flaw in the logic: facility owners and engineers get to work every day with *people*, not just technology.

Sure, any self-respecting engineer can easily master the intricacies of a time code synchronizer that is keeping the video workprint in tight frame lock, while recording a multi-voice synthesizer bed and overdubs to the digital multi-track, and then mixing to a mono-compatible, TV-style stereo mix. Yes, you can set up the monitors in your control room so the array reasonably mimics the sonic perspective in a film re-recording stage, as you make that 8-channel music pre-mix of a heavy metal score for George Lucas'

latest blockbuster. You can even dig up the studio floor, lay some gravel along with other interesting surfaces, and then adapt/modify/upgrade your existing digital synthesizer system to handle Foley sessions locked to video.

But—and it's a big "but"—without an appreciation of the people skills necessary to handle the running of such sessions, technical chops alone probably aren't going to get you too far down that "Golden Path to Fame and Fortune."

Not for one minute would I suggest that audio-for-video clients are particularly "difficult" types to deal with. It's more a matter of coming to terms with *their* particular *raison d'être* and, just as important, adjusting to their set of priorities.

Network television, cable, motion pictures and industrial A-V all have one important aspect in common: the picture is King. Sure, we audio professionals know the soundtrack is just as important as the visuals and, in some blockbuster films, has helped establish a level of excitement and adrenaline in the movie theater that has enhanced their commercial success. But Hollywood and the networks don't necessarily see it that way.

I'd be the first to admit that a growing number of video and film producers appreciate the symbiotic relationship that a well-crafted soundtrack can establish with the visuals, but their primary interest will always be in the picture editing, continuity and dramatic action; sound—aside from dialog—will, by the very nature of the medium, be of secondary importance. It's a fact of life, as much as we may wish it were otherwise.

So, if we understand that we will never get their undivided attention, how best to ply our trade in the studio? One tactic that is particularly useful is to quickly establish, through direct questioning if necessary, what the visuals are designed to achieve. Regardless of whether you are mixing audio for a commercial, industrial or sales presentation, comedy special, or music for a theatrical release, you need to make sure you are aware of the "mood" and atmosphere the director is attempting to put across with the flickering images. All too often,

without that one vital piece of information, you can easily end up working at cross purposes.

I don't think I am overestimating the need for everybody involved with audio-for-film and -video to be fully conversant with the intricacies of the project—particularly those individuals, like yourself, beneath whose hands the audio signals are flowing. Even if you are simply involved with remixing a collection of previously recorded dialog, music and effects

tracks, how those myriad elements play against the picture can make or break the way in which the director perceives the audio blending with or working against his carefully crafted visuals.

Suppose we consider a chase sequence in a weekly network cops and robbers show. The music is a high-energy, synthesizer-based track. There are several Foley and effects elements (mainly footfalls, tire squeals and gun shots), while the production dialog

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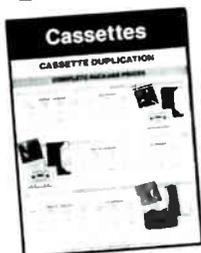
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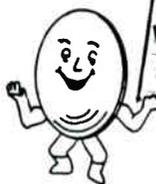
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## JUXTAPOSITIONS

only needs a minimum of mid-range EQ to overcome the boom and chestiness inherent with the use of concealed lavalier radio mics.

Without being briefed as to the tone and mood that a particular scene is supposed to engender—whether the director plans to reveal a vital clue here, or simply build anticipation, or maybe point out a connection between cast members that will be necessary later in the proceedings—we may run the risk of having the effects sound too hot in the mix, or missing out on the fact that the dialog tracks *have* to be clear over the music and production sounds.

Also of vital importance is a clear understanding of the final medium over which the mix will be heard. Although all of us are aware of the differences between record mixes destined for album play, radio broadcast and club/disco use, bear in mind that stereo mixes for TV are radically different from those intended for theatrical release. Not only do we need to give some consideration to pre-processing a stereo television mix (if only to anticipate how multi-band compression and peak limiting will alter the tonal balance of the composite elements), we need to bear in mind the far-from-optimum loudspeaker separation of domestic receivers.

With such a narrow subtended angle at the listener's position, it is very difficult to ensure a realistic stereo spread (forgetting for a moment the "audiophile" home viewers that run their TV receivers through a properly set up surround-sound system, complete with LCR and surround channel monitors). Add to this the problem of ensuring a reasonable continuity of aural perspective against camera movements and point-of-view changes, and we begin to understand some of the compromises.

Maybe that's why most post-production engineers tend to compromise in their balances by using stereo for a background music "wash," and occasionally for attention-grabbing effects and sonic textures. (Which, when we really get down to it, is how the majority of motion picture soundtracks are recorded; as has been pointed out in these pages before, use of Dolby Stereo surround-sound techniques are not without their own technical compro-

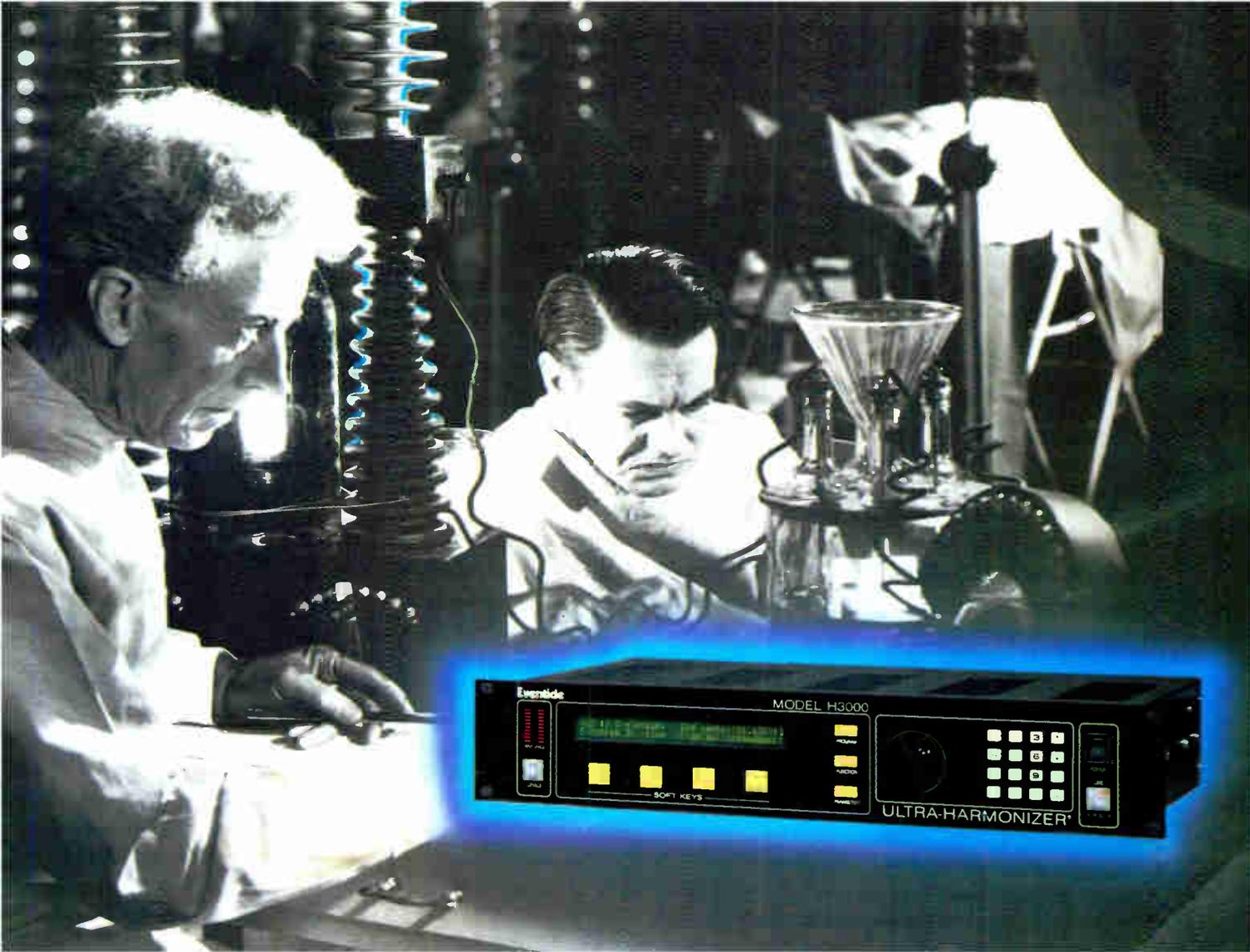
mises inherent in any well-designed 4:2:4 matrix-encoding system.)

The bottom line is that record label dates usually involve a longer period of time on a studio-based project with known technical parameters (but unknown artistic factors), a restricted number of people and a more controlled creative environment (if only to try and reduce the number of external artistic influences). Contrast this measured and defined environment with what we are more likely to encounter during a sweetening session. Besides the director, production assistants and music editor, we may have a laugh man and the talent standing by for a quick voice-over or dialog touch-up, not to mention our own machine-room assistants who look after the various effects carts and compact disc libraries, 4-track music reels, multi-track stems and other hardware.

If you'll pardon the pun, all of these individuals will be looking at the visuals with different eyes and, if the person in the hot seat is really on top of his or her craft, listening with less trained ears than most music recording engineers.

With the coming revolution in digital workstations and hybrid random-access editing systems intended to import and manipulate edit decision lists generated by off-line video editing systems, more and more of us are going to find ourselves actively involved with the process of mixing audio for various species of pictures. It behooves us all to begin to speak the language of the new generation; or at the very least to brush up on our dialects so we can be ready to lend our not inconsiderable experience with sound for picture. The names and nature of the process may be changing, but the manipulation of audio is a skill that any self-respecting audio engineer can adapt to—given at least five minutes notice! ■

*Mel Lambert has been intimately involved with professional audio on both sides of the Atlantic for the past decade, and served most recently as editor of Recording Engineer/Producer. He is currently the president of Media&Marketing, a consultancy service for the pro audio industry, and is willing to listen to anyone who can come up with a better sounding, one-word alternative to the generic expression "digital audio workstation."*



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# L L LIVES

LENNON

## BEATLE'S MUSIC SURVIVES TIME AND FORMATS FOR NEW MOVIE BIO

by Dan Daley

PHOTO: NISHI FUMIYA SHIMURU



being unloaded from an ambulance into a Manhattan emergency room. From the brash and heady days of The Beatles, through the unmelodious bitterness of his later recordings, to his untimely .22 caliber death nearly eight years ago, Lennon's has been a life that demands examination, not trivialization.

One of Lennon's pencil-sketch self-portraits adorns the letterhead of the production company headed by executive producer David Wolper and producer/director Andrew Solt. Lennon also left his own soundtrack, of course, a discography that spans and chronicles a generation, its aspirations, its sounds and its technology.

Engineer Rob Stevens was an appropriate choice to act as musical curator of Lennon's dusty tape museum for the movie; Stevens had mixed Lennon's *Menlove Avenue* LP

That *Imagine John Lennon* will be a documentary rather than a more traditional Hollywood-esque recounting of his life is appropriate. The last images he left were those shaky news videotapes of him

and his *Live In NYC* record and home video, as well as Yoko Ono's *Starpeace*. The robust, thinly bearded engineer/producer admits to having little patience with the more arcane technical aspects of recording, but his healthy respect for both the capabilities of his own ears and for Lennon's legacy prepared him for mixing the 11 post-Beatles songs that accompany *Imagine John Lennon*.

Staying true to the original recordings was a priority. "It wasn't really up to me to augment what was there," says Stevens. "It was a matter of taking the equipment I have and re-creating what had been. To a degree, I was a technological interpreter. You had to bring an acceptance of what was there to this project, because what was already there was clearly legendary. You would overlook small recording errors when you placed it in this context. This project was historical in nature, not pop. It had to be respected in that way."

Lennon recorded in various formats as technology, during the period of his solo career, went from the 4-track decks of *Sgt. Pepper* vintage to 8-track to 16. So it's with an irony that Lennon

The family at work on *Double Fantasy*, 1980. Inset: On stage in New York, 1972.



ABOVE: INSET PHOTO: BOB GREEN

PHOTO: KISHIN SHINDOYAMA

himself would have appreciated that, after his tracks were bumped to and mixed on 24- and 32-track digital machines, their final form would be 6-track stereo.

The 6-track mixes done by Stevens were recorded on the same tape reels that the original tracks had been transferred to (see illustrations). "On digital there's no cross-talk, so we figured, why not do that," he says. The Dolby approach resulted in a spread of information that made reliance on his ears critical: "You have to disregard where your pan pots are and just go with what you're hearing."

The Dolby DS-4 6-track Monitor Box system for 70mm film (expected to premiere at Manhattan's cavernous Ziegfeld Theater), as described by Dolby rep Al Matano, is arranged with five channels set up behind the screen with left, right and center; a pair of



PHOTO: MICHAEL MCCARTNEY

Above: The lads during their pre-Beatlemania club days. Left: Meet the press, 1964.

## 1. EXPERIENCE

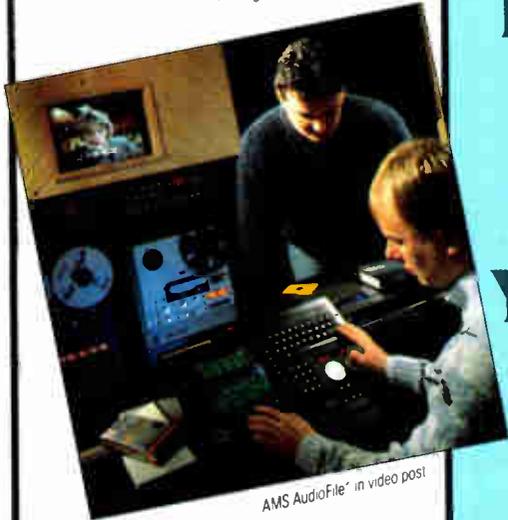
AMS AudioFile is the most successful disc based linear editor for the audio engineer. Introduced in 1985, both experience of owners and AMS's R & D have continued to shape AudioFile into the professional's workhorse of today.

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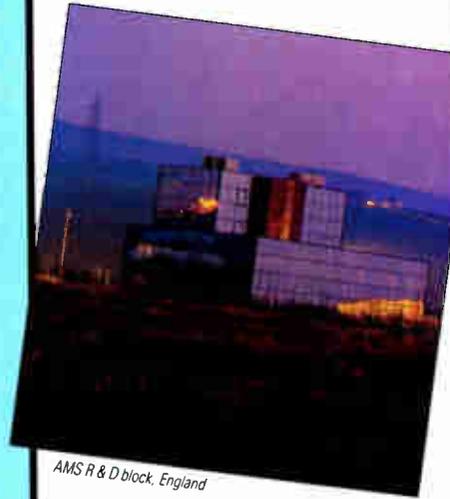
Whilst certain systems offer cumbersome or expensive back-up, AMS AudioFile continues to successfully use inexpensive digital audio tape recorders.

## 7. LOGIC 1

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## 8. DIGITAL AUDIO NETWORKING

Whilst other audio disc manufacturers are working hard to try and incorporate as many features in their systems as AMS AudioFile



AMS R & D block, England

– AMS are introducing networking.

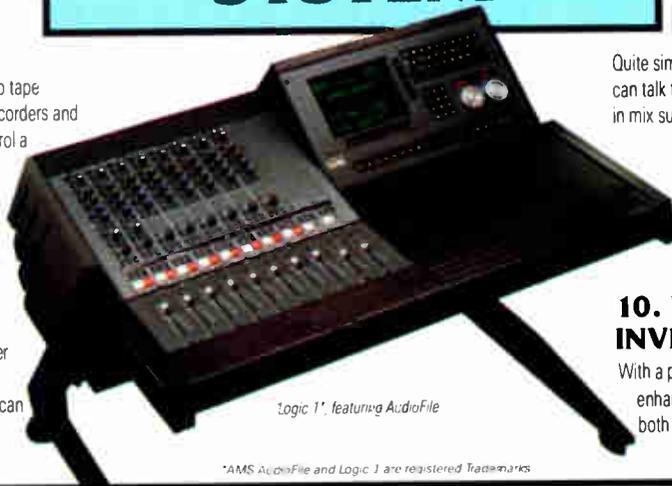
Quite simply, several AudioFiles in edit, dub or track-lay suites can talk to each other as well as to Logic 1's integral AudioFiles in mix suites.

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left-extra and right-extra channels, which contain information between right/left and center, also are subwoofer channels. Finally, the sixth channel for speakers on the theater walls is the "surround channel," which has a slightly delayed mono signal. According to the spec sheet that Stevens worked from, channel assignments for the movie were instruments on left, right and center; background vocals and lead vocal reverb left and right on tracks four and six, respectively; and dry lead vocals on track five. Songs in the film include "How," "Jealous Guy," "Oh Yoko," "Woman," "Starting Over," "Come Together" and "Imagine."

"Some of the tapes were 16-track, some were 8-track," recalls Stevens. "'Imagine' was a trip because there were two different versions on 8-track. One had the basic tracks and basic vocals. But when [Lennon and producer Phil Spector] went to put the strings on, instead of going to a 16-track machine, they did a 2-track sub-mix of the song, transferred that onto another piece of 8-track tape, then recorded the strings onto the other six tracks. But the movie mixes needed independent vocal, kick and snare tracks, so I went back to the original 8-track and flew the strings onto an empty track." Stevens notes that the recording was done in the days before sync was used; as a result, it took four or five passes to get the strings on the tape to compensate for the lag in machines.

The only major problem in the project cropped up when the track of Lennon's version of the Ben E. King classic "Stand By Me" was being readied. A long purgatory in storage had wreaked damage to the master—a sludge-like sap oozed from the tape, covering tape heads and rollers, like something that Steve McQueen might have battled in a long-forgotten horror film.

"I knew about the conditions of these tapes since 1985," Stevens says. "We were mixing *Menlove Avenue*—which was originally titled 'Rock & Roll II' as a sequel to Lennon's *Rock & Roll* album—which was made up from other tunes from the Lennon and Spector sessions. I put them up at Right Track Studios and couldn't get them to play for more than a few seconds at a time. At that point, no one wanted to do anything about the problem or the tracks since they decided



PHOTO: DAVID NUTTER/PHOTO TRENDS



PHOTO: CYRIL MANTLAND/CAVEIRA PRESS

**Above: John and Yoko after their marriage in Gibraltar. Left: Yoko, first wife Cynthia and children Julian (L) and Sean.**

not to use any alternate takes for that record, and they just sat there in storage.

"Earlier this year, when they wanted to use a mix of 'Stand By Me' for the movie, instead of using the 2-track master they had, they wanted to go back to the multi-track. We had to transfer it then because of the goop problem."

The "goop" problem was solved through a series of coincidences that started several years ago in some nameless Caribbean reggae recording studio and ended up in the lap of Lou Gonzalez McLean, president of Quad Recording in Manhattan. One of the employees of Time Capsule, a New York studio time broker, led Stevens to McLean. "I didn't believe him when Rob told me over the phone that the tape would slow down within 15 sec-

onds," says McLean, a tall, thin gent with a passion for country music. "Every tape guide from start to finish was covered with this brown goop. It was all over the guides and heads. No wonder it wouldn't run. It wasn't just shedding, which I'm used to; it was molasses. The adhesive emulsion that bonds the oxide to the tape was coming apart and going onto the heads."

A copy of the 16-track, 2-inch tape had been made at Sound Works, where mixing was done by playing the track at 15-second intervals—about as long as it would run at one time—then splicing. "They wound up with a copy with 30 or 40 splices in it," says McLean. "And as good as anybody can be splicing tape, when you have that many splices, you wind up with one or two wrong spots."

McLean's solution was derived from

his reggae experiences. "This is the problem that we always get from reggae tapes that come from the islands," he explains. "At one point I was the sound designer on a 1980 musical entitled *Reggae*, and I fell in love with the show and the music. Since I got along well with everyone on the show, soon they were coming to my old, smaller studio [prior to Quad's present location] to do overdubs and mix. They came to me with tapes they had started in the islands—it's like country music, where you have to go to Nashville to get the groove; you have to go to the islands to get the reggae groove—then bring the tapes up here to get a quality mix.

"But they would store tapes in the trunk of a car and take it to the beach with them or whatever. By the time the tapes got up here, they were in sad shape. I was forever making copies of them on fresh tape to work with them. Also, because a roll of tape costs four times as much down there, they have a tendency to reuse tape a lot, so you might face a piece of tape that was already five years old when a new recording was put on it.

"But I found a way to get these

tapes to play. Basically, Studer tape equipment lends itself to playing games. You can fudge the tensions. If you set the tension too loose, you won't get enough tape-to-head contact, and if you set it too high, you'll slow down the machine and wear out your heads faster. The harder you pull the tape across the heads, the faster you accelerate whatever damage has been done to the tape," says McLean.

"But the first thing you have to do is clean the tape. I got an idea from the original 3M digital machine, which had a roll of cloth-like substance that runs on its own little motor; the tape has to pass it before it gets to the heads. It keeps the dust off the heads. So I built a guide out of a microphone stand, put cloth on it and ran the tape for a while. Doing that, in combination with properly resetting the tension to just let it pull the tape across the heads, you get results." McLean adds that he needed to clean the heads extensively after each pass. "I don't think what I'm doing is terribly innovative. It just works," he says.

Following the cleaning process on the Ampex 406 tape, which took about an hour, the track was mixed at Quad.

The remaining ten tracks were remixed at Sound Works onto two machines: a 24-track digital Sony for Capitol Record's own archival purposes, and a 32-track digital Mitsubishi for the 6-track movie mixes.

The remixing seemed to resist additions of contemporary technology, which was just fine with Stevens, who, rather than look for a consistency to the overall sound, tried to re-create the original sounds from each period of Lennon's recording life. Stevens did try adding triggered samples to the drums to fatten the sound, but he says, "It sounded wrong to hear a modern snare drum on something recorded in 1974. It just doesn't make sense and the overall sound was skewed. We were looking to represent the man's life, which spanned several time periods, so you don't want it to sound like 1988, you want it to sound like the time it was created in."

Stevens brought in CDs of Lennon's records to get a sense of what made the originals as magical as they were. He feels the result is true to those records, but cleaner and a bit bigger sounding. Other than the few drum samples used—which were printed

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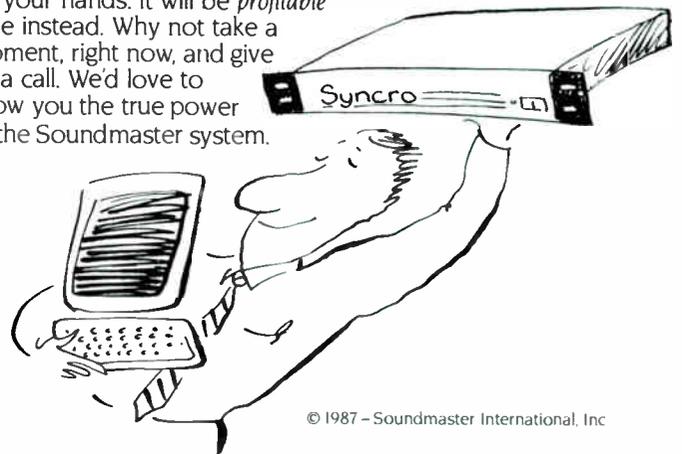
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onto the 32-track deck—no other re-recording took place. Actually, some of Lennon's own music was recorded onto 32-track technology: two 16-tracks hooked together.

EQ and effects were used with the original recordings in mind and close at hand. Digital delays replaced the tape slap that was such a large part of Lennon's sound. Stevens says Lennon also used an Eventide Harmonizer a lot when it first became available.

The original track sheets were straight-ahead in terms of information, Stevens recalls. The only curve ball came on the "Imagine" track. "It starts

off with a mono piano in the middle," says Stevens. "After a few bars, the piano pans to the right side and another piano comes in and you have two pianos hitting together. Listening to the CDs was helpful, because I saw two pianos on the multi-track sheet and they didn't seem to sync up. Then, by subtle use of echo, you get the two piano tracks to fuse into a single piano. You can hear the flammings if you listen really closely, but you'd never notice it on the radio.

"The drums on 'Imagine' had a delay running through the whole drum kit that was in the background that I

didn't put there. But I didn't really listen just for specific EQs. I listened for total orientation: when instruments came in and when they came out. 'Stand By Me' had four different guitar tracks, and I didn't want to have the wrong solos up. That's where the CDs really came in."

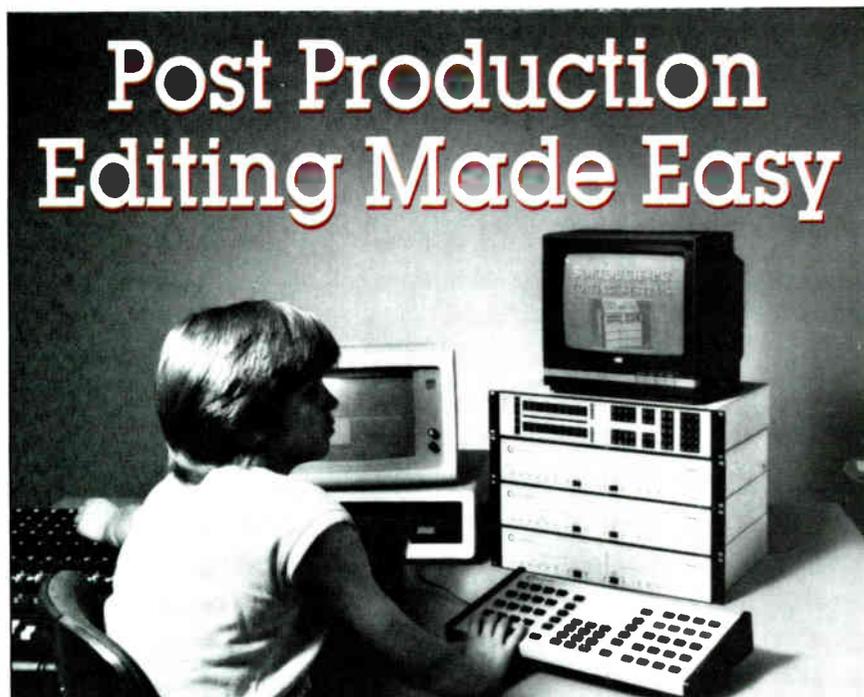
In retrospect, Stevens regards the experience as both curious and challenging. "What was interesting was that it spanned Lennon's career," he recalls. "I was fascinated by the fact that although 16-track was available, Lennon and Spector chose to do a 2-track submix and went 8-track to 8-track. On the *Imagine* album, they didn't seem to care too much what the snare drum sounded like, at least in the same terms we do these days. The snare drum was there to fulfill a musical purpose, but clearly that album was a song album. In those days, Lennon was writing songs, and the people at Sound Works said they hadn't had a project like this in a long time, where the focus was on the music, not on what the snare drum sounded like. In this case we were listening to an artist from a different era, in a sense. And I like the fact that artists who write from the heart are getting deals again."

Yoko Ono was not present for any of the mixes. "I couldn't see her wanting to be there to remix something she had mixed with him," Stevens says. "There were times when we mixed *Menlove Avenue* that she would come down, and I sensed it would be hard for her to listen because she would feel then what she felt [when the record was originally recorded with John], and feel it a lot."

The track "How Do You Sleep" ended up as a composite done from four different Lennon takes, including one from a videotape of a Lennon performance. Stevens remixed all the takes and used the pieces to build one complete take for the film.

Ultimately, Stevens is satisfied that Lennon's legacy is intact for the movie, and that the artist's original intentions have been faithfully preserved. "It would take a pretty large ego to say I can mix this stuff better than Lennon and Spector," he says. "They're not going to be doing dance remixes of this stuff. These are not films you're going to colorize." ■

Dan Daley is a Mix contributing editor.



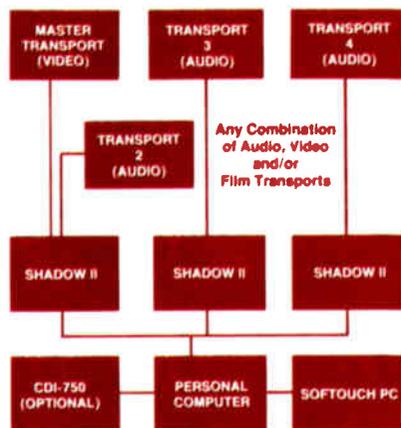
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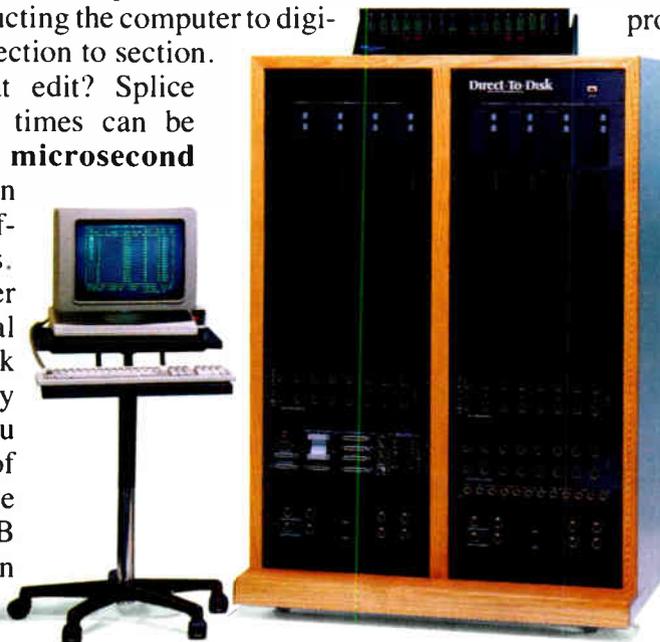
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# CORPORATE MUSIC VIDEO



## Novelty or New Talking Head?

by Joan Tortorici Ruppert

As business and industrial video is dragged kicking and screaming into the '80s, in-house producers have, inevitably, begun dabbling with music videos as an alternative to talking heads framed by potted palms. While music video as a concept is hardly news to the world in general, it's downright revolutionary in the cloistered boardrooms of corporate America.

The productions range from clumsy lip-sync by embarrassed branch managers of Acme Widget, to expertly produced, award-winning aural and visual gems. To discover what makes the difference, *Mix* asked video producers to recount their experiences and predict the future of music video created by and for the business world.

When that business is communicating with employees of McDonald's restaurants, it's safe to assume that music videos have more than a shadow of a chance for success. "We figured that our audience was going home after work and watching music videos on television," says Tom Bowman of McDonald's Creative Services Television, who, along with co-producer/director Dave Curley, created groundbreaking pieces for the fast food chain starting five years ago. "Clean It" was a take-off on the Michael Jackson hit, "Beat It," reminding employees to keep the restaurants up to shiny specs, and "The Best" was an original music piece that gently reinforced concepts of personal grooming.

"I don't remember if we did any research or not, or if we tested them,"

says the soft-spoken Bowman from his suburban Chicago office. "At that time the average age of our audience was pretty young. We just figured that a music video might be more interesting than sitting down and watching some guy in a suit say, 'Remember now, you should clean the store.'"

The topics for those first two were chosen after Bowman and Curley met with McDonald's operations people and made a laundry list of training topics that were both high priority and conducive to music. "Clean It" and "The Best" were at the top of a list of 12. And although those initial two went on to win Gold Awards from the International Film and Television Festival of New York, the remaining ten were never produced. "They're not inexpensive to do," explains Bowman. "From an operations standpoint, there were a lot more pressing, hard-core training programs we had to do on an ongoing basis." The music videos, he says, were more appropriate to reinforce training messages that had already been delivered by more traditional means. Since then, he and Curley have produced four more music videos, mostly for McDonald's marketing department, which adds up to a grand total of six out of the 500 video programs the department has produced in five years.

That's not to say that the remainder of McDonald's training videos are patently dull. A recent tape on the care and cleaning of deep fryers was based on a deadly accurate send-off of the Gene Siskel and Roger Ebert classic movie review television program, renamed "At The Fryers." Through the use of film clips (scenes of an employee cleaning the fryer apparatus) and the ensuing arguments, the training message was as effective as it was fun.

Above: On the set of Merrill Lynch's "Remember NYSE Rule 387."

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**Lighthouse Production's Director Ron McGregor (back to camera) shows Carson International restaurant employees the "moves" he wants them to make during the taping of a scene for "Take 1," an employee-motivational music video shot at O'Hare Airport.**

**T**he real Gene Siskel was on hand at the annual conference of the International Television Association (ITVA) in Las Vegas this April. His mission was to critique a selection of programs that had won top ITVA awards in the prior year's video competition. He promised to apply the strictest, most professional standards, and a few programs suffered horribly.

He did, however, heap praise on one particular program, gushingly pronouncing it "the 'Last Emperor' of corporate television." Siskel's thumbs-up went to a clever, expertly crafted remake of the Beach Boys' "Fun, Fun, Fun." Produced in 1986 by the Merrill Lynch Video Network, it features stock brokers instead of surfer girls, who lose their business, not their daddy's T-Birds, after ignoring a new stock exchange rule. Judy Noble, marketing manager for the New York City-based Network, explains that when new legislation was passed, the brokers "were being inundated with a lot of information, all of it important. The people in

charge of getting this information out wanted to somehow jar the brokers, to wake them up. We [the Network] came up with the idea for a music video, and the client said 'terrific.'"

It was the first time they had undertaken a music video project, and they put to good use the theatrical backgrounds of various department members, including Noble, who choreographed with professional agility. "We went with new lyrics to an existing melody due to time and money constraints. To create a new song from scratch, with a really good hook, takes a lot of both. Also, we liked the disparate concept of 'Fun, Fun, Fun' against the visuals of the brokers who were clearly in trouble." Rather than using actual brokers, professional talent was employed as the cast, and a New York music production house recorded the new lyrics.

"The objective was not to send any new information; it was to highlight information that they already had," explains Noble. "It did exactly what the

title said: 'Remember NYSE Rule 387.' Then, someplace else, the brokers had to look up Rule 387 to find out what it is."

The client was delighted with the finished piece, which went on to win not only an ITVA Golden Reel, but also top awards from the Intercom/Chicago International Film Festival, the Film and TV Festival of New York, three Monitor Awards, third place in the JVC Professional Video Competition and a Gold Camera in the U.S. Industrial Film Festival. "The program was not done cheaply. There was great attention to detail. Still, all those awards are amazing to me, because it's such a simple program," laughs Noble. "Which says a lot, doesn't it?"

The Merrill Lynch Video Network is a bustling department that produces weekly live programming distributed via 482 offices in the U.S. and Canada equipped with satellite downlinks. But in spite of its first and only music video's success, the Network has not done another since. Noble says that once the tape was in the field, it met with mixed reviews.

"Many people loved it, but others said, 'Why are you wasting corporate money on this?' But you're always going to have people like that," she says, identifying a common burden of corporate television departments in every industry. "I'm sure there are people who think we're wasting company money by having television at all. They can't understand that you help them bring in money. Because we don't directly create revenue, we shouldn't exist. Especially in this environment."

**W**hen it comes to the business of satisfying corporate clients, working for an outside production company as opposed to an in-house department reveals many more similarities than differences. True, Ron McGregor, producer/director at Lighthouse Productions, had a music video project virtually dropped into his lap by his client's advertising agency. But after that, his challenges were very much like those of his in-house counterparts.

The project was to be a motivational music video for the employees of Carson International, a company that has the enormous task of providing restaurant and food service to travelers at Chicago's O'Hare International Airport. The stars of the music video are Carson International employees who dance and lip-sync to an original track

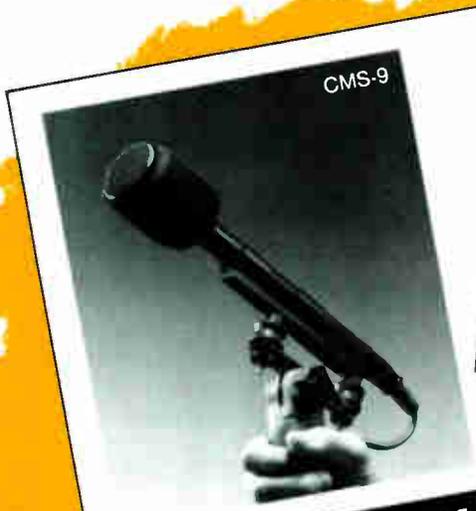
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created by the agency (GAMS Chicago) and Lighthouse's own composer, Dan Reifsnnyder.

But instead of making utter fools of themselves and their company (which is the sad result of most of these employee things), the Carson employees are smooth, believable, energetic and thoroughly charming.

"The major response we got was astonishment that all those people on screen were employees," says McGregor, who auditioned, rehearsed and directed the small army of Carsonites under an oppressive shooting schedule. When "Do It On The First Take, Do It Right" was completed, it took awards in the International Film Festival and the ITVA Chicago Videofest, and, became a potent selling tool for other clients who wanted proof that an employee-based music video could really work.

"It's a matter of clients starting to think in terms of something different," says McGregor. "It takes time for them to make that switch. I think people are finally starting to accept the fact that you have to provide enough entertainment value to keep the audience's attention."

McGregor admits that even the most excited client will occasionally develop a mysterious case of cold feet when it comes to actually giving the green light to something off the beaten track. Whether the stumbling block is inappropriate subject matter or insufficient budget, music videos are clearly not destined to make up the largest slice of the production pie.

McGregor remains optimistic. "I'd really like to see more music videos, and I think they will lead to other directions. One thing they do really well is get people away from thinking that you always have to be verbal and literal when you tell your story. I think everyone misjudges the viewers in terms of what they can comprehend," he says. "I don't think the idea of doing music video is necessarily passe yet."

**A**nd then there are producers who wish that corporate music videos, as we know them, would die a quick and quiet death. "I'm not a big fan of them," says Jim Pasta, producer at AGS&R Communications. "I don't think there was that much potential for them in the first place. They're interesting, they're fun, but I just think they've been beaten to death. It's kind of like what has happened now with so many

ad agencies using '60s music for television commercials and ruining songs for us. It got so overused that now we can't think of a beautiful song without thinking of a product."

If the concept of corporate music videos is inherently flawed, why did they catch on in the first place? "Because they exposed people to a new form. And they were fun to work on," he admits, "because they were a lot of people's first exposure to working with music. Before this, a lot of pro-

**... I think people are finally starting to accept the fact that you have to provide enough entertainment value to keep the audience's attention."**

ducers had simply taken library music and used 20 seconds at the beginning, faded it down and then out at the end. With a music video, they suddenly could have music all the way through. A lot of video departments in corporate settings don't have audio studios, and they don't have the budgets to go out for custom music. So naturally a lot of people were excited about the opportunity to really use a song."

That opportunity, Pasta explains, was used so poorly so often that it evolved into just another production cliché. "It's gotten to the point now that it's like the new talking head," he says. "Just a conventional gimmick you can use when nothing else comes to mind creatively. The ones I've seen have been too contrived, too much of an easy out. Unless you take the time and money to do it right [he cites Ed Gilbert at Quaker Oats as one producer who does] and customize it to fit your company, it's not that interesting to people. The interesting part is seeing employee faces. But that's about it."

Let's you assume that Pasta is some music-hating stuffed shirt, you should know that the creative use of music, both existing and custom, is a large part of what he's built his reputation on for nearly a decade. He's used songs from Jan Hammer, Pat Metheny,

Shadowfax and many others (with permission, of course) as the backbone of a wide variety of corporate video and multi-image projects, and frequently looks to local Chicago composers and arrangers for original scores. He is also one of a group of people who founded the thriving Chicago Music Video Competition five years ago to be "a forum for people, not only in video, but in all parts of the arts community in Chicago to have an outlet for their work."

Back in the boardroom, he says, music continues to play a crucial role. "People in decision-making positions today are a lot different from people in decision-making positions seven years ago. Seven years ago, you had the 50-year-old training salesman who wanted information. Now you're getting baby boomers who are more open to music, who were brought up under a more image-oriented, public relations mindset. These are the people who are looking for more of a feel in presenting business communications than specific information. You still have the information that has to be put across. But you can put it across in a more emotional way. And that is one of the great things about music. It is a very emotional piece of the entire project. It puts you in a receptive mood."

Emotion, he says, is not a result of "putting on a Huey Lewis record and having people jump around."

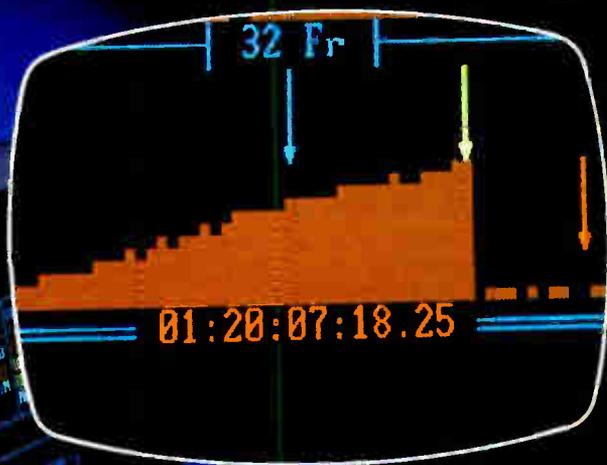
**T**he elements of a successful corporate music video, according to our survey, include a simple message, a good song and great performances by talent, whether that talent is professional or supplied by employees. If that formula sounds vaguely familiar, it's because *any* communication—in any medium—must be simply conceived and expertly crafted in order to have a lasting, positive impact.

Let's face it—chances are that corporate music videos will go the natural route of most trends. But if in the future one client in one corporation remains slightly more open to new ideas, and if one in-house video producer goes on to treat his soundtracks like something more than an afterthought, progress has been made. ■

*Joan Tortorici Ruppert is a video writer/producer/director at Amoco Corporation in Chicago. Additionally, she's written freelance articles for music and television industry magazines over the last 12 years.*

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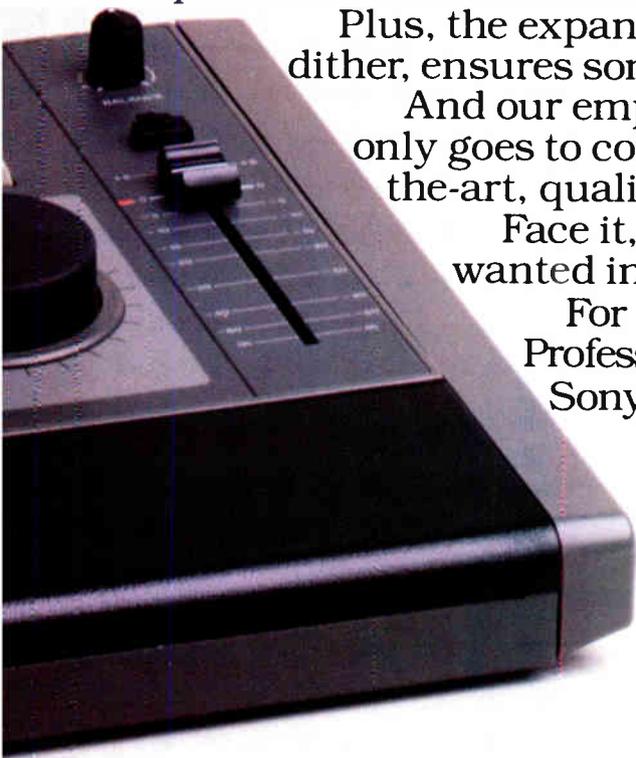
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Digital dialog recording at Transcom Media in NYC. The computer terminal (right) is the controller for the CompuSonic system.

PHOTO: ARTHUR A. MURPHY

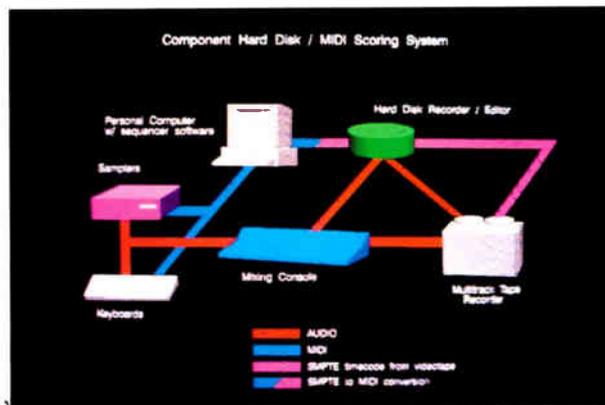
# (TELE) VISUALIZING BETTER SOUND

Friday night, just got back from Crazy Freddy's... spent the better part of a paycheck on one of those hi-fi VCRs with a "multi-channel television sound receiver." Raced home, connected the old TV set to the VCR, hooked the VCR to the stereo amp, then booted up the whole fandangle. Actually listened to Johnny's monologue, but just to hear Ed chortling in the left speaker and Doc's giggles in the right. Sounded like the whole audience was sitting right there on the couch. And in the morning, all those space-age cartoon adventurers will be zapping around in great-sounding stereo, with all those rockin' commercials making our little den sound like the inside of a beat box.

We are reaping the benefits of audio's most recent harvest. A new generation of products is out there, developed within the audio and recording communities, making it easier for TV producers to turn out programs with great sound. One

by Linda Jacobson

## DIGITAL AUDIO TECHNOLOGY MEETS STEREO TV



pioneering program, *The Tonight Show*, uses Dolby surround technology and strategic stereo miking, while another, *Saturday Night Live*, uses a CompuSonic DSP-2002 hard disk-based, digital audio recorder for instant access to effects and ambience. Other TV shows, such as Barbara Walters and Liza Minnelli specials, and programs starring Jim Hensen's Muppets, are posted on an AMS AudioFile hard disk system.

NBC, PBS and MTV, along with pay cable systems such as HBO, have set new standards for TV audio. The rest of the broadcasters are catching up (the last holdout, CBS, goes stereo this season). Now that most commercials sound better than most TV shows, the network execs yep for better audio. They don't care about things like "enhanced spatial perception" or "non-destructive editing" or "no

**Here's the newest way for post houses to handle music scoring for TV.**

generational loss"; they just want aural integrity. And the TV world is using old techniques in new ways and new techniques in old ways to achieve it.

Not only producers are improving TV sound. Consumers started doing it way before the networks. Since 1983, over a million households have purchased Dolby's 4-channel SDU4 Dolby surround decoder device. (Dolby, by the way, makes noise reduction cards for 1-inch VTRs, and their Spectral Recording cards are also being used with VTRs to improve the audio signal to near-digital quality.) The Dolby surround system conveys spatial information, enhancing mood or effect, and the decoder lets Dolby Stereo-ized movie soundtracks—broadcast, on videodisc or taped—be experienced at home.

Today Dolby's on a mission to get surround equipment into the hands of video production people. Already, SDU4 decoders are in active production duty ("They've been shipped in small numbers"), and six SEU4 encoder units are in beta-test. "To do a surround mix, they must be able to monitor what they're doing, so that means installing the SDU4 surround decoder, with the extra speakers and amps," says Dolby product manager Roger Dressler. "And then, it's possible to mix very adequately without any encoding equipment. For instance, *The Tonight Show* mixes music in stereo, mixes dialog to center, occasionally mixes someone to left or right, and that works out perfectly well with the current Dolby surround system.

"Later on, if they want to do purposely mixed surround encoding and really take advantage of what the medium offers, they need an encoder, too," Dressler continues. "We intend to lease our SEU4 encoder, which takes four channels from your mixing console that you've pre-assigned to left, center, right and surround, formulates them into the 2-channel medium that you broadcast over stereo TV, then the decoder on the other end re-extracts the four channels."

Dressler foresees the day when there will be "various tiers" of surround TV watching: "the regular Dolby Stereo movie shown on TV; the purposefully mixed Dolby surround programming that's been encoded with an SEU4 and monitored on an SDU4 while mixed in the video house;

and compatible material that's mixed in stereo but can be monitored [at home] on the SDU4 to bring out the stereo mixing, like Letterman or Carson or baseball games, or any other show that does some production other than just recording the event." Dolby's licensing will enable other companies to outfit "the living room of the future"; Shure has already debuted its HTS5200 Vector Logic Decoder, which decodes Dolby Stereo encoded on broadcast or cable TV transmissions (or on disc or tape).

**A**lthough "surround" is the word of the day for videophiles, the vid-

eo producers' buzz phrase is "random access of audio material." Video/TV post folks are discovering that random access (plus many other "bennies") can be had from any one of several disk-based, digital audio recording, editing and storage systems, a.k.a. digital audio workstations (DAWs). Using these amazing, software-controlled megadevices (which range in price from \$5,000 to six-digit figures) is a new way to go when integrating cutting-edge audio sources—PCM audio, R-DAT, CD, synthesis and sampling—onto the master hi-fi tracks of various cutting-edge video formats (Beta Hi-

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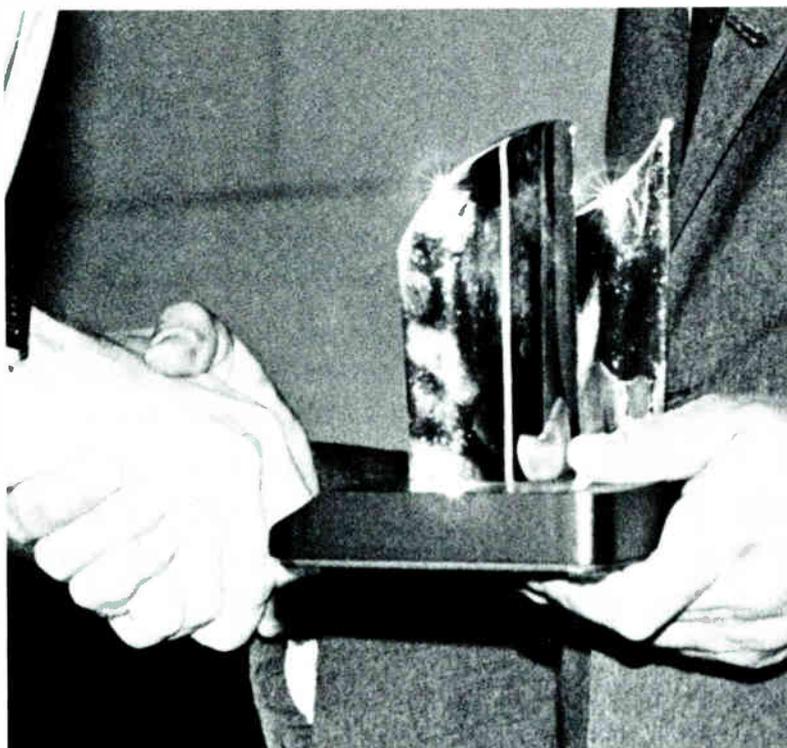
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**T**he publishers of *Mix* invite you to join your fellow professionals and some of the recording industry's biggest names at the Fourth Annual Technical Excellence and Creativity Awards.

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**Awards Ceremony: 8:30 p.m.**

The TEC Awards will be held the first night of the 85th AES Convention. A special highlight of this year's program will be the induction of Les Paul and the late Bob Lefebvre into the newly established TEC Awards Hall of Fame.

Seating for the 1988 TEC Awards will be assigned according to the date tickets are ordered. For ticket information and complete details, call or write Rachel McBeth at Mix Publications, 6400 Hollis Street, Suite 12, Emeryville, CA 94608. Phone: (415) 653-3307; Fax: (415) 653-5142.



# TEC

TECHNICAL EXCELLENCE & CREATIVITY

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*Presented by Mix Magazine*

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Fi. S-VHS, M-II, Beta and U-Matic SP, D-1 and D2). AMS Industries, CompuSonics, Digital Audio Research, Fairlight, For A, Integrated Media Systems, Lexicon, New England Digital and WaveFrame have sunk billions of dollars into brainstorming and actualizing a variety of innovative DAWs, marketing them toward the audio, video post-production and broadcast industries.

The marketing efforts are working — DAWs have been greeted enthusiastically by the traditionally conservative TV market. The reason, according to Peter Roos, formerly of CompuSonics and now with New York's Transcom Media (which posts children's TV shows with the help of two "older"

CompuSonics 2002 systems), is that "in the television programming world, production deadlines are always very tight. You have air dates to deal with. So it's because of the speed you get with disk systems that they broke in [this market]. People who are a little more daring went with disk, with good results. Before, the producer would say, 'I want these cues synched up,' then go away for a day while the work was done. Now we can have our whole set of music cues for a show on the disk, he can stand there, and you can bring the cues up on the computer so he can hear them. Then you just pop them in, in sync, right there. You finish spotting an entire show, with music, within an hour or two. It

**"The big hurdle in marketing toward TV people has been the user interface."**

**—Paul Broucek, Fairlight**

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brings the process of selection hand-in-hand with the actual synchronizing, which is not something true of tape. You get speed without sacrificing quality.

"And for producers," adds Roos, "it is more important now to have a better [sound] track for TV shows because of the whole stereo market that's opened up."

Kevin Dauphinee of Digital Audio Research, whose SoundStation II DAW is being marketed toward TV production facilities (DAR recently delivered its first systems) agrees that speed, not digital-quality audio, is why the new systems are making waves in TV-land. "The producer can play back different sounds in a heartbeat and determine which one's going to sit better with the viewers. You can cut things as fast as you can listen to them, which you can't do with tape."

### Se Habla Video

Video producers do *not* want to learn a new language or new way of working. That's why various DAW developers have incorporated familiar topography into the more complex, fully integrated superboxes (which attract

the type of TV producers, says Compu-Sonics marketing VP Bob Kearns, "who look at [the system] to do everything: to get them up in the morning, feed them during the day and put them to bed at night").

"New technology should be easier to use [than older technology]," states Michael Guthrie, systems engineering manager for Solid State Logic. SSL's 01 Digital Production Center is designed so "anybody who's done [analog] audio work can sit down and in ten or 15 minutes is doing useful stuff," says Guthrie. "The control surface of the 01 is very conventional. The analogy is three 2-track machines, an 8-input mixer, a splicing box, a razor blade and a tape library. The 01's left side looks like a fairly ordinary 8-input mixer, except when you use it, you process in 24 bits. The right-hand side of the machine is an edit system, part of which is the equivalent of three stereo tape machines. Other than the fact that you don't pick up a razor blade, you use it the same way as you use 2-track machines. The real power of digital will come in doing old things in a better way, but not necessarily a totally different way."

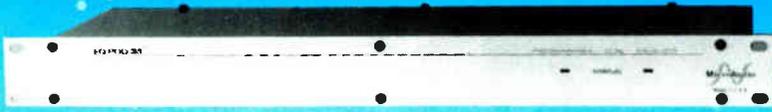
The 01 reads and generates good ol' time code, and can synchronize to an external video source. The mixer's inputs take digital or analog and pick up the outputs of the 01's "tape machines," while the mixer's program output can be sent directly into a video machine. The first SSL 01s will ship in early '89.

AMS Industries has shipped more than a few AudioFiles to video facilities. The company recently released specialized software that makes the AudioFile emulate a video tape machine so it can be addressed by the popular CMX or Ampex ACE editors, and it "becomes transparent to the [human] video editor," says Nigel Branwell. "So audio tracks can be recorded as they would normally be, but instead of on the VTR, they go to the AudioFile. All the video edits can be done at the same time as audio follows video, then that audio material can be taken on, and, using an AudioFile, further typed up as far as edits, crossfades, etc. Then it's done, and all in the digital domain." AMS is also releasing additional, optional hardware for use with the AudioFile, including the Logic 1 digital mixer, although Branwell points out, "Most analog consoles are quite up to the task of performing with digital storage systems."

When Lexicon developed the user interface for its Opus audio recording, mixing and editing system (designed primarily for audio-for-picture work), the company went for a conventional, analog-style layout, straight-ahead, clearly labeled command keys ("cut," "copy," "align," "replace," "loop"), on-screen audio represented as moving tape, and a PC AT interface that "for all practical purposes is transparent to the user," says Rod Revilock. "It's designed to be as much *not* like a computer as possible."

Paul Broucek of Fairlight concurs that "the big hurdle in marketing toward TV people has been the user interface." So Fairlight designed its MFX console for post editors who will use it to control a Fairlight Series III system. The MFX features an IBM-style keyboard with function keys, a display terminal and a 3-button graphic pad similar to the Macintosh mouse device. Some controls sport familiar, ATR-style labels, and others permit common activities such as rock and

—CONTINUED ON PAGE 182



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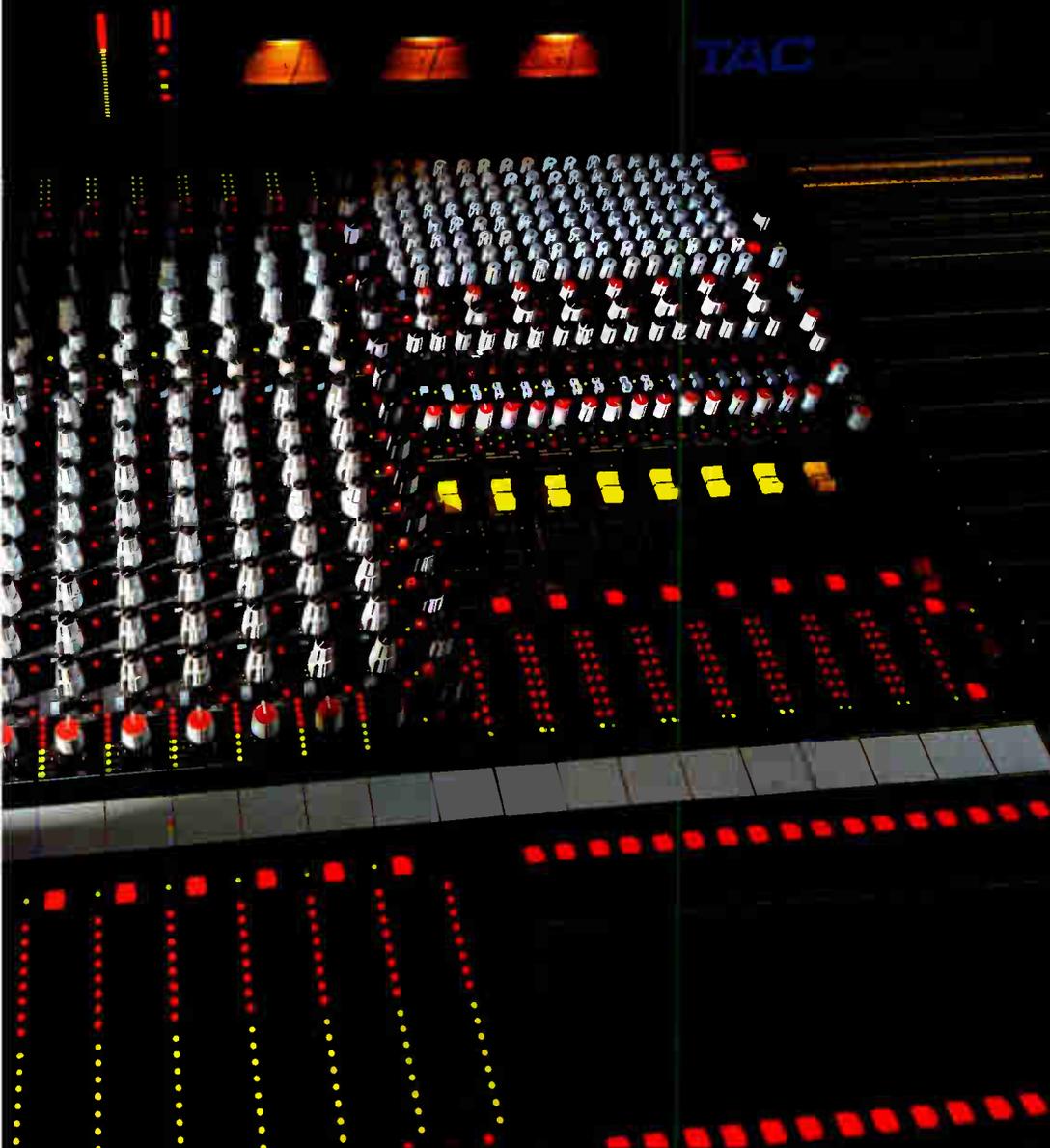
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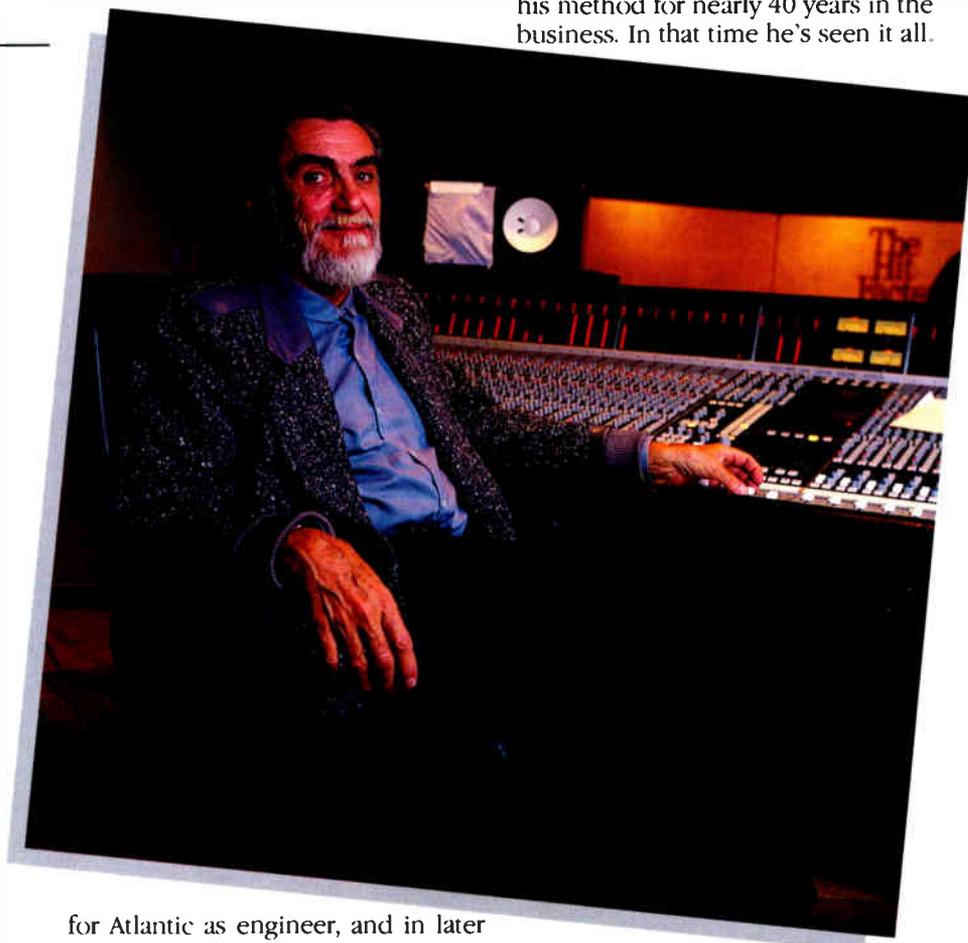
by Bill Milkowski

# TOM DOWD

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**P**ick up any Atlantic Records album from 1952 to 1960, look at the production credits on the back cover and chances are you'll find the name of Tom Dowd. And you'll see his name on countless other albums for Atlantic throughout the '60s and '70s as well. The man was on virtually every important session

Redding to Eric Clapton and Kenny Loggins and dozens of others, Dowd was there offering significant input, as well as manning the console and twirling the dials. He's the kind of producer/engineer who needs to establish a rapport with an artist before he can begin to record him or her. It's been his method for nearly 40 years in the business. In that time he's seen it all.



for Atlantic as engineer, and in later years, as producer.

The artists who Dowd has worked with in his career read like a Who's Who of American popular and jazz music. From John Coltrane and Ornette Coleman to Aretha Franklin and Otis

He's watched the industry grow from 2-track to 48-track to digital. And all the while he's been an innovator, pointing the way for record companies and colleagues.

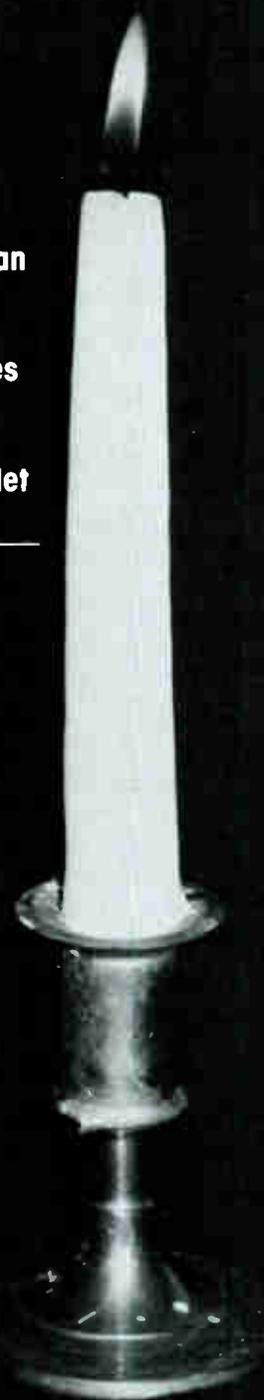
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—FEEDING THE FIRES OF CREATIVITY—



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Dowd was born in Manhattan on October 20, 1925. He was involved with music during high school and college as a member of the school orchestras, concentrating on string bass and baritone saxophone. But he never pursued a career as a musician. At the City College of New York and Columbia University, he studied engineering and physics. His studies were interrupted when he was drafted into the service during World War II, and when he returned to the States, he was no longer interested in pursuing those same studies. He decided to combine his interest in music and records with his aptitude for electronics by entering into the new and exciting field of recording, though the music industry was strictly in its infancy in those days.

In this interview, Dowd tells the story of how he entered the industry and grew along with it, watching the technological innovations along the way and seeing talented newcomers break onto the scene and become stars. The number of stories that Dowd has could easily fill a book, but given the limitations of space, he recounted only a few for *Mix*.

**Mix:** Tell us about your first job as an engineer in New York City.

**Dowd:** It was around the end of 1947. I had just gotten out of the service and I hooked up with a small independent studio that was originally being used strictly for recording demo tapes for voice and piano students. It was the Carl Fisher publishing house, an established business in New York City. They had put in this small studio at the request of the voice coaches and piano teachers there, strictly as a means of recording their students and showing any progress that was being made over the weeks. And around the time that I came in, a number of little ethnic record labels sprang up. New York was such a melting pot with so many ethnically rich neighborhoods, and these small labels catered to the populace of those particular areas. There were Polish labels, Italian labels, German labels, what-have-you. And these labels didn't have a lot of money, so they came to us. Also at the same time a number of small gospel music labels began and they, too, would utilize our services, mainly because we were cheaper than anybody else. So my first

experiences in engineering were with polkas and other ethnic folk music.

**Mix:** What was the equipment like back then in your studio?

**Dowd:** All of the equipment in the recording industry in those days was hand-me-down radio equipment. You didn't have tape machines. You didn't have consoles designed for recording. You didn't have engineers who were really recording engineers. Studios basically employed radio people who

come by and record. The labels that were predominant in those days for recording jazz were Savoy, Apollo, National, Mercury, New Jazz and Prestige. I did a lot as engineer for those labels.

**Mix:** And how did you establish your relationship with Atlantic Records?

**Dowd:** I did some preliminary recordings for Ahmet Ertegun and his partner Herb Abramson at the beginning of '48. They were starting a predominantly jazz-gospel label called Atlantic.



PHOTO: DIANE NINI

**Early '80s: Producer Tom Dowd (seated left) with Jimmy Pankow and Peter Cetera of the group Chicago.**

went out on remotes and did big bands in ballrooms with two microphones and a portable hand-held mixer. All the engineer did was sit there and make sure the meter didn't go into the red. That was *it* in those days.

The studio I worked in had a Western Electric console with a four- or five-position console. And that was really adequate for what the studio was originally intended, which was piano and voice or violin and voice or whatever the students were involved in.

**Mix:** And you eventually got involved in recording jazz artists of the day out of that same small studio?

**Dowd:** Yes. A lot of the musicians along 52nd Street between 1947 and 1953 would end up recording at our place after their gigs in the wee hours of the morning. Oscar Pettiford and his trio, Lester Young and his quintet, Charlie Parker. All the greats would

They were also doing what was then called race music—blues artists with a quartet or a quintet behind them. Around the same time I also was working for National Records. For them I was doing groups like The Ravens, Billy Eckstine's big band and Joe Turner's group. I was really in demand in those days because I was young, ambitious, bright and I had an electronics/physics background. I could make it sound different than what all the old radio guys were doing at the time.

I continued working for the Carl Fisher studio and by 1950 that studio changed hands and became Atex Studio. I worked for them for about a year and then quit to become a freelance engineer. I worked frequently for two or three different studios then. At that time in the industry, the Big Four were Decca, Columbia, Victor and Capitol. But by 1952 a number of smaller, ambitious labels popped up. Suddenly

you had Mercury, Chess, Aladdin, Modern and all these different independent labels popping up to draw their share of the market. The studio that I began working with a lot in those days was called Fulton, which would later change its name to Coastal. That label was basically a collection of engineers who had been in competition together as freelancers around New York City. We joined together and began doing dates for MGM, Mercury, Atlantic and National. Atlantic, though, had its own recording facility, so when they would book me to do a session I would come in and record over there. I spent about three or four years freelancing like that all over New York City until Atlantic finally said, "Come work for us exclusively." So I stopped all my other outside activities and did nothing but Atlantic from that point on, around 1954.

**Mix:** Had the basic equipment progressed at all by then?

**Dowd:** Atlantic started recording in stereo in 1952. They had a 2-track recorder made by a company called Magnacorder. Just two microphones in the room at every session. That system continued until 1957, when I finally talked them into buying an 8-track machine. Nobody knew what 8-track recording was back then. They thought I was out of my mind when I'd talk about it. So I had to design my own 8-track console and modify their existing studio to accommodate 8-track recording. And that took about a year and a half. We began recording in 8-track from about the end of 1957. From then on we were multi-track all the way. We never went through 3- and 4-track recording. We went from 2-track to 8-track right away. We were years ahead of the other labels.

**Mix:** Who were some of the producers you worked with in those years?

**Dowd:** Ahmet Ertegun, Herb Abramson, Jerry Wexler, Leiber & Stoller, Bert Burns, Bob Crew. I had a different working relationship with each of them and a whole different communication system with each. For example, I had a whole different method of recording with Ahmet's brother Nesuhi when we were doing artists like Coltrane or Ornette Coleman or the Modern Jazz Quartet, compared to when I was doing R&B novelty songs with Leiber & Stoller doing The Coasters or Bert Burns doing The Drifters. So I

went through all these transitions, relating differently to different kinds of music and the different producers.

**Mix:** How long did you stay with Atlantic?

**Dowd:** I stuck with Atlantic until 1982. By 1960, Atlantic had expanded so that they decided to go to a bigger facility. So just after I had finished with the 8-track facility in the old studio they asked me to redesign a bigger 8-track studio in a new space they acquired. That one took me about six to eight months to build. We moved into that new facility in November of 1960 and in January of 1961 we made our first record in that facility. And it was a hit. The coincidence is that the same record was a hit again last year. It was "Stand By Me" by Ben E. King. That was the first recording in the brand new Atlantic recording studio. It was strictly a live recording utilizing 15 strings, five brass, background singers and a rhythm section. No overdubbing, just a straight-ahead three-hour session.

**Mix:** How did you mic that session?

**Dowd:** By then I had my own console. I had come up with a mixer that had either 12 or 14 positions on it. The Atlantic concept, which we all got quite accustomed to, went something like this: one microphone for each instrument in the rhythm section, one for all the vocalists, and then we'd spread out the rest. So for "Stand By Me" we had four microphones on the strings, two microphones on the brass section. Those were assigned to three tracks. The guitars were all grouped together on one track. The drums had one track, the bass had one and the piano had one. And the final, eighth track was for the vocal and background vocals.

**Mix:** So how did things progress from there?

**Dowd:** Well, we went from 8-track to 16-track and all of a sudden we had a bunch of people who were devoting all their time to what I was doing as part of my job, which was designing equipment, thinking of better ways to utilize 8-track and 16-track recorders and the like. And by then we had consoles that had 20 positions instead of just four or five positions. So there

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were many brilliant people who got into the industry in the '60s who began specializing in those areas, and it's been going on ever since, evolving to what we have today.

And by the '60s we had 16-track, which meant I had to redesign and update the console again. It was a chase-your-tail-forever kind of situation. And what happened with me was that I couldn't continue to devote all of my time to those technical things and keep on making records. So I developed a different relationship. I started getting more and more involved with the artists. And eventually, my musical input became as vital as my engineering concepts.

**Mix:** Tell us how your relationship with Stax Records developed.

**Dowd:** Ahmet and Jerry [Wexler] started that up. They had some artists down in Memphis who they were particularly fond of and I would inevitably have to go down there and do trouble-shooting. They'd have all kinds of technical breakdowns in Memphis and it was very difficult to get replacement parts down there. So I'd fly down there, find out what the problem was, phone my contacts in New York City and have them send down a part on the next flight, meet the plane at the airport and have the particular part back in the studio in a matter of hours. And if they would've waited for the distributor to ship it to them down there, it might've taken a few weeks.

Once I'd be down there, they'd ask me to make a record down there. So all of a sudden I began working with people like Steve Cropper and Duck Dunn and Booker T. and Al Jackson. I'd record them and establish a good rapport with them. And the next thing I knew, Memphis was calling me back to record Sam & Dave and Otis Redding and a lot of other artists down there. I did a lot of people in Memphis for the Stax label. Some great people. And it was my rapport with them that made it work. I had a relationship with the artists where I could give them input on the music and do the engineering at the same time. And being down there, I could expedite getting records out of them faster than they would normally do it themselves.

Atlantic was, of course, encouraging me to continue developing my rap-

port with the Memphis artists, so I was commuting a lot in those days. I'd also fly out to California once in a while whenever there was an equipment breakdown or a schedule breakdown. Ahmet or Jerry would ask me to fly out there and find out what in the hell was the problem, whether it was an engineering problem or a musical problem or an ego-artistic problem. And then I could remedy the problem and expedite the session.

**Mix:** You were wearing many hats back then.

**Dowd:** I was all over the damn place all of a sudden. And in the meantime, whenever I did get back to New York I'd step right into whatever else was going around town. So in the mid-'60s I was recording The Drifters or The Coasters in the daytime and then doing the Modern Jazz Quartet or Ornette Coleman by night. Then for some culture shock, I'd fly down to Memphis to do Sam & Dave or Otis Redding, or somebody. And by then, the traffic got so heavy that I got a partner, Arif Mardin. I would give him information about some of my engineering concepts, and at the same time I'd get lessons from him in his musical abilities. He gave me a really rounded education about some things that I either forgot or that I had never learned. And that's why we made such a nice team and kept on plodding along for as long as we did. That got us out of the '60s and into the '70s.

**Mix:** Can you list your favorite albums that you've been involved with?

**Dowd:** I'd have to break it down by decade. Let's see—in the '50s it would be any of the Ray Charles stuff I did, the John Coltrane stuff, the Bobby Darin stuff, particularly "Splish Splash" and "Mack the Knife." And all of those recordings with The Coasters were spectacular. All of those works have stood the test of time.

In the '60s it would have to be the things I did with The Rascals, Cream, Aretha Franklin, Otis Redding and anything I did on Stax, which would be everything from Rufus Thomas to Booker T. & The M.G.s to Herbie Mann & Memphis Underground. And, of course, the Allman Brothers band. One of my favorite albums of theirs, in spite of *Eat A Peach* and all those others, is *Live at the Fillmore*. If anybody wants to study and listen to a band playing

their asses off in a blues context with plenty of open space for extended soloing, listen to that record. It's a brilliant album. We did it in two nights, no overdubbing. It was a spontaneous, live show. A classic album.

Then, in the '70s, I'd have to list my work with Kenny Loggins, Rod Stewart, Eric Clapton and Lynyrd Skynyrd. And here in the '80s it's been Rod Stewart, Eddie Money, Diana Ross and back to Lynyrd Skynyrd with this album *Legend*. That stuff had never been released. The last actual recording of that album would've been done in April or May of 1977, down here in Florida. Some of the cuts were never finished. We never had enough time to finish them for the last album so they just went back on the shelf. Some of the other sides we found at Allen Collins' home in Jacksonville, Florida. They were just rehearsal tapes. We stripped out parts and updated them and rearranged the songs. Actually, we put them in the tradition of the Skynyrd band of ten years ago. We went backwards in technology to keep it sounding the same as the original stuff in 1977.

**Mix:** When did you begin actually getting producer credits?

**Dowd:** The first record I ever got credit as a producer for was The Rascals' "Good Lovin'." The way that happened was, Ahmet and Jerry were very hot on that group and had gone into a bidding war with all the other labels that were pursuing the group. Ahmet sent me out to Long Island one summer to hang out with the group and record them on a portable unit, just to give them an idea of what they sounded like. So I spent a weekend with the group in Westhampton and all of a sudden we established this great rapport. They eventually signed with Atlantic and the first week we did "Good Lovin'," which was a history-making record.

**Mix:** Has that been your method over the years—first establish a rapport with an artist before you actually record him?

**Dowd:** Yes. And at this point in my career it's getting harder to do that because of the great age gap between some of the artists and me. But I can work as a mediator now since I have good credibility with both the artists and the record companies. The record

companies know my track record, they know my reputation in the industry. And the management and artists know me from having grown up with records that I made. You find a lot of situations where record companies and artists, or record companies and management, or management and artists, are not speaking to each other and can't come to terms on how they want to make a record. So I enter in as a kind of mediator. I've got a reputation as being honest about my opinions, which the artists always appreciate.

**Mix:** Tell us about your relationship over the years with Eric Clapton.

**Dowd:** Eric and I are great friends. We call each other on our birthdays and we visit whenever I'm in England or he's in the States. And when it comes time to make an album, he calls me. Eric and I go way back. From *Disraeli Gears* through *Wheels Of Fire* to *Goodbye*, Eric and I were good friends and we enjoyed making records together. And then to watch him do it live in concert—the man was and is incredible. Anyway, after the *Goodbye* album [Cream's swan song], I didn't hear

from him for a while. Then I got him and Duane Allman together for the *Layla* album in 1970 and we continued on from there. I didn't hear from him for maybe three years or so, and then the next thing was *461 Ocean Boulevard*. We made about three records in a row, then we broke off for a while again. Now we're making more albums together. It goes like that because we have this rapport. He calls on me whenever he needs me and I'm glad to help out.

**Mix:** Is there an advantage in being a producer/engineer as you are?

**Dowd:** Yes, because then you can communicate in three or four different languages—sound, musical, studio, concept. So I can think in four or five different languages and speak one when I'm in the studio.

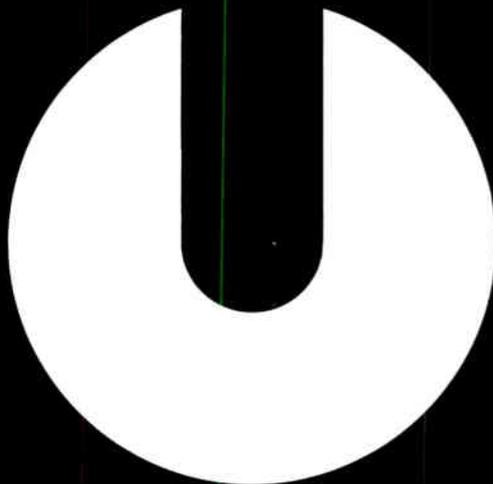
**Mix:** What traits must a good engineer have?

**Dowd:** Big ears and a small mouth. Good reaction time and sensitivity to what the artist is trying to do. Sensitivity to the competency of the musicians working around the artist. Not trying

to make something big out of an insignificant part. Some people, for instance, dwell on the wrong things, trying to make the record better when in actuality what they're doing really won't help sell one more record or make the artist sound one bit better. So why waste time on it? An engineer has to be sensitive to what's really important to the artist, to the project, to the record company, to the producer, while still preserving the integrity of the recording that he is responsible for.

**Mix:** Do you still work as an engineer yourself these days?

**Dowd:** Sometimes, whenever it's called for. Like on the recent Lynyrd Skynyrd project. But normally I try not to. I'd rather devote my time to making sure that the engineering crew is keeping their chops up but not overdoing it with the technology and sterilizing an emotional endeavor with a sound endeavor. That's very important. I get into fights with engineers about that. They're often so busy turning knobs or whatever, not paying attention to the performance. And I have to



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intercede and make sure that the communication is still there, that the technology isn't draining the life out of the performance. You see, I'm not trying to win any Grammys for the best recording of the century or anything like that. I'm just trying to get this artist's communication across. I'm trying to preserve the integrity and the intensity of what they're trying to say. So I'm always careful not to let the technology get in the way. So I have to watch my engineers carefully.

**Mix:** What other producers on the scene today do you admire?

**Dowd:** Trevor Horn is brilliant, George Martin, of course. I think Phil Collins is a brilliant producer. He's an in-charge man who doesn't have to demand anything; he just commands respect. He's so fresh and innovative and professional, and a most pleasant human being. I admire David Foster for a certain kind of music, but I wouldn't want to use him for everything. I have deep respect for Steve Lillywhite's work with U2 and Big Country and Level 42. But he's only done one album with each of them. He's never had a follow-up with them, so I'm waiting and holding judgment. I had an incredible respect for Rupert Hine, but lately I've dried up on him because everything started sounding the same from him. His early Styx stuff, though, was brilliant.

I've had a deep respect for Bob Clearmountain's remixes for the last seven years. He is fresh and clean and conscientious, but I haven't really heard much full-scale production work from him, where he'll take a project through from start to finish. Oh yes, I have to mention Alex Sadkin, one of the young people from down here in Florida. He passed away recently but was brilliant over the last five years. He was a good friend and one of the engineers to emerge from the Criteria studio scene here in Florida. I loved his records, whether it was Duran Duran, Police, Simply Red, Robbie Neville. He turned out good product consistently. Also, I am constantly amazed at Jimmy Iovine. The variety of artists he works with and the diversity of product he comes up with are incredible. There are really so many good producers out there today, and I've learned something from each of them. You never really stop learning in

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this business. It's a perpetual learning process.

**Mix:** What is the most significant difference between the role of engineers in the 1960s versus the 1980s?

**Dowd:** Specialization. The recording techniques today are so dramatically different than they were even ten years ago. And the people who are just now becoming proficient with what the technology was three years ago are already outdated because digital is starting to come on so strong now. That's a whole different culture. You have to adopt a whole different attitude and aptitude when you're dealing with digital. It's like if you want to learn how to speak French, you have to learn how to think French. You can't just think American and parrot the language. Digital is another language. Computer is another language. And you have to learn how to speak all these languages today if you're going to make it in this industry.

**Mix:** What kinds of equipment do you

prefer these days?

**Dowd:** I like the computer technology that goes with the SSL console. But there are some species of Neve consoles that I like the sound of better than the SSL console. I wish I had a hybrid between the two. For sampling I like the Casio FZ-1. I work a lot with the Focusrite preamp equalizer, made by Neve. In terms of synthesizers, I like Rolands and Yamahas, whatever models happen to be current, since they get updated so frequently. My favorite drum machine is a Linn 9000 which I constantly update. It's gone around the world with me two or three times and it's still working great. Some people say that they're unreliable, but it's not the machine, it's the user.

I also love the Synclavier but I don't know enough about it yet to be able to employ it intelligently. And microphone-wise, I can't endorse any one microphone because I'll often use different ones with the same artist, depending on the key they're singing in, the range they're singing in and the emotion that they're trying to convey for the song. Sometimes I will go back and use microphones that are 40 and

50 years old if it's appropriate to help get the message across. It's all about communication, you see. But I do have one favorite microphone that I carry with me at all times. I never ship it. It goes in my hand. That's the AKG-422 stereo microphone. That's one of my favorite toys.

**Mix:** What digital recorders do you prefer?

**Dowd:** I love the Otari and Mitsubishi digital machines. You don't find too many studios with digital machines, so I usually have to rent them. My preference is either an Otari 900 or a Mitsubishi 850. That's it. That eliminates the necessity of locking up 2-tracks, it eliminates noise, it makes degeneration an impossibility. I have had nothing but healthy success with both of those machines.

**Mix:** What about DATs and CDs? What's your opinion on them?

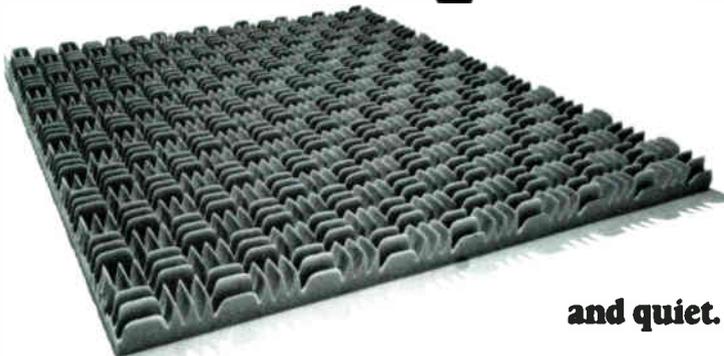
**Dowd:** The DATs are the wave of the future. I have the ultimate respect for the technology employed in that machine. I like the looks of it, I like the feel of it. It's an incredibly clear no-noise device. As far as CDs, I am a fan of some of the things that the CD guys have done in reissuing some of my old records. They sound like a million dollars. I'm so proud of them. I think CDs are great, and that's why four out of my last five projects I have insisted on recording digitally. I do that now as much as I possibly can, whenever the budget permits.

**Mix:** What are your current activities and upcoming projects?

**Dowd:** I did an album with Billy Vera for Capitol/EMI. And I've been recording down here at Criteria Studios with a young artist out of Canada named Colin James. He's a very, very good guitar player in the Stevie Ray Vaughan tradition, and a very hard singer. And he's only 22 years old. He's got good blues roots and a good feel for phrasing his vocals. I think he's going to be big. And then coming up [in '88]—I don't know. Possibly another Clapton album. Rod Stewart may call. But as of now, I have no clues. I'll have to wait and see. ■

*Brooklyn-based Bill Milkowski is a freelance writer who contributes regularly to Mix, downbeat, Guitar World and a number of Japanese publications.*

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# THE FIXX IS IN

**I**n a way, Between the Ears Studios reminds its owner of his youth in the London suburb of Wimbledon. Cy Curnin, the lanky, blond lead singer/songwriter of The Fixx, used to take the train for a 20-minute ride into London to get at the music scene which eventually rewarded him and his mates with success.

These days, when not bucking the abominable traffic on the Long Island

Expressway in his Volvo station wagon (he's a family man now) Curnin takes the Long Island Railroad for the half-hour ride from his Manhattan apartment to the semi-pastoral environs of Douglaston, a community of one-family homes and a few modest estates on the edge of the borough of Queens.

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PHOTO: LARRY BUSACCA

Seated from left to right: Andrew Sedgwick, Cy Curnin, Rob Bengston.

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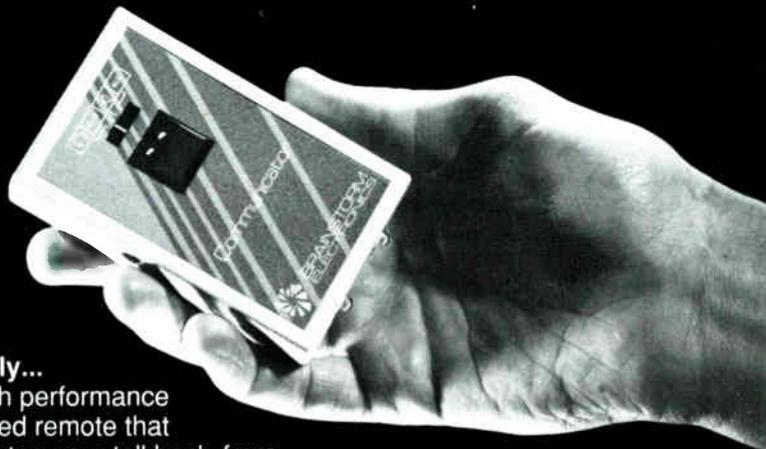
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## ARTIST'S · STUDIO

come back and the snare is totally out of context with the track. It's a great snare but it has nothing to do with the track or the song. That's not what we do here."

After deciding to purchase the studio in Douglaston, Curnin decided to bring Sedgwick and his equipment in. "I wanted to start doing some dance-type stuff," says Curnin, "and Andrew was writing grooves and I thought that was great, I could start putting songs around the groove. It's like writing with the band—someone comes up with a riff and you build from there."

Over in the MIDI studio, Sedgwick, who has worked as a programmer for a range of artists including Julian Lennon and Arthur Stead of Public Image Ltd., has dominion over a collection of equipment including the Sequential Studio 440 sequencer, sampler and drum computer, a PPG 2.3 Digital Wave Synth, an Oberheim Xpander and a Roland Juno-106.

The recording facilities are a Tascam MS-16 with dbx noise reduction and a Ramsa WRT-820 20 x 8 x 2 console. The effects and keyboards in the room are normaled to assigned channels in the Ramsa, which is as yet without a patch bay, although one is planned, says Sedgwick. Tie lines connect both rooms and some projects which begin in the MIDI room are eventually shifted to the 24-track studio for finishing.

Sedgwick's days are filled with changing hats between managing the studio and programming for both clients and Curnin. Although Sedgwick owns the equipment in the smaller room, there is little sense that it is an entity apart from the rest of the facility other than Sedgwick's emphasis that it is a full-service studio in and of itself. He runs the entire place during Curnin's forays with his band while still working as programmer, a combination that prompts his employer to comment, "Andrew has a degree in music and a degree in accounting, which is what you need in a studio manager."

The upcoming Fixx record was written there, and *Between the Ears* will figure in its recording. Drums will be cut in Manhattan's Record Plant and some overdubs done in *Between The Ears*. As Curnin points out, it's very possible that work on the record will proceed simultaneously in several studios. But eventually it will wind up in

England, and that fact underscores Cur-  
 nin's growing autonomy as a writer  
 and musician, a by-product of both  
 owning the studio and becoming  
 more a citizen of the New World.

"The advantage in having the studio  
 is that it's familiar," he says. "You can  
 judge the growth of a song from the  
 very beginning. The disadvantage to  
 me, though, is that the other four guys  
 in the band are very English; they like  
 to live there and their families are  
 there. I like to be in New York. I get a  
 kick out of it. So I have to go back to  
 England to finish the record."

As a place to compose, Between the  
 Ears is a haven for Curnin. Ironically,  
 the combination of ownership of a  
 relatively high-tech studio and having  
 someone like Sedgwick as a buffer be-  
 tween the muse and all that technol-  
 ogy allows him to spend more time  
 on the song rather than the produc-  
 tion aspects.

But Curnin has an agenda for the  
 place that goes beyond personal proj-  
 ects yet at the same time encompasses  
 more than simply commercial gain.  
 He is considering bringing in another  
 writer or two as a partner, and wants  
 the facility to be available to other writ-  
 ers, and especially to young, up-and-  
 coming bands. "When writers write  
 songs, they have a view of the produc-  
 tion in their heads but they don't al-  
 ways get the chance to follow through,"  
 he says. "Now they'll have the chance  
 to explore that. There are a lot of bands  
 around that don't want to be intimidat-  
 ed by high costs. They want to see a  
 studio that's quite friendly."

The studio rates will vary according  
 to individual projects, he says. "We'll  
 take any sort of cash," he laughs, per-  
 haps remembering The Fixx's own ear-  
 ly experience with demos, one of  
 which, "Lost Planes," caught the ear of  
 Rupert Hine and launched their career.

Will the fact that he is now a mem-  
 ber of a well-known band be an ace in  
 the hole for the studio? "Yes, at first,"  
 he allows. "I thought it would be an  
 attraction for young bands that maybe  
 look up to some stuff that we've done.  
 But I'd like to see the place running on  
 its own without too much fanfare." ■

*Contributing Editor Dan Daley tries  
 hard each month to add a dark edge to  
 these author's bios. But the truly dis-  
 eased ones are edited out by Blair Jack-  
 son and kept, festering, in a glass jar in  
 his lab.*

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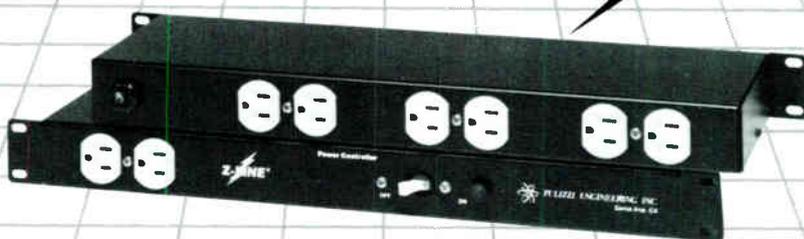
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by Bob Hodas

# APHEX

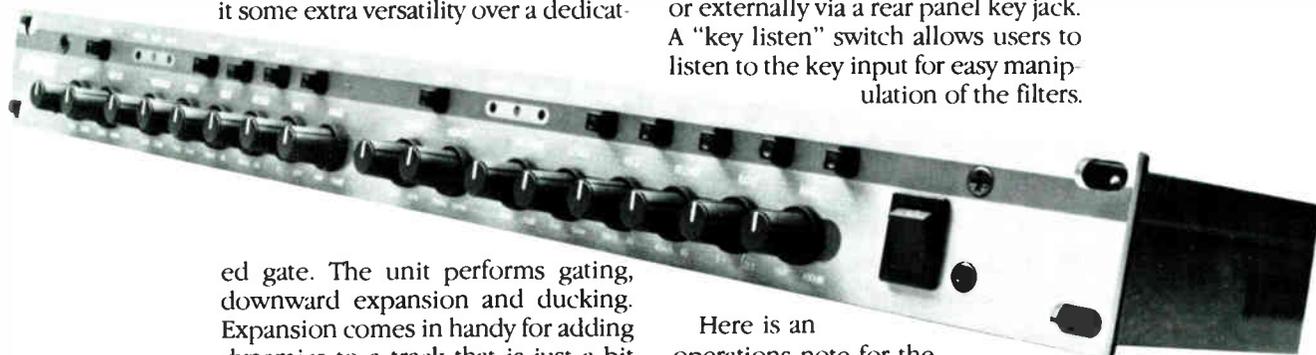
## EXPANDER/GATE MODEL 612

One thing I'm always aware of is the effects of "processing" in an audio processor. You listen to an audio signal, decide that it needs some work, hook up a piece of gear to fix the problem, and wind up with an effected audio signal before you even begin the processing. I've had this complaint about noise gates for years: isolating a drum requires compromising the sound, either by adding distortion or chopping off the front, thus losing attack and transients. Isolation comes at the price of having to use large amounts of high EQ to add some life back into the drum or living with the effects of VCA distortion. I've always wanted a gate that passes audio without leaving a significant mark, and the Aphex 612 has finally fulfilled my wishes. This is the best sounding noise gate I have ever heard.

The 612 is an expander and a gate, utilizing a user-variable ratio that gives it some extra versatility over a dedicat-

A dual-channel, single rack-space unit that operates at +4 dBm, the 612 can be used in either balanced or unbalanced modes. Rear panel connections include XLR inputs/outputs and external key inputs for each channel. A nice additional feature is the sidechain output, which is a buffered copy of the audio input. This may be fed to other devices for triggering, etc., without using up patch bay mults. The 612's two channels are identical, with the exception of a switch on channel 2 allowing it to slave to channel 1 for stereo operation.

As the 612 is similar in operation to a popular gate of English origin, many engineers will be familiar with its front panel controls. There are variable (rotary pot) high- and low-cut filters that can be switched in and out of the key path for tuning out unwanted sounds from the key source. The 612 can operate on either an internal key, or externally via a rear panel key jack. A "key listen" switch allows users to listen to the key input for easy manipulation of the filters.



ed gate. The unit performs gating, downward expansion and ducking. Expansion comes in handy for adding dynamics to a track that is just a bit too compressed. With the growing acceptance of CD and DAT, extended dynamic range can be utilized without having to worry about the noise floor of vinyl or analog tape. Ducking can perform automatic level changes or remove programs completely. An example of this would be keying a music track to reduce its level by several decibels when the voice-over starts.

Here is an operations note for the users of any noise gate. If you don't need to isolate your key source with filters, I recommend leaving them switched out. Filter circuitry in the path of any key source—whether used for gates or any other device—will slow down the trigger time. It's a simple fact of physics.

Getting back to the 612, three colored LEDs indicate if the signal is above threshold (open), holding or

When I'm buying audio equipment, I don't want to have it serviced over the phone or by some guy who doesn't understand my studio, music or even the equipment he's just sold me. I want the high end gear that's going to make my productions sound great and the personal service that's going to back the equipment. That's why I go to Hy James.

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## FIELD · TEST

below threshold (closed). Rotary pots are used for setting threshold (-50 to +20 dBm), attack time (3  $\mu$ s to 100 ms) and gating range (0 to 100 dB). Hold and release pots offer full control of the decay envelope shape. The hold function prior to release is adjustable from 10 ms to four seconds. Release time is adjustable from 40 ms to four seconds. The ratio pot allows adjustment of the operating ratio from 1.2:1 for the most subtle of expansion to 30:1 for the most effective gating. This wide ratio gives the 612 far more versatility than encountered with dedicated gating units.

At first, I found the front panel labeling inconvenient. The closely spaced control pots are marked only at the extreme positions, with no numeric indicators in between. However, this turned out to be only a minor problem. Since a noise gate's controls are set by ear as opposed to numbers, once I spent some time with the unit I was able to work quickly and efficiently.

Using the 612 is simple and, as I mentioned earlier, the audio is excellent. My first test with the unit in-

**“David Holman  
... was 'knocked  
out' when he first  
heard the unit  
because it could  
do the job with-  
out affecting the  
sound.”**

involved trying to salvage some poorly recorded tom tracks that had a lot of loud snare bleed-through. After setting the downward expansion ratio at 30:1 for gating, I manipulated the key filters, fine-tuned the threshold and found that it was possible to isolate the toms and still discriminate against the snare. The separate hold and release pots allowed me to contour a totally natural-sounding decay.

I feel that one of the true tests for a gate is listening for irregularities in the release. I set up a 20-second decay on my Quantec and fed a snare into it. The outputs of the Quantec fed through the 612, and I keyed it to open with the snare. I then set fairly long hold and release times on the 612 and listened to the outputs. Smoooooth is the word that comes to mind. No clicks or weird noises. I could even set up some very non-linear decays without causing problems. The separate hold and release controls allow very creative envelope shaping when triggering a sustained synth line from a more percussive source, and I like having that versatility.

So much for the release; how about the attack? With an attack time of 3  $\mu$ s, (which I believe is the fastest on the market), one might expect to hear clicking when the gate opens, but the 612 experienced no problems in this area. I fed several different instruments into it, and the gate opened without any audible clicks, while transients and the signal's "life" remained intact. Since the 612 keys off transients, I found that small changes in threshold or filters could affect the gate trigger. This is not unusual for a precision tool such as the 612, and the unit required a delicate touch only in very critical situations.

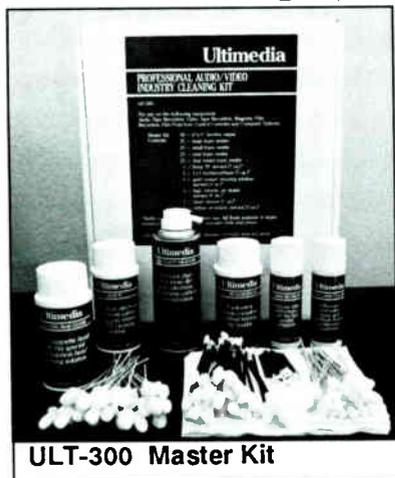
For a second opinion, I spoke with engineer David Holman (whose credits include Olivia Newton-John, Bill Medley and Laura Brannigan) to get his feelings on the 612. He said that he was "knocked out" when he first heard the unit because it could do the job without affecting the sound. While he felt it worked well on everything, he was especially impressed with the 612's performance on guitar. David usually records guitar through the player's rack, which can contain a number of noisy effects and delay devices. He needed a gate that could be tailored to follow the delays down, yet would discriminate from the noise floor. The 612 filled the bill precisely.

I thoroughly enjoyed the audio performance, speed and precision of the Aphex 612. Considering its quality, the unit is quite reasonably priced at \$795 and is a very desirable tool for either studio or touring sound applications.

For more information: Aphex Systems Limited, 13340 Saticoy Street, North Hollywood, Calif. 91605; (818) 765-2212. ■

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division of **Telemation, Inc.** . . . **J. Alan White Incorporated**, a PR/ad agency specializing in the broadcast and video industries, has opened offices in the Chicago area. **Jeffrey White**, president, can be reached at 127 N. Marion St., Oak Park, IL 60301; (312) 386-1575. . . Audio engineer **Debbie Sebel** has joined **West L.A. Music's** Audio LA. Division as a pro audio sales specialist. . . **Fane Acoustics** is relocating to a larger warehouse facility in the Chicago area. For information, call Bryan Newman at (312) 766-6696. . . **Mobile Fidelity Sound Lab** of Petaluma, CA, has appointed **Rick Kelley** its new national sales manager. . . **Arnold Singer** has formed **Corporate P.R. Group, Inc.** to offer communication services to the electronics industry. Offices are at 470 Park Ave. South, New York, NY 10016. . . New name, new address: **Philips Subsystems and Peripherals, Inc.** of Knoxville, TN, is now **Optical Disc Mastering**, 8000 Corporate Center Drive, Bldg. 2, Suite 210, Charlotte, NC 28226. . . **William J. Dorman** has assumed the position of connector project manager at **Neutrik USA's** headquarters in Millville, NJ. . . **Zeta Music Systems, Inc.** has expanded its facilities to cope with large-scale production and moved from Berkeley to Oakland. New address and phone: 2230 Livingston St., Oakland, CA 94606; (415) 261-1702. . . **Quanta, Ltd.**, a leading British television and video production company, will locate its American headquarters at 1100 17th Street NW, Washington, DC 20036. **W.G. Williams** will manage the firm's marketing and business concerns in the U.S. . . **Apple Computer, Inc.** recently appointed **Donald P. Casey** to the position of vice president, networking and communications. . . **Engineered Packaging, Inc.** of Westwood, MA, has opened a western office in Long Beach. Address: 3040 E. Spaulding St., Long Beach, CA 90804-4489; (213) 985-0062, Fax: (213) 494-1713. . . **Leonardo Software** announced an upgrade for its *Professional Librarian* software and a move to West LA. New address and phone are 10378 Holman Ave., West Los Angeles, CA 90024; (213) 277-5161. . . . . **Cook Laboratories** of Norwalk, CT, has appointed **Mason Jenkins** its director of sales. . . . .

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**Opus III Music**

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## Wohler Stereo Audio Monitor

Just one rackspace is all you need for this self-powered, stereo monitor speaker system from Wohler Technologies (San



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## Grass Valley Automated Mixer

To meet the demands of TV post work, The Grass Valley Group (Grass Valley, CA) introduces the AMX-170S automated audio mixer, designed to integrate fully with computerized video post-production systems. Up to eight VCA inputs can be simultaneously routed to any of four program channels, ideal for use with the new VTRs that have 4-channel audio record/playback. The AMX-170S also features 4-band EQ on each input, and the console's "audio

memory system" stores and recalls input, EQ and trim control settings, providing 20 memory registers

that can be recalled manually or through the edit controller during an event. Crosspoint selection (of input sources, output routing and transition sequences) and effects (EQ, trim, fader level, crossfades) can also be controlled through the mixer or triggered by the edit controller.

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## A-T Interchangeable Mic System

Varied miking requirements are addressed by the versatile AT4051 cardioid microphone from Audio-Technica (Stow, OH). Engineered for low self-noise and high output,

polar pattern by replacing its element with the AT4049 omni or AT4053 hypercardioid capsule. Specs include 20-20k Hz response and a SPL capability rated at 144 dB (1% THD); an optional capsule output attenuator handles up to 159dB SPL. Standard features include an integral 80Hz high-pass filter, foam windscreen and durable brass housing plated with black chrome.

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## Rane Flex Series

In conformance with the proposed HR (Half-Rack) format for equipment packaging, Rane Corp.



the AT4051 is part of a new series of transformerless, externally polarized mics with interchangeable head capsules. For example, one

can change the AT4051's (Everett, WA) is introducing the Flex Series of modular signal processors that mount vertically or horizontally using minimal rackspace. The modules—

including splitters, crossovers, EQs, filters, compressors, limiters, program meters, headphone amps, output transformers, power supplies and various mixing functions—connect directly to other gear via 3-pin, 1/4-inch and DIN connectors. Each processor is powered by a low-voltage, external supply (also part of the proposed HR standard).

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## Studio Technologies ISS Stereo Simulator

The ISS Integrated Simulator System from Studio Technologies (Skokie, IL) converts mono program material into realistic, simulated stereo for production and on-air MTS broadcasting. Easy to install, operate and service, the ISS incorporates two types of circuits, one for moderate simulation of all audio frequencies and another for more dramatic simulation in low- and high-frequency signals. The circuits work together while maintaining voice centering. When simulated stereo is not required, the ISS crossfades between the audio input signals and the simulated stereo, selecting one of three crossfade speeds for smooth, unob-

trusive transitions. It interfaces with a station's automation system or can be manually operated. Options include a "recognition" card (that determines the mono/stereo status of the audio input signals and switches the ISS into the on-air audio chain upon recognition of mono) and a polarity correction card (prevents loss or degradation of audio to mono listeners).

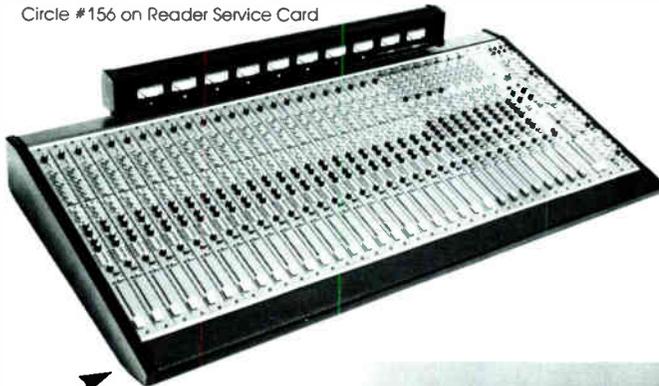
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## Agfa Improves PEM 469

Agfa-Gevaert has improved its PEM 469 mastering tape formula, introducing a cleaner running oxide surface (for all formats, from 1/4- to 2-inch), providing greater stability in long-term storage. In addition, the 2-inch format now uses a new tape back-coating and new base film, which together offer a cleaner,

more durable tape capable of withstanding multiple passes.

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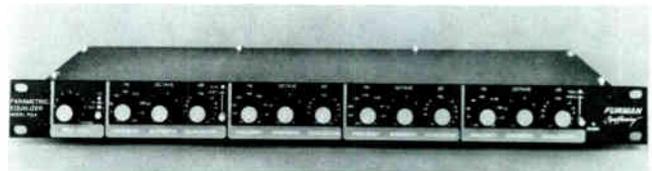
## DDA Q-Series Console

The new Q-Series Console from DDA (distributed by Klark-Teknik), available in 16-, 24- and 32-input frames, provides a direct output on each input channel and 8 aux/fold-back buses. It features controlled output, which is enabled by switching the direct output via the Aux 1 control. On a 32-input

desk, this provides for 32 dedicated effects sends in addition to six aux buses

tape sends, 8 grouped sends, 6 aux/foldback send buses, 24 monitoring returns and 8 returns with EQ. Other Q-Series modules include P.A. outputs (double subgroup modules with 3-band EQ on all outputs) and aux/foldback master modules (standard on all consoles). Options include P&G faders, PPM meters, and mic and line transformers.

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## Furman PQ-4 Parametric

The PQ-4 full-function parametric equalizer is the successor to the popular PQ-3 from Furman Sound (Greenbrae, CA). Its EQ range goes from a full 20 dB of boost to an "infi-

(ideal for sound reinforcement). The Q-Series version with matrix output modules has eight effects returns with 3-band EQ, and with the addition of 6 effects return modules, can be configured as a 26/8/2 multi-track desk with 26

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**Stewart Electronics' PM-6 (\$289)** is a 6-channel

phantom supply delivering up to 10 mA of +48 VDC power for mics, direct boxes and other accessories. An AC supply is included and the unit's unique design allows it to be either front- or rear-mounted in any 19-inch rack. Call (916) 635-3011 for more info...

**Dimension Production Music's Platinum Series** is a new CD library designed for A-V and broadcast production. Each tune includes 2.5-minute and 60/30/10-second edits as well as an alternate mix of rhythm tracks only. The initial release is five CDs, with 22 more now in production. Call (800) 634-0091 or (407) 746-0310 for more info...

**Soundcraft's VSA24 (\$1,950)** is a rack-mount serial interface box allowing the Soundcraft 200B/VE console to provide true audio-follow-video, matching crossfades between the mixer and the video machines, as well as being able to control audio effects independently from the video editor. Multiple crossfade types and times (up to 999 frames) are possible. For more info, call (818) 893-4351...

**Scientific Design Software's CACD (\$349.95)** is an IBM-based (Mac version coming) optimization and analysis program for developing either active or passive loudspeaker system crossover networks.

CACD predicts the response of the network/driver combo (a 750-driver database is included), as well as the input impedance. For more info, call (818) 718-1201...

**The Demomaster CD** from the Bob Wood Organization is a compilation disc containing 14 five-minute music and jingle producer demos, which, according to the promoter, is distributed free to 5,000 top advertising creative directors. CDs are indexed for fast reference to particular musical styles, and database diskettes will accompany future releases. Call (619) 565-2006 for more info...



nately deep cut," according to Furman. Its constant-Q curves allow a bandwidth spread from extremely narrow notches to boosts as wide as four octaves. The top and bottom bands of this 4-band EQ also offer peak/shelf switches. In live situations, the PQ-4 can function as an instrument preamp, providing a footswitch jack for remote control. Other features include isolated connectors, ground lift switch and low noise design. Suggested list price is \$359.

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**Audio Precision RS-232 Interface**

System One from Audio Precision (Beaverton, OR) is now available in an RS-232 interface version, allowing operation via lap-

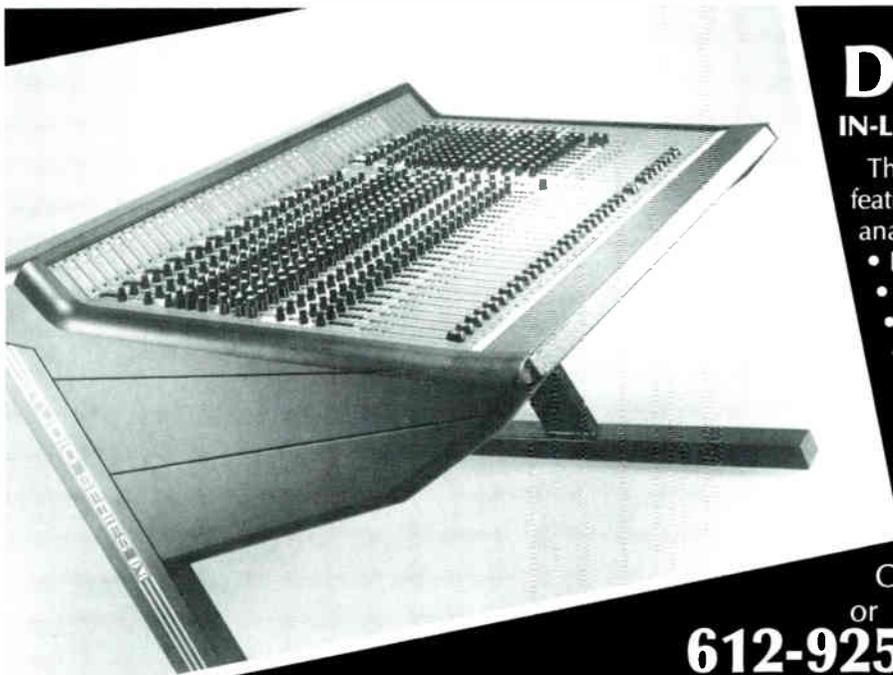
top IBM PC clones. System One has also lost six pounds in weight, resulting in a more portable test system for field work, on-site measurements and

studio maintenance. The new version also allows measurement of audio transmission links and remote facilities, with no need for a PC at the distant

point; dial-up telephone lines and modems can provide full control of the remote test system. Broadcast station, microwave and satellite link end-to-end tests can be carried out from one control point, with data graphing in real time on the computer screen at the other—allowing an unstaffed site to be tested from thousands of miles away. Optional accessory switchers allow testing of multiple points at the distant installation.

System One's standard test capabilities include harmonic and IM distortion, selective and broadband amplitude measurements, phase, frequency, and rotational and scrape wow and flutter.

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# CHICAGO



## THE HAL BLAINE STORY

by Hal Blaine with David Goggin

As a kid playing the drums and growing up during an era of swing and jazz, I naturally fancied the Big Band sounds of the late '30s and '40s. In 1939, I was a 10-year-old with my ears glued to the radio. I sang along with every hit song—that is, sang the solos and instrument ensembles. I couldn't remember important dates in history and had

**My first band after Korea was the Stan Moore Trio (L to R: Stan, me, Keith Curtiss), also known as The Novelteers (inset)—a "funny-hat band."**



trouble memorizing my times tables, but I knew every popular song and all the parts. I was always tapping out my finger rhythms, driving my teachers and my folks nuts. My parents called it "shpilkas," Yiddish for "ants in your pants."

When I got my first small set of "trap drums," I felt like a real drummer and knew this was to be my profession (although I didn't really know what a profession was at that time). I taught myself how to play and before long I was doing a one-man-band show. I had a kazoo strapped to my mouth with a contraption my father made from a large rubber band.

Each time I finished a "set," I felt incredibly satisfied. Every day was a triumph. When I got older and started playing seriously with other musicians I had this same sense of accomplishment and love of what I was doing.

When I got discharged from the Army in 1948, I started playing with various groups and finally settled in with a "funny hat" band called The Novelteers, also known as the Stan Moore Trio. Stan played sax, Keith Curtiss played piano and I was on

drums. I was also our emcee and singer, and we all did comedy. We created pantomime bits for popular records and were doing quite well on the road.

We made our way up to Alaska and worked the Talk of the Town in Fairbanks during the pre-statehood days. Talk about a tough audience. The waiters were all roughnecks—tough Alaskans, ex-cons and guys capable of keeping the lid on the joint. When there was a fight it looked like a John Wayne barroom brawl. They wouldn't quit until someone was knocked out or dead. If the loser died, he was covered with a tarp and left where he fell until the commissioner arrived from Juneau.

This was the wild Northwest during the building of the Al-Can highway. The summertime work period was three months long and the sun shone 24 hours a day. The construction men worked as many hours as possible and earned about a thousand bucks a day. Prices were high, hookers were plentiful and business was booming.

Our audiences were mostly male—construction workers out for a good

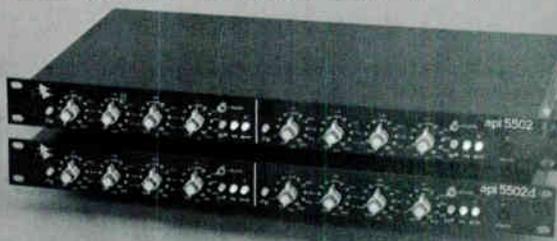
time. Here we were wearing dresses and falsies and silly hats, doing pantomime and trying our best to entertain these gorillas. When I look back, I realize it was great showbiz basic training.

Occasionally, a female singer would be booked to work for a week or two, and we would be the backup band. These girls would arrive with their 17-piece band arrangements and find us: piano, sax, drums. Not even a bass to fill it up. But even with the lack of a big band, just about every singer told me how much they liked the way I "accompanied" them.

It was something that stuck with me all through the years. I was very fortunate to learn early on that my role was to be an accompanist.

When the summer of 1948 rolled over and the nights got longer and colder, we closed Fairbanks and headed back to the States. We worked every kind of dump imaginable, and during our touring I had my first real love affair. I was 18 at the time and fell for an older woman in Medford, Oregon. She broke off the relationship and went back to her husband. It was a mystery to me because he beat her

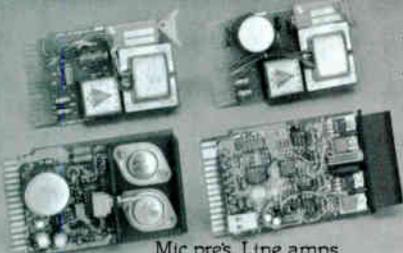
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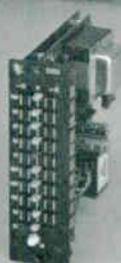
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regularly and as a result, was in jail when we met. With my heart in a sling, I went back on the road. As it turned out, this love affair that went sour led to a good move on my part.

We wound up in a club called Tommy's Ranch House in Great Falls, Montana. The movie *Young Man With a Horn* was on my mind. I had cried like a baby when I saw this poor dude in a montage of nightclub ramblings, drunk out of his head. I started acting the same, drinking like a fool and hardly aware of what I was doing or where I was. I tried calling the woman from Medford, but I couldn't reach her. After days of calling, I finally got her on the phone and she told me to get lost.

That New Year's Eve in Great Falls, with the snow falling heavily and the temperature about 40 degrees below zero, was a night I will never forget. I was merrily drinking my way into oblivion and I passed out cold.

Tommy's Ranch House had been a health club before it became a nightclub. It had a large basement with little green rooms, each equipped with a massage table. I woke up about 5 a.m. on one of those tables and thought I was in the city morgue. The green walls were wet with cold sweat and I was shivering uncontrollably. I started screaming for help, for an attendant to come and get me out of there. I felt terrible, but I wasn't dead yet, and I thought some doctor was going to come in and start an autopsy on me. That was the end of my drinking.

The next year I turned 20 and a buddy of mine, Rick Verdi, talked me into going to Chicago to study at the Roy C. Knapp School of Percussion. After a year on the road with The Novel-teers, Chicago sounded pretty good. I left the band and moved in with Rick and his immigrant parents. I lived with them for a few weeks until I found a small room over a garage on the West Side.

I enrolled immediately and started my studies. The school, with all its history, became my entire life. There were 500 drummers of all ages, studying with great, dedicated teachers. It was the first time I felt like I was part of something important, that I was with the "names." The old man, Roy Knapp, had taught one of my idols, Gene Krupa. The teaching staff included Bob Tilles, Bob Seaman and the late Hugh Anderson, who I worked with many years later in Hollywood. Jose Bethancourt, a member of the Chicago NBC

Orchestra, taught marimba. I was studying percussion with the best and minoring in piano and vibes.

The Knapp school had all types of students, from young kids to older professionals. There were also a few boxers studying independent coordination. Independent coordination was the latest thing for drummers to study, and many fighters were trying to learn how to throw a punch while getting the other hand ready for action.

We had all sorts of classes—music appreciation, harmony, arranging, sight singing and reading, drums, a variety of percussion classes and lots of homework. Thanks to Uncle Sam, my G.I. Bill gave me the freedom to study full time.

School ran from eight to five, with a break for lunch. I rode the subway from the West Side to downtown every day, but soon got tired of the long commute. I needed more time to study and my dad agreed to help out. I ended up at the Majestic Hotel, just a few blocks from school.

The old Majestic was the cheapest hotel in that part of Chicago known as "The Loop." The Majestic had seen better days. At the turn of the century it was one of Chicago's finest hotels, but by 1949 it was the pits. There were 12 floors—a high rise in the old days—and the old accordion-door elevator took forever to climb to the top. The Majestic was home to hookers, pimps, addicts, pushers, gangsters and strippers. The penthouse ballroom hadn't been used for decades and was covered in dust and cobwebs. I went exploring one afternoon and discovered an old grand piano under a bunch of junk. This became my practice piano and my playing boomed through the old hall every night.

Chicago was a mecca of burlesque houses and "bust out" strip joints. Strippers would do their act and then come down into the audience and "mix" with the patrons. The customer would buy a drink for the lady and after downing her cocktail (usually tea), she would keep the swizzle stick that came with the water chaser. After an evening of work, the "B girls" would have about 40 swizzle sticks which they turned in for 50 cents apiece. If a sucker bought her a bottle of champagne for \$25, she got a five-buck commission.

Chicago was also a big convention town, and there was always something going on. It was still loaded with Syнди-

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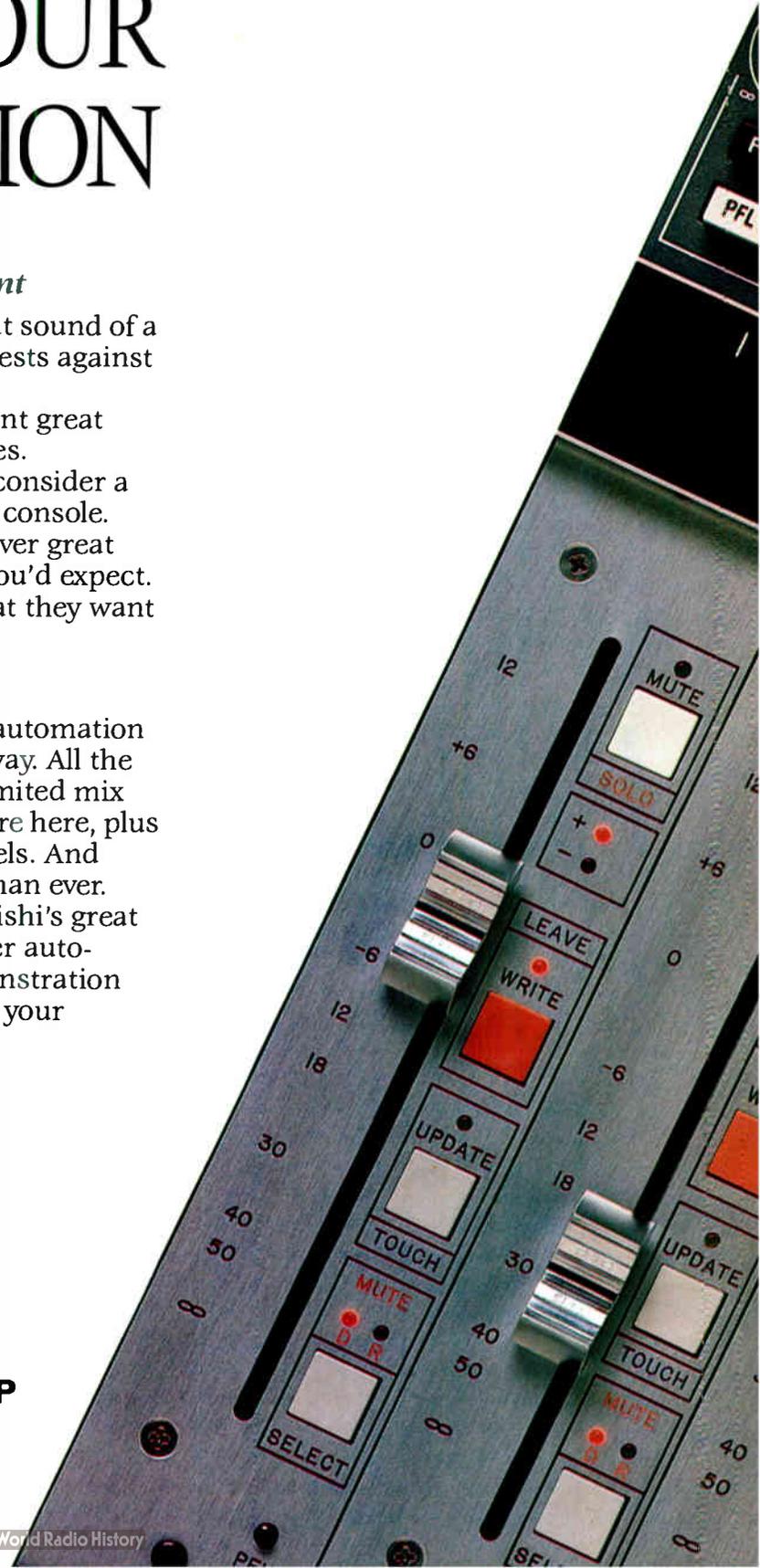
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cate characters, and it appeared to me that they ran the town. Most cops seemed to be "on the take." I was told to always have a couple of bucks clipped to my driver's license. When a cop asked for your license, you handed it to him. He pocketed the money and handed back the license.

One night shortly after Rick Verdi got married, he called and invited me to go out for pizza with his new wife, Mary. I jumped into his beautiful new Buick and he tore off like a bat out of hell. Rick had already been celebrating, and with our meal we had a few more bottles of wine. He wasn't normally a heavy drinker but this was a special evening.

We were heading home about 2 a.m., with the snow falling and the roads slick with ice. Rick ran a red light and suddenly we were being chased by a cop with his siren blasting. Rick floored the Buick. Mary and I screamed for him to stop, but he was out of his head and decided to make a run for it. Then a few more cop cars joined in the chase and I knew they were going to start shooting any second. Like in the movies, I lay down on the floorboards, hoping the bullets would miss me.

We ran every damn light on the West Side, sliding all over the trolley tracks. It was a real chase scene. We finally pulled up at a wall of police cars with red lights flashing. The cops had their guns drawn and murder on their faces. More cars arrived, and we found ourselves surrounded.

Rick casually got out of the car and walked up to the cops, who were lining up. He had just been paid and started peeling off \$10 bills and handing them out. I was petrified and couldn't believe what I was seeing. Each cop patiently waited his turn and after receiving the cash, politely said, "Thank you," and stepped out of line. Rick waved a friendly good-bye and calmly drove me home. I was shaking for hours.

After a year of study at the Knapp school I started getting calls from band leaders to sit in at casual dates. Don Knapp, Roy's son, got to know me pretty well and sent me off on jobs that he couldn't take. Then I started getting calls to work at the strip joints. I worked clubs like Ju-Ju's Glass Show Lounge on the West Side, the 606 Club on South State Street, and some of the Rush Street joints like Minsky's Bur-

lesque Theater. My job was to substitute for the regular drummers, which was great sight reading experience.

Learning to read well paid off. I was sitting in my room one night when I got a call from a stripper who lived at The Majestic. She was calling from the Post Time Club, about ten blocks away on North State Street. Their drummer had taken ill and she asked if I could come over right away and sit in.

Piano, trumpet and drums. From 8 p.m. to 4 a.m. with no intermissions. The shows consisted of a comic coming out and doing a few minutes, followed by a stripper and her three numbers, first slow, medium, then fast. We took turns switching instruments when one of us had to hit the toilet. During a slow number I would play piano so the piano man could go to the toilet. When I took a break, the trumpet player would sit in on drums. The trumpet player could take a break whenever nature called. The comic/dancer, comic/dancer routine went nonstop all night.

We had special red lights over the bandstand. If they flashed, it was a signal from the doorman that we were to go into a fast, two-beat version of

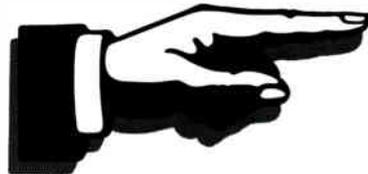
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"Billboard." This let the girls know that the vice squad was on their way in. There were strict nudity rules at the time and the girls were usually breaking the law. They would quickly pick up the clothing lying on the stage and run off. The comic would rush out and start a gag in the middle and deliver a phony punchline. The audience was wise to what was going on. Of course, the doorman knew all of the vice cops who were on the take and we had plenty of warning. That first night was a real learning experience for me.

When I finished, the boss called me into his office. He handed me some cash and asked if I could work the next night if the regular drummer was still sick. I said sure. It was about 4:30 in the morning and I had to be at school in a few hours. When I got back to the hotel the next night, there was a message to come back to the club.

I got to the club and walked into one of the dressing rooms to find eight or nine gorgeous women sitting around in the nude. One of them yelled, "Who the hell are you, buster?" and they threw on their robes. I said I was the drummer, and they calmly took off the robes and went back to

putting on their makeup. It was tough work, but I was beginning to like my new job.

At the close of the second night, the boss called me in again and introduced himself as Tony. He was a rugged guy, built like a bull, with a huge chest and hands like vice grips. He asked me to sit down and explained that Mickey Scrima (ex-Harry James drummer throughout the '40s and one of my favorites) was not returning to the Post Time Club.

"Have you got a set of drums, kid?" he asked in a tough Italian accent. "I sure do," I replied. He asked if I smoked any of those crazy cigarettes, or if I drank. I told him I was clean. He said he would start me at a hundred a week. I would work seven days a week, and the hours were long, but a hundred bucks was big money in those days. I was thrilled.

After a week at the club, Tony called me into his office again and I was afraid I had done something wrong. On the contrary, he told me that all of the girls loved the way I played—I had a good feel for their music—and he especially liked my sober ways. He raised my salary to a hundred and a

quarter and made me the band leader. I was on top of the world. He also drew open a curtain and displayed a beautiful set of drums. Drumming was his hobby and he wanted me to show him a few pointers.

Tony and I became very good friends and I stayed at the club for two years. Once a week, he would take me to his house and treat me to his family-style Sunday dinners. I felt like I was in Italy, sitting at the huge table, surrounded by Tony, his wife, the grandfathers and grandmothers, the brothers and sisters and his friends. These were very happy times for me.

But there were some dark times, too. I got mixed up with some rough people looking for protection money—leg breakers that were part of the Chicago outfit. I was a member of the Local 10 Musician's Union and somebody was trying to give me a bad name. Tony made one call and I never heard from these people again.

In 1951, I completed my studies at Knapp. Now I had to go out into the world and face the future. I decided to head for California—maybe the studios were calling me, but I didn't know it yet. ■

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by Robyn Flans

# AMY GRANT

## RECORDING "AT HOME"

**B**rown Bannister speaks about Amy Grant as befits a proud papa. And with good reason. Bannister "discovered" Grant 12 years ago when he was working with a church youth group, and Grant (then age 14) played him some of her music. It wasn't that the songs were exceptional, he says, but that he immediately became aware of her charisma and ability to communicate.

Although he never produced before, Bannister cut a demo for Grant and took it to producer Chris Christian, who then called Word Records. Word signed her sight-unseen, and Bannister was permitted to produce the debut album. Off that record they earned four Number One singles on the Christian charts.

"It just worked," Bannister says of their mutually beneficial relationship. "If it hadn't, it wouldn't have continued. I think one of the benefits for me as a producer on the 11th album, having done the other ten, is I know where she comes from, I know where she's grown, what she can do, what she shouldn't do and I'm sensitive to the spiritual side of things. Working with something new, there's no way you can establish a great working relationship immediately. If it's not working and you're not selling records, it doesn't make sense, but she's progressively grown in sales and popularity."

Bannister is so attuned to Grant's idiosyncracies that their interplay sometimes borders on the absurd. For instance, he relates this episode that occurred while recording the vocals for Grant's current album, *Lead Me On*.

"Something she's been doing for a while is eat potato chips while she

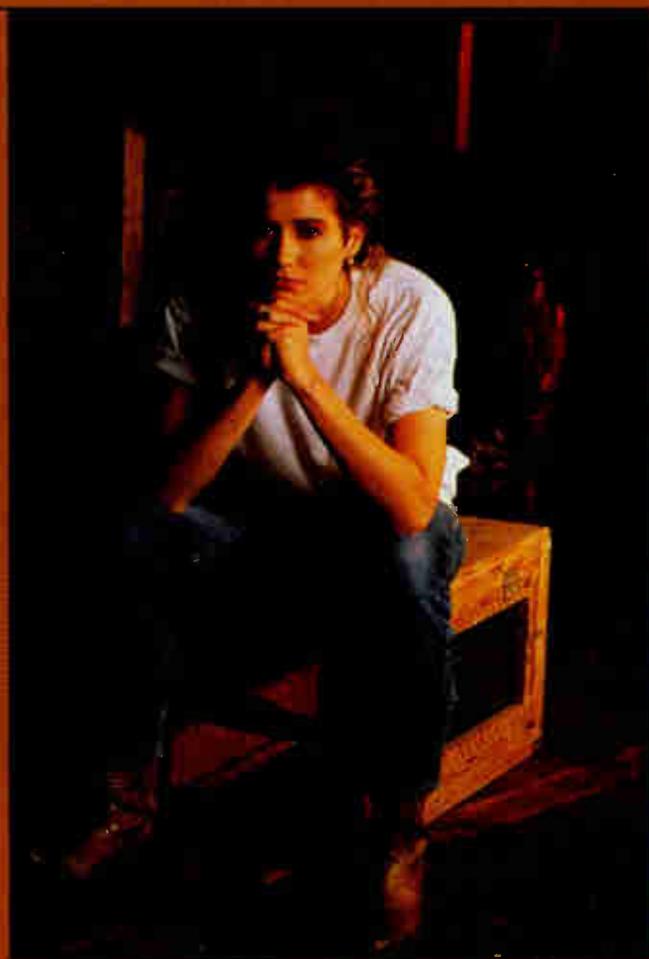


PHOTO: TONY NORRIM

sings. If she ran out of potato chips, we'd go get a bag, she'd eat one, and it would bring the presence back in her voice. This one time, she had been in the kitchen and came back and began to sing. I looked over at Jeff [Balding, engineer] and said, 'It sounds like she's been eating banana bread,' because it was a thick, kind of smooth thing. I had never heard her sing after

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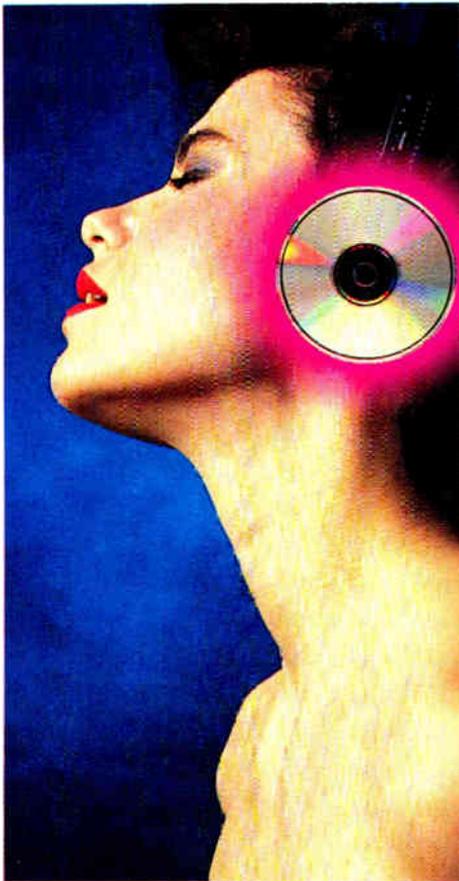
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## PLAYBACK

eating banana bread before, but it sounded like that. I punched talkback and said, 'Amy, have you been eating something?' She started laughing like she had been mischievous and said, 'Yeah, I just ate banana bread.' "

The vocals on *Lead Me On* took three months to record, and not because they ran out of potato chips or banana bread. Grant had just given birth, something that played a part in her vocal inflections.

"It was a little wild because Amy's hormones were swinging," Bannister laughs. "She was nursing her baby, and

out we were going to cut the album right about when she was delivering the baby, so leaving town wasn't an option. One day it just popped into my mind to do it in a house, not a studio. That's how [the residential studio] Bennett House came up, which I had never really considered because the actual studio was too small. I called [studio manager] Gene Eichelberger and asked, 'Gene, how would you feel about us cutting Amy's album at the Bennett House, but not in the studio?' And he said, 'What does this mean?' I told Gene that it probably meant running a lot of cables and I didn't know how many. He said he was up for it.

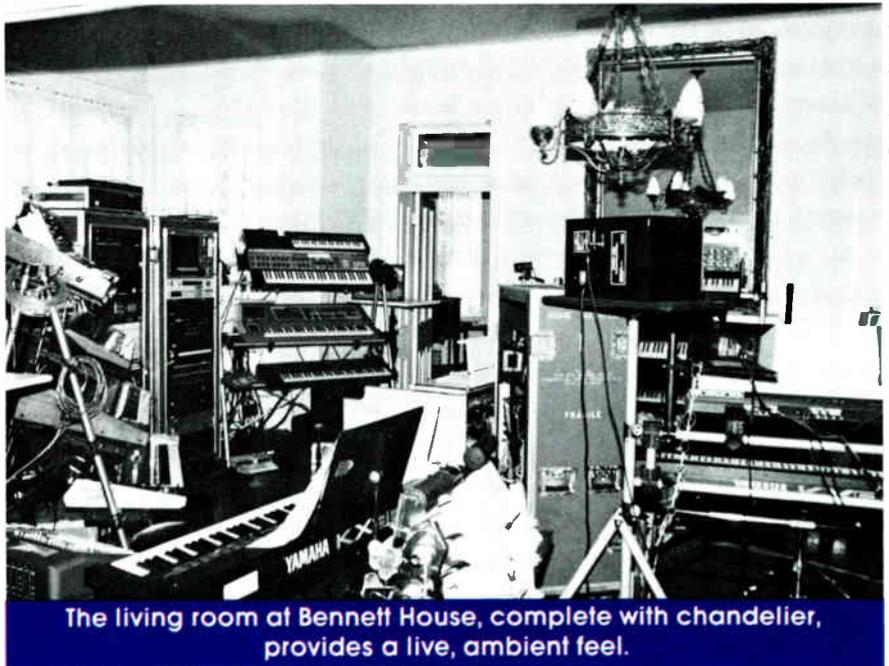


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The living room at Bennett House, complete with chandelier, provides a live, ambient feel.

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we could hear a change in her voice while she was singing. It was subtle, but a definite change, and I'd push 'stop' and say, 'You've lost a little presence here.' It would still be changed and then she'd say over the mic, 'I've got to go nurse my baby; I just heard him cry.' Every time. The process was interrupted quite a few times."

The approach on this album was altogether different from previous Grant albums. Bannister has been charged in the past with engaging in techno-madness, to which he smiles sheepishly, "We apologize." To complement the new album's acoustic direction, Bannister wanted to record with a live, ambient feel.

"There aren't too many studios in Nashville that are ambient," he says. "I really wracked my brain. I had planned to go out of town, and then Amy found

Little did he know what he was getting into!"

No one knew what he was getting into. Jeff Balding explains it took four days of intense setup to run 60 to 70 inputs from the studio to the house. Monster Cable loaned them about a mile of cable to do the job.

"We were just going to run the cables out the doors, but the next thing we knew, Gene was drilling an 8-inch hole in the side of the studio wall and knocking out a window in the house to run 8-inch PVC from the house to the control room," recalls Balding. "We ran four cameras into the house so we could see everyone, although they couldn't see us.

"They had an old Trident A Range console, so we had to rent a monitor board, because we cut 32-track digital

—CONTINUED ON PAGE 183



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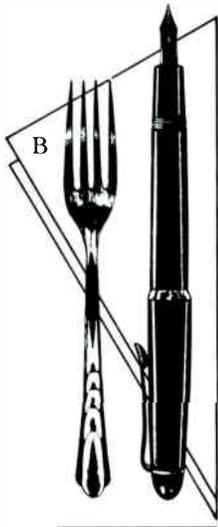
# TASCAM

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by Mr. Bonzai

# ANDY SUMMERS

## BREAKING DOWN BARRICADES



Take a long, cool swim in the new fluid worlds created by Andy Summers. The environment of his first solo instrumental album is spacious, open, inviting—a slow-motion unfolding panorama, a flowering revealed in time lapses. It is the work of the texturalist we know so well from The Police: the subtly commanding presence voted four times *numero uno* in *Guitar Player* magazine's annual poll. The album, *Mysterious Barricades*, is a gallery of acoustic paintings, a spec-

trum of soundtracks for the imagining.

We met in Andy's new seaside studio, an expansive, white-walled building lit naturally by skylight. A clean canvas waiting for fresh paint. With two scores to his credit, *Down and Out in Beverly Hills* and *End of the Road*, Andy is actively courting the world of visual music. The rooms are lined with guitars, amps, keyboards, samplers, synchronized video gear and a shiny new Mac II—the tools of the modern sound painter.

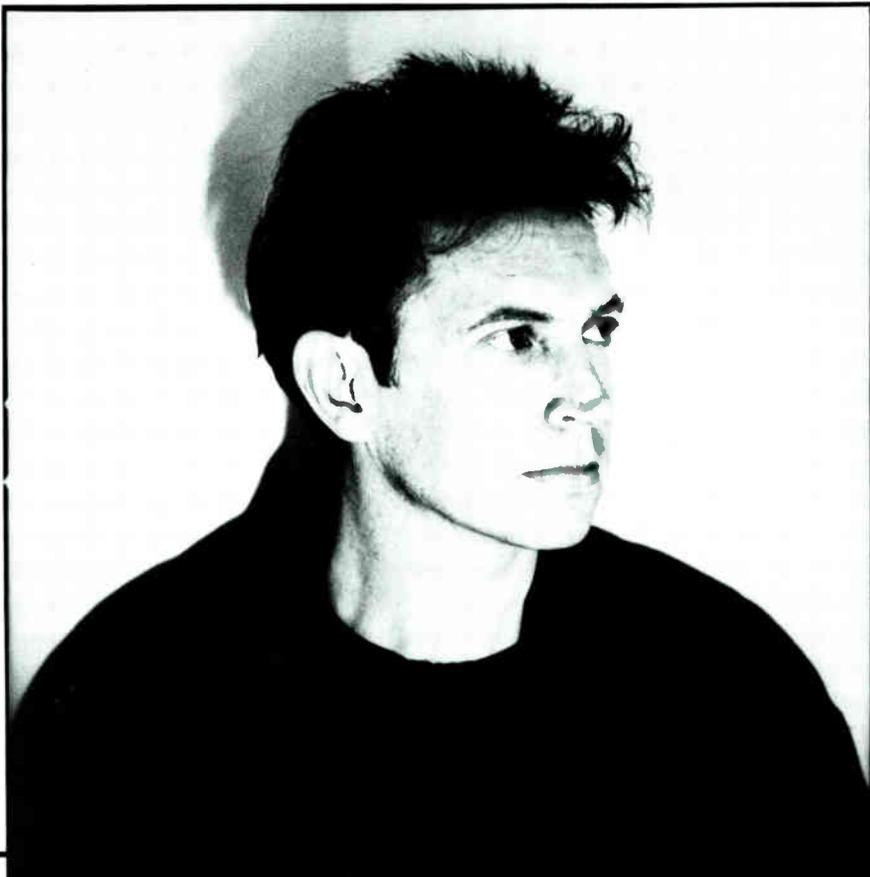


PHOTO BONNIE SCHIFFMAN

Andy is a musician linked with the visual arts, a respected photographer with a number of international exhibitions and a published book of his work well-received. *Mysterious Barri-cades* has a painting by Anne Seelbach from his superb collection on the cover. Evocative stylist and art director for the project, Norman Moore, first worked with Andy for the memorable *Synchronicity* package. The tasteful graphic imaging, naturalist videos and exploratory soundings are consistent throughout the Private Music catalog, which includes such artists as Leo Kottke, Suzanne Ciani, Patrick O'Hearn, Ravi Shankar, Lucia Hwong and Yanni.

There's a fresh breeze blowing in from the sea nearby...

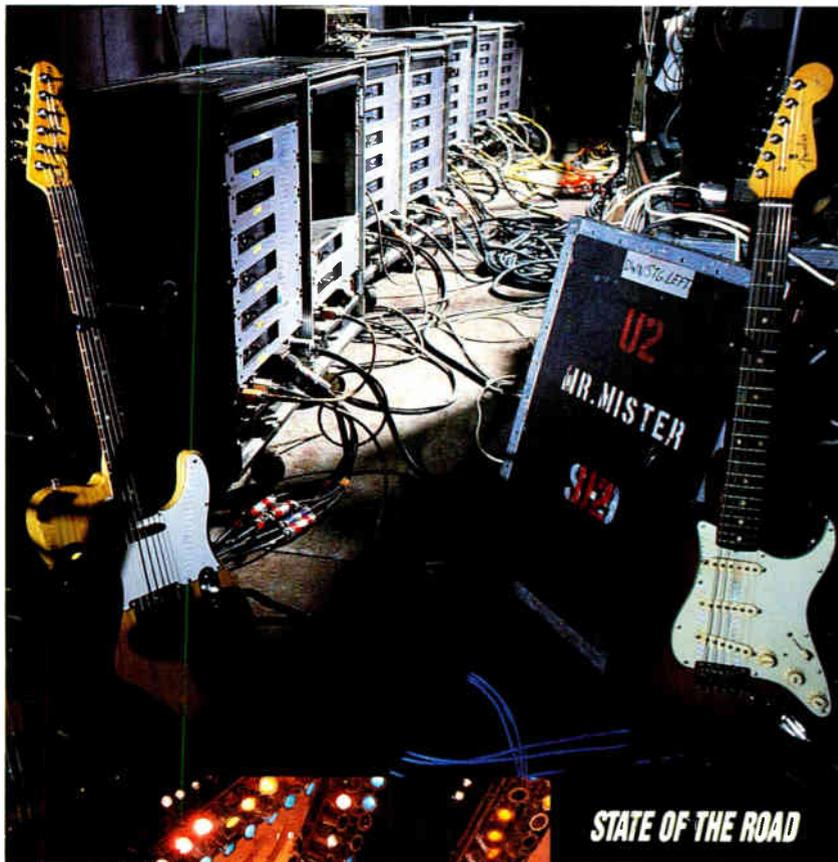
**Bonzai:** Your new album is very atmospheric, cinematic—

**Summers:** I've always been interested in this type of music. It started many years ago when I played with Dantalian's Chariot—an early acid-rock band—and then I was with a group called Soft Machine. We played pieces based on atmosphere and repetition even then, so it's been with me a long time. And then I made the two records with Robert Fripp. I put a lot of myself in those records, and you can hear a similar atmosphere in this record, although this is a purer version, more focused in my feelings.

I've always loved film music—the work of Nina Rota, for instance. Stravinsky's "The History of the Soldier" has been a big influence on my work. I feel that there is a line that goes from Stravinsky's "Soldier," to Kurt Weill's music, to Nina Rota. Stravinsky took elements of American jazz into European music and created an interesting hybrid, as did Kurt Weill. Nina Rota was an influence in terms of melodies that are non-American.

**Bonzai:** I was talking with Bob Casale, your engineer for this new album, and he mentioned that everything went very smoothly, even quickly.

**Summers:** By rock album standards, yes. Last year I made *X,Y,Z*, a rock album, with Bob, and it took many months to do. When you are doing vocals and trying to get to a very high



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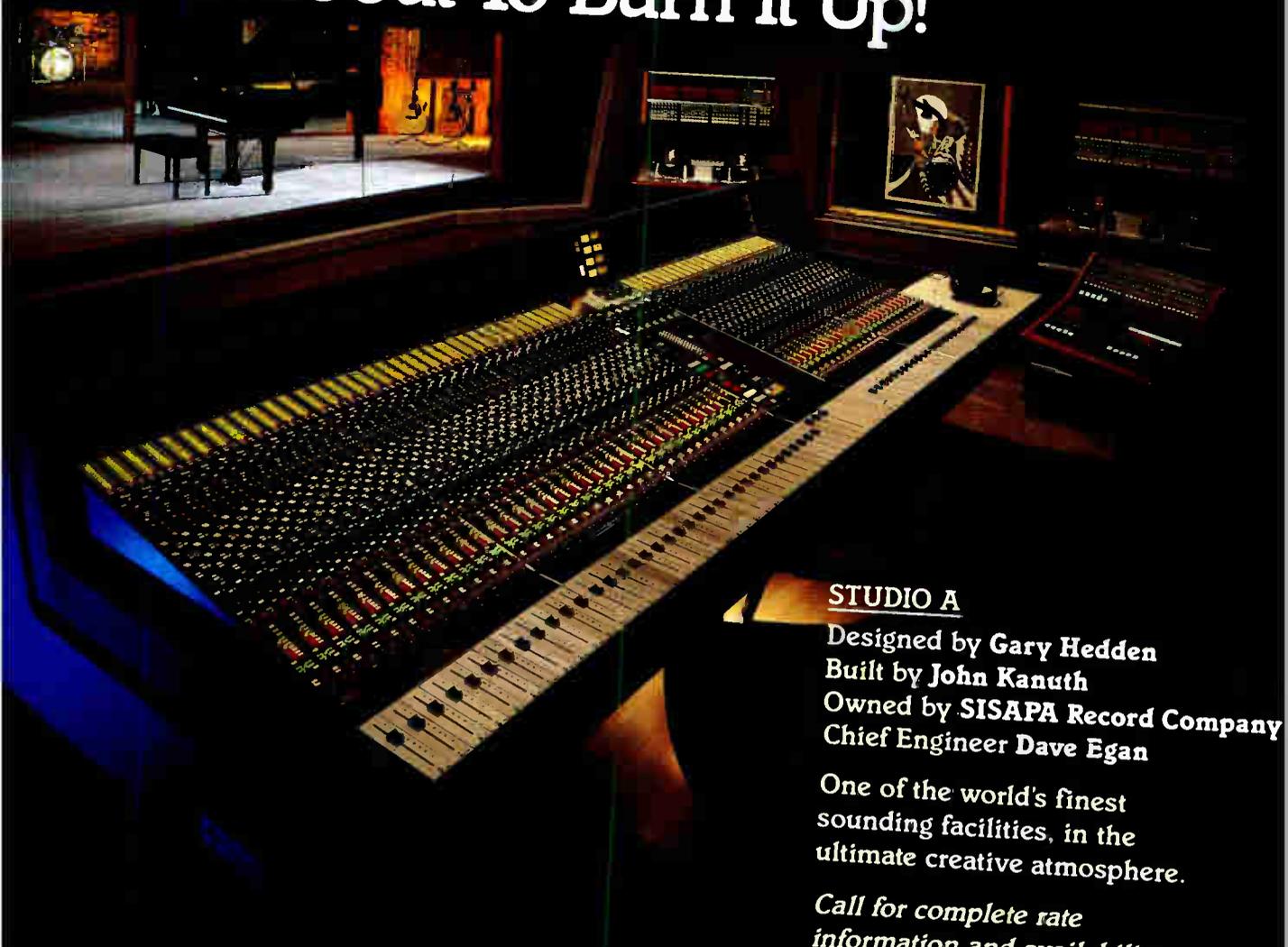
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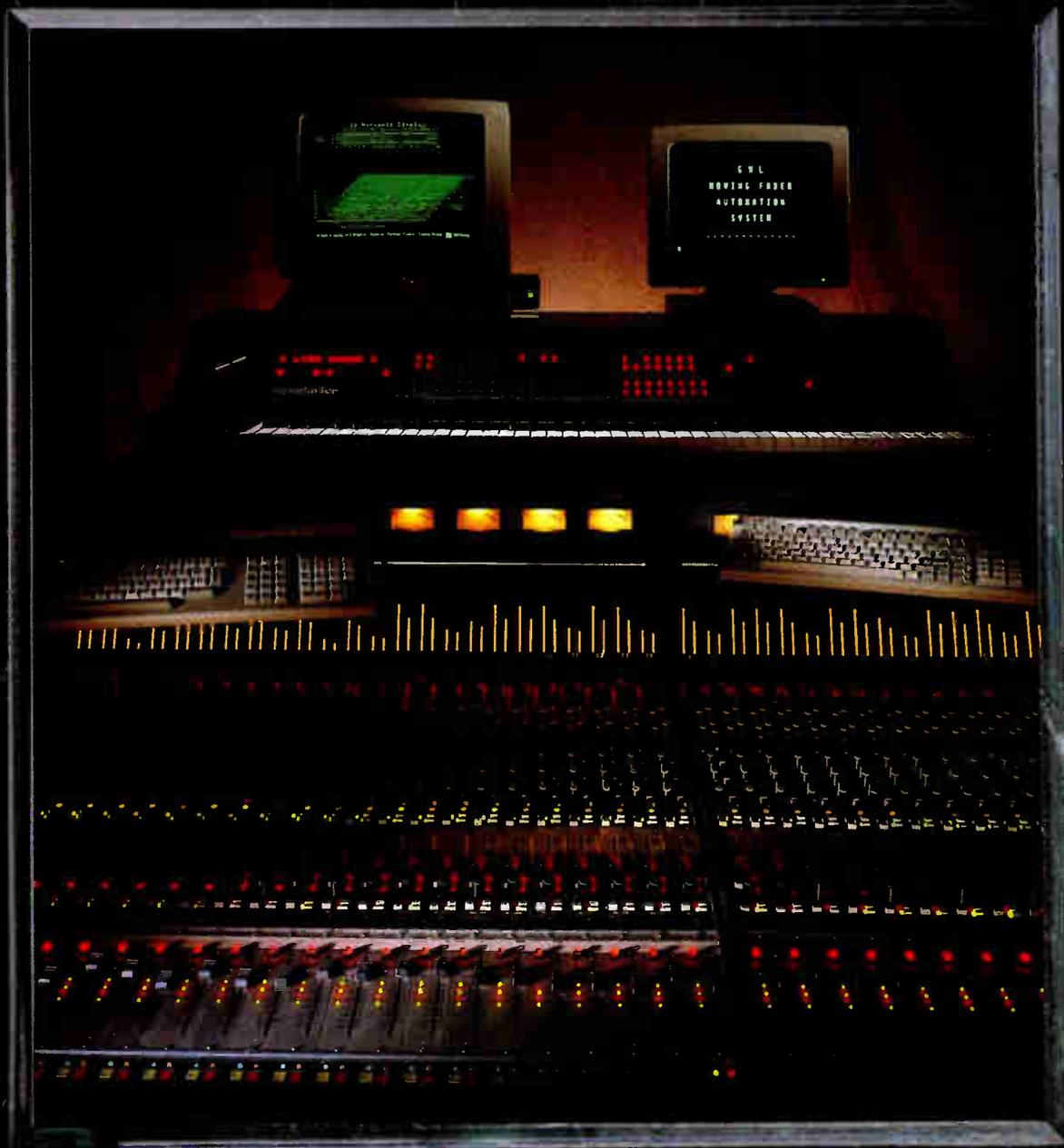
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level with progressive rock, everything has to be so perfect and all the structures and nuances have to be just right. And by the exacting nature of these projects, it's easy to lose perspective and spontaneity. It's hard work. This album took two weeks overall, four days of which I spent alone with my cassette recorder putting the ideas down. I was joined by David Hentschel for a few more days, and then we just went in and did it. David was my co-producer and produced the previous album the year before. He's an excellent producer as well as a terrific keyboardist—he's worked with Genesis, Kraftwerk, Paul McCartney, Elton John.

**Bonzai:** So it was just the two of you doing it all.

**Summers:** Yes, I had all these ideas, which were simple and in the ambient vein. David played keyboards and we worked it all out together. That helps to do it quickly, even though we wrote some of it in the studio. One of the tracks, "Train Song," came from the film score for *End of the Road*, which came out earlier this year.

**Bonzai:** You've scored two films now. How was it working on *Down and Out in Beverly Hills*?

**Summers:** It was a good experience—but a heavy one. It was the first time for me, and I worked with a fairly notorious director, Paul Mazursky. There was a lot to do. It wasn't just a simple score—I had an orchestra come in on three occasions to record. It took me about two months because Paul changed his mind a few times.

**Bonzai:** How did you land the job?

**Summers:** I had written a melody that became the theme of the film. The lucky break was that I was here in Hollywood, and by chance I had become friends with Richard Halsey, the editor of the film. He didn't tell me about the film, or who the director was, but asked me if I had something with a Debussy style. I didn't, but I had another tune and he thought it would be perfect. He played it for Mazursky, and he loved the melody and asked to meet me. We talked about the film, and he wanted a few more demos, playing around with the material. I did it and he wanted the tune for the film. That's how I got the job.

**Bonzai:** Was film scoring something

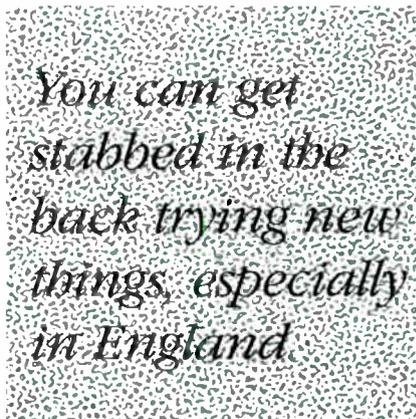
you were looking to do?

**Summers:** Yes, something that I thought would be good fun—so much new freedom.

**Bonzai:** Is this the new direction of your career?

**Summers:** It's part of the direction. I'm living in Los Angeles now, I have a studio set up and an agent to secure me work. Of course, it's not as simple as that. Unfortunately, many of the films one is offered are not interesting. I've become somewhat disenchanted with it, what with the quality of the films and the immense amount of bullshit you have to put up with if you want to be in this career. It makes you think twice about it. It's not as pure as making your own records. There's a lot of politics involved.

**Bonzai:** Is that why you have your own studio?



**Summers:** It's one of the ways of having a better chance. The reality is that you live in Hollywood and you want to score films, along with 5,000 other people. One of the ways of standing a better chance at it is having your own studio, because you can turn things around fast. And the people who hand out the jobs like to come to the place where the work is being done. It can be an important aspect. It's not the only way, but a lot of guys are doing it.

**Bonzai:** You have a new Mac II—is that part of your master plan?

**Summers:** Yes, it would be, because the basic way for me to approach most things—depending on what is needed—is to lay a lot of it, the backing stuff anyway, on the Macintosh. Then it is transferred to the multi-track. You get very clear, loud recordings this way. Then you add live instruments on top.

**Bonzai:** It sounds like you have quite

a classical background. Did you have a formal education?

**Summers:** Yes, I went to California State University at Northridge, 1969 to 1973.

**Bonzai:** And you toured with The Animals before that.

**Summers:** Yes, that's how I came to California. I was with them for about a year, and then the group broke up after our tour of Japan. I stayed on out here, tried a few things, made a solo album. My life sort of gradually broke down at that point in time. I had nothing—five dollars in my pocket. It was a pretty rough time. I ended up staying here and was teaching guitar, got married, and then entered the university to study music. I enjoyed it because I had never really studied, although I had played for a number of years. Shortly after graduating I returned to England and started all over again, in rock groups.

**Bonzai:** Before The Animals, and before college, you never had any teachers?

**Summers:** Like many people, I was self-taught. Listened to records, had two or three lessons and played.

**Bonzai:** Did you have any early heroes?

**Summers:** Well, I started out quickly as a kid—I was a complete jazz fanatic. It's probably because there was a very active jazz club in the town I grew up in, Bournemouth, on the southwest coast of England. It's the moldy English equivalent of Santa Barbara out here. Robert Fripp comes from there as well, and a number of other musicians. All my early interests were American jazz guitar players, like Kenny Burrell, Wes Montgomery, Barney Kessel. I got into playing rock a little later on, after playing for three or four years. Then I played mostly black American R&B, which was a great early grounding. Later on I got into classical music and did the whole education here. Back in England after college, I synthesized all of this together as a guitar player and started all over again.

Leading up to The Police, I was in a couple of groups—I played with Kevin Coyne and Kevin Airs, who had been with Soft Machine. There was a three- or four-year period playing with those guys.

**Bonzai:** How did you meet Sting?

**Summers:** The first time I actually met him was in a studio. We'd been

## LUNCHING · WITH · BONZAI

brought together by someone else, and halfway through the session Sting said, "You know, I was on a bill with you once." I was getting quite well known in England at the time as a guitar player. While Mike Oldfield's *Tubular Bells* was popular, there was an orchestra going around England playing the music symphonically. Sometimes Oldfield would tour with them and sometimes he wouldn't, because he was a strange guy. One night in Newcastle, I was playing instead, and on the bill in this hall was a group called Last Exit, a Newcastle fusion group. Sting was the bass player. There we were on the same stage. Another time playing in Newcastle, I was staying in the same hotel as Curved Air. Stewart Copeland was the drummer. We had a long talk, and two months later I found myself in a London studio with Sting and Stewart. We had all crossed paths in Newcastle and were brought together. I don't much believe in things like that, but there were undercurrents—of synchronicity.

**Bonzai:** Did you envision that the group would become such a monster?

**Summers:** Not really. Miles used to go on and on about how huge we were gonna be—"Bigger than the Beatles!" and all this stuff. We just laughed at him, but we did all right, actually.

**Bonzai:** Well, now that you've set up your own studio, do you have any advice for others with the same plan?

**Summers:** Don't buy anything in pink.

**Bonzai:** You've also got a reputation as a photographer—let's talk about how you got started.

**Summers:** It was always lurking; I was interested in it, but it had never taken a hold of me, maybe because there had never been enough space. I was so obsessed with music. But when I started going on the road with The Police and had enough money to buy a reasonable camera, I made a resolution to get good at photography. I started practicing with a Nikon and off I went, snapping away, and I kept all my contact sheets and studied them along with technical books.

The real thing that got me excited, in the way that music excited me, was studying great images and seeing what was possible. Basically, I tried to emulate those I considered to be mas-



PHOTO: MR BONZAI

### Andy Summers and Dennis Smith

ters. I carried books of photography around with me on the road and tried to make similar photographs—just as when you start out as a guitar player you copy licks of other people. In photography it was Brassai, Cartier Bresson, Diane Arbus; Ralph Gibson in particular, was a big influence on me. He eventually became a good friend.

**Bonzai:** Man Ray?

**Summers:** Well Man Ray is my all-time, absolute favorite. There's one of his prints on the wall over there. Anyway, it went on and on, got deeper and deeper, until I almost gave up guitar for photography.

**Bonzai:** It's interesting that you are doing film music and are preoccupied with photographic imagery. Would you consider going into directing films?

**Summers:** Anything can happen, but that would be a big step. I don't think I'm ready at this point in time. I'm really thinking more about music now, but on my next tour I plan to integrate some photography along with the playing. I'll be on the road with Tangerine Dream, playing solo, with tape loops, et cetera.

**Bonzai:** It seems that the success of The Police has given you the opportunity to try a lot of things, and have the attention necessary to succeed in new directions.

**Summers:** Yes, it's true, but it doesn't necessarily mean that you will succeed. If you've done one thing very successfully and it brings fame, you

have a platform—but you can still fall flat on your face. It's a risk. You can get stabbed in the back trying new things, especially in England.

**Bonzai:** Of all the people you've worked with through the years—who has impressed you most as a genius?

**Summers:** I think Kevin Coyne was a genius—although he was kind of burning out at the time, like a thousand watts going through a 20-watt bulb. He was difficult to work with, but he was quite exceptional—a very gifted, incredible writer.

**Bonzai:** Anyone you consider important today?

**Summers:** Well, there are always a few good people around. Joni Mitchell is outstanding and continues doing good work. In terms of popular artists—Suzanne Vega, Peter Gabriel, Talking Heads, Tears for Fears and Blue Nile. My tastes are very eclectic, actually. I check out rock groups from time to time. Been listening to Robert Plant's new album. . .

**Bonzai:** Do you like it?

**Summers:** It's OK. The first track is terrible—worst thing he ever recorded. The rest of the album is good, but I don't think it's him. It's like a pop album, and not really what he does well. I'm just not into that type of music anymore.

**Bonzai:** Let talk about the role of the engineer.

**Summers:** I basically regard the engineer as a slave, someone who does exactly as I tell them. The way I look at it nowadays, having my own studio,

it's hard to do it all yourself. There is no question that things have gotten more complex and much more time consuming. We use machines so much. I don't know if I would want to take on having a studio if it was just me on my own. I like to be free to have all my mental energy, the creativity, on the music. There is a lot of studio stuff that is horse work. I don't feel I should spend my time on all that has to be done.

You've got to work with an engineer who's got good ideas for sounds and can be creative. An engineer contributes, whether it's a miking technique or an echo setting, and you have to work with someone who is really on top of it.

Another important factor is to have someone who can work really fast. The worst thing for a musician is to sit around waiting for machines—it just kills the creativity. I want to walk in and play and be engaged in my process. Otherwise, you get an inferior product in the end.

I don't think people place enough value on the sensibilities required to keep things alive. There is so much emphasis placed on recording quality and technical matters that the essence often gets left out. As a musician, I also consider myself an actor, and I prepare for it and get into the role and psyche myself up—whether it's playing a guitar solo or working on a structure with someone. So, the engineers are really important, because they have to understand that and take the load off. I don't want to hover about and tell them everything to do. You must have someone who is really sharp and understands what it is to be a player. Most engineers play to some degree—Bob Casale has played with Devo for years, and he understands it from both sides. It is also important to find an engineer who understands the type of music you are working on.

**Bonzai:** Dennis Smith is credited with technical assistance—what is his role?

**Summers:** Dennis has been working with me for about four years now. He started when I was working on my second album with Robert Fripp, *Bewitched*, and I saw how capable and versatile he was. He was very helpful during those sessions.

**Bonzai:** Would you call him your studio manager?

**Summers:** Yes, I suppose so. He's also been on the road with me—we did a

tour with Stanley Clarke and Stewart Copeland last November. He practically ran the whole tour on his own, set my amps every night.

**Bonzai:** What about the role of the producer—what qualities are important?

**Summers:** What I want from a producer is a safety net, in a way, so I can be free to flap around in the studio and know that someone is there keeping things defined, holding the show together. I'm pretty good at doing it myself, but working with David Henschel, for instance, is great.

In The Police, we never worked with producers—we didn't need it. Before The Police, I hated the idea of producers—someone telling me what to play. My view has softened somewhat. A producer can really help a project.

The role of producer has changed these days. It's not what it once was, where the producer dictated everything. Some musicians are of such a high level, they wouldn't stand for it. The producer can make sure the project is completed and is technically superb, and the sound is right, and

that the performer is giving the best performance.

With David Henschel, I found someone who is very capable, technical, understands engineering, drum programming, and is a good player. And he doesn't impose any heavy personality things. He's good at bringing out my best. He and I have quite different personalities. He's laid back and gentle, and I'm a complete bastard. But it really works well. His musical language is also very broad, which is important for my work.

**Bonzai:** Do you think this new album will create more interest in you as a film composer?

**Summers:** Well, we've already had a few calls from people who would like to use the music in films. But my next album will be more of a guitar playing album. *Mysterious Barricades* is an ambient record, where you are not actively soloing. It's more like painting pictures in sound.

**Bonzai:** The label, Private Music, was founded by one of the members of Tangerine Dream.

**Summers:** Yes, Peter Bauman, an original member. I'm very happy to

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## LUNCHING · WITH · BONZAI

be with them, and I feel it's the right place for me to be with this type of music. Very aware people—no corporate bullshit.

**Bonzai:** For this album, the cover, the graphics, even the press material, are very well conceived. The album must stand on the merits of the music, but the presentation has much to do with opening the mind of the listener.

**Summers:** It's so important to me. Some people don't care about it, but I am very visually oriented, and to me the album package is an absolute ex-

pression of my sensibilities. The package must entirely reflect all that I put into the music, and the company let me work closely with Norman Moore, the art director.

**Bonzai:** What is your strangest characteristic?

**Summers:** I'm slowly going downhill at this point, getting more and more nervous ticks as time goes on. I am really quite strange—it got to be quite a joke with The Police. We'd book into a hotel, and I would change my room about six times until I got it right—avoiding traffic noise, the elevator. I am very picky and I like very dark

rooms.

**Bonzai:** Do you know any really good business tricks you could share with the readers?

**Summers:** Yes, I do. Don't go outside your front door—that's where the trouble starts.

**Bonzai:** Can you recall any particularly bizarre, ridiculous moments in the studio?

**Summers:** There are several, but here's one I like. It was in Montserrat for the fifth or sixth Police album. We used to do a thing called "taking people to the party." Everyone eventually gets burnt out in the sessions, and when someone would fall asleep on the couch in the control room, they would get covered with bits of scotch tape and cigarette ends and wake up covered with all this garbage. Anyone who dared to fall asleep would have it done to them. And then we would photograph them. It became a horrendous running gag.

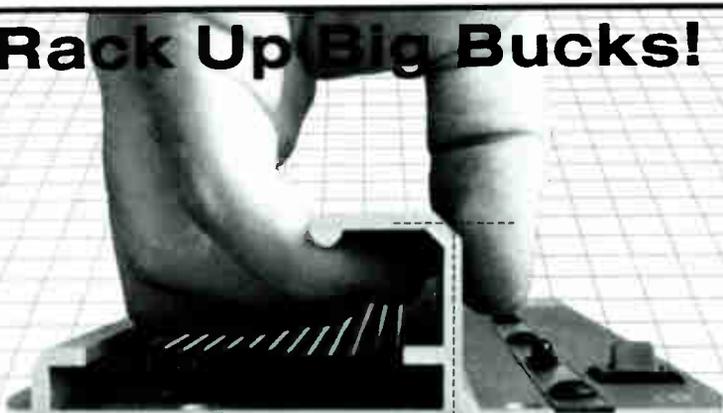
I had a Scottish roadie at the time whose name was Tam. One night, he fell asleep on the couch and started to snore. The snoring got so loud that we all stopped to listen. We lowered a microphone over his mouth and added echo and chorus and played it really loud through the monitors. We were covering our ears it was so loud. Finally it woke him up. We had it on tape—sounded incredible, like some deep-sea monster. From then on, when one of us went into the studio to do an overdub and came back into the control room and asked enthusiastically, "How was that?" nobody would say anything—and then the snore would be played.

**Bonzai:** Would you consider yourself a gambler?

**Summers:** I would, definitely. I've taken plenty of risks. I've never been afraid to move anywhere and start a new life, or risk, financially. You don't always win, but I think it's extremely important to take risks in life and take your chance. Otherwise, life never moves forward. You've got to do it, especially if you are a musician or an artist of any sort. You have to take risks artistically, and risks in your life. ■

*Mr. Bonzai, a 15-year veteran of the music industry, is former manager of a major Southern Cal recording studio, and author of Studio Life: The Other Side of the Tracks (Mix Publications).*

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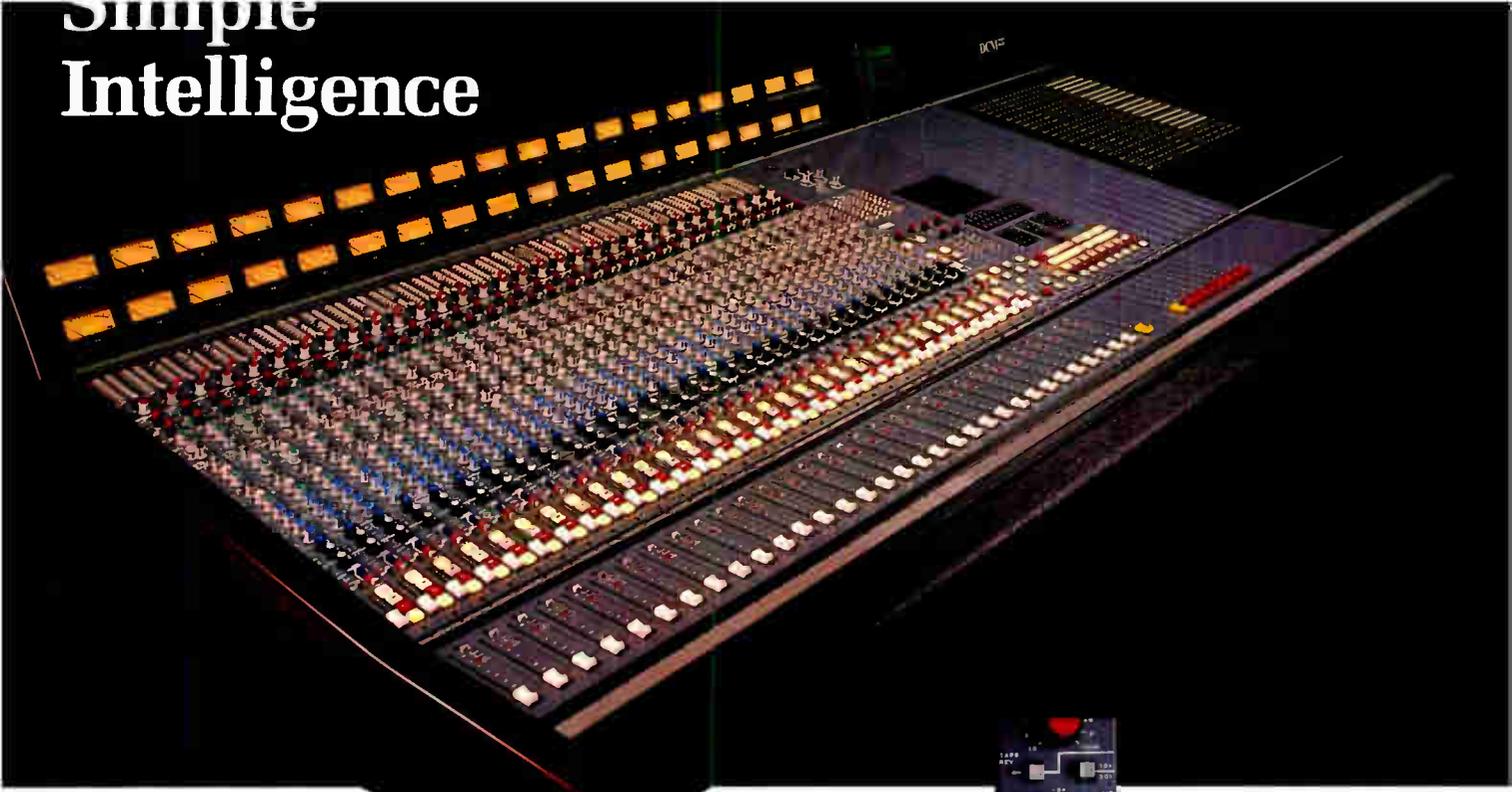
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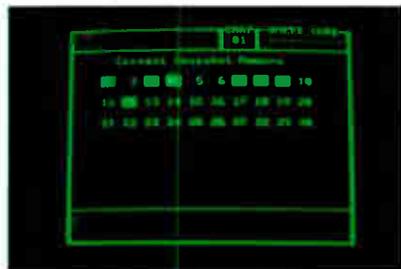
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by Mark Herman

# SOUND REINFORCEMENT NEWS

Business is booming this year! Nearly all the major and regional sound companies have reported full agendas this past summer. 1988 is well on its way to becoming one of the better years in our industry's history.

Like all the other large sound companies, Canadian-based **Audio Analysts** enjoyed a very productive touring season. Audio Analysts spokesman **Albert Leccese** stated, "We've been busy. Everything was out this summer, there was nothing left equipment-wise hanging around. And I expect us to keep at least 75% of the gear busy through the fall. The winter season is too far away to predict accurately yet, but if everything goes as expected we will have had a very good year." Leccese reports systems out with teen queen **Tiffany** (see *On The Road*), **Freddie Jackson**, **Bryan Ferry**, **The Scorpions** and **Pat Benatar**. . . The gigantic **Monsters of Rock** tour ended in late July. For that tour AA hung over 60 tons of sound equipment from an outdoor roof for each show, and 11 48-foot trucks were required for the sound equipment alone. . . The new CADD DL-1 digital crossover was used on the Monsters of Rock tour and is slated for The Scorpions and Pat Benatar tours. . . This fall the new CADD house and monitor consoles are scheduled to be put to the test on upcoming Audio Analysts tours.

New York's **Andrews Audio Tours** is becoming increasingly involved with sound reinforcement for assorted major events centered around the New York area. Owner **David Andrews** explained that his company's booking direction is now more oriented toward "events such as television, industrial shows, large festivals and municipal programs. There are more chances for us to utilize our company's special talents this way and make

a little more profit for our labor. And I especially like high visibility live media events that demand the best in personnel, equipment and preparation." . . . Andrews Audio has one of the largest Meyer P.A. inventories in the country, with over 100 MSL-3s, four complete monitor rigs, loads of UPAs and 650 subs. . . Among the events worked in the past few months were: the *Daytime Emmy Awards* live on CBS; nine days of the **JVC Jazz Festival** in New York City, which featured various performers at locations such as Carnegie Hall, Avery Fisher Hall and Town Hall; the **Queens Festival**, a huge block party for the borough of Queens with various national acts entertaining enormous crowds over two days; the first **NY International Festival of the Arts in Central Park**, with events spread over a month (the final event, seen by around 100,000 people, was the American Symphony Orchestra with **Placido Domingo**, **Linda Ronstadt** and **Gloria Estefan**; 40 MSL-3s were used); the **9th New Music Seminar** for independent record producers and companies, which attracted thousands of professionals; a series of outdoor happenings at Lincoln Center in NYC with hundreds of different acts performing for a month-long festival (the agenda saw incredibly varied daily events ranging from Caribbean Day, Hispanic Day, Bluegrass, Clown Day and Square Dance Day, to sophisticated symphony and orchestra shows); and two weeks of rehearsals and a show with Japanese musician **Ryuichi Sakamoto** (known for his music in the movie *The Last Emperor*). . . New purchases of Meyer P.A. and monitor gear, and Crown Macro-Tech 2400 amplifiers were added to Andrews' equipment stock.

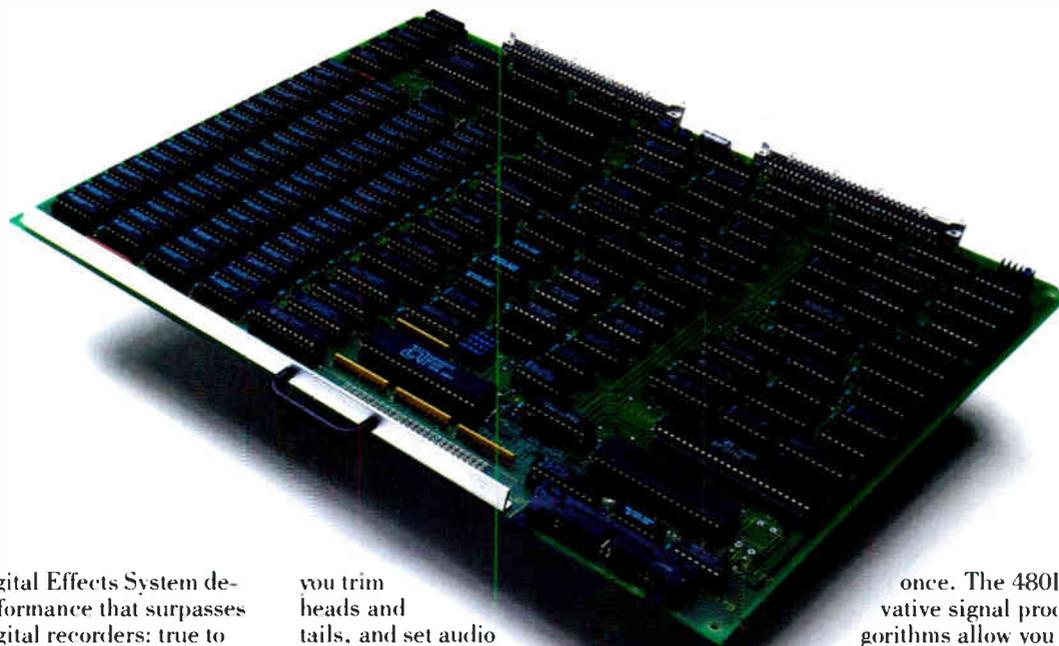
**Off to the Races!** This summer

saw **Roadworx Audio & Lighting Specialists**, the touring division of **Woodworx Audio Enclosures**, based out of Greensboro, NC, provide production for the **Charlotte Motor Speedway World 600** stock car races. 180,000 fans were treated to pre-race festivities with national music acts, skydivers and air shows. . . Additional work included sound for a local jazz festival and two of the musical stages at the **Chattanooga Riverbend Festival**, as well as the vocal/announce reinforcement for the festival's Formula One powerboat races. For the races, a special 360-degree speaker array with 18 JBL-loaded enclosures was built. The system is designed to suspend from a crane and does not have to be disassembled when lowered if the suspension source is required elsewhere. . . Also reported was tour work with country veteran **Waylon Jennings** (see *On The Road*). . . Roadworx designs and builds all of its own speaker cabinets through Woodworx Audio Enclosures. They have two major systems, one TAD and one JBL, plus smaller systems. Woodworx house and monitor cabinets have been sold to other sound companies in the United States.

**Around the World.** . . Console manufacturer **DDA** reported that Spain's largest sound company, **Triple Onda**, ordered four large D Series consoles. Triple Onda will own 11 DDA consoles upon delivery. . . **JBL** reached an agreement with mainland China to install speakers and electronics in the **Great Hall Of The People** in Beijing. The massive complex houses the central government and is the site of all important official state functions. **Advanced Communications Electronics**, Hong Kong, is JBL's distributor for China. . . Canadian amplifier company **Bryston** was

# EXPANDING THE SYSTEM

*The 480L Sampling Memory Expander. Accurate sampling in phase-locked stereo:  
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The 480L Digital Effects System delivers audio performance that surpasses conventional digital recorders: true to life sampling is a prime example of its advanced engineering. With the optional Sampling Memory Expander, the 480L becomes an astonishingly practical way to copy or move several seconds of audio from point A to points B and C.

Until now, "flying in" or "slipping" vocal and instrumental overdubs meant tradeoffs. Two-track tape is clumsy and degrades the signal: DDLs with long memories are better, but not by much. Now, with the 480L's optional Sampling Memory Expander, you can digitally record 10 seconds of true phase-locked stereo or 20 seconds of mono at a 48 kHz sampling rate, 18 bit equivalent A/D conversion produces a typical dynamic range of 98 dB, with a bandwidth of 20 – 20,000 Hz: output doesn't get any closer to input.

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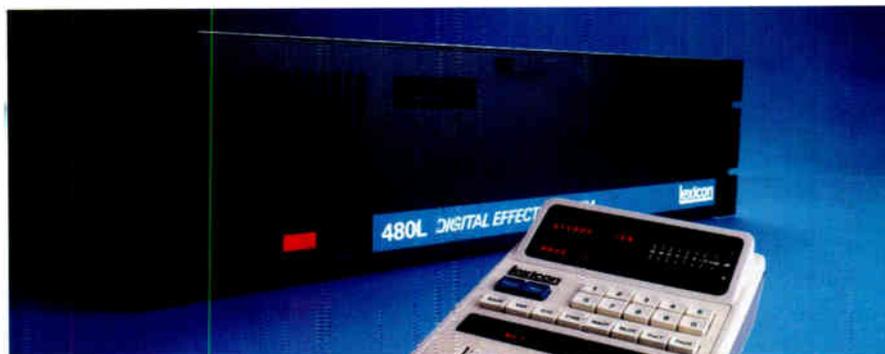
You control sample recording, editing, processing and triggering from your work position using the 480L LARC. Varying up to six parameters at once,

you trim heads and tails, and set audio trigger levels. Audio trigger response time, incidentally, is under 300 microseconds — virtually instantaneous. Sampling Memory Expander enhancements include Record Trigger to trigger sampling automatically from audio input, Time Variant Record, and sound on sound digital recording in sync with the original sample. Lexicon Dynamic MIDI® lets you assign MIDI controllers to sampling parameters, for new dimensions of real-time or sequenced control.

Sometimes even the most accurate replica isn't exactly what you're looking for: if so, the 480L will take you beyond imitation into creative sampling. Play samples faster or slower (without changing the sampling rate), backwards or forwards, even both at

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## SOUND · ON · STAGE

selected to provide power for the new Toronto Skydome, which features a retractable roof. Over 150 4B Pro amps will be used. . . **BSS Audio** and **Turbosound** will now be distributed by **Edge Distribution Corporation**. Previously Turbosound handled its own distribution, and BSS was affiliated with Klark-Teknik. . . The popular Latin American band **Los Bukis** recently purchased 64 QSC Series 3500 amplifiers for their new touring system that uses Electro-Voice speakers with Soundcraft and Yamaha consoles. . . **MicroAudio** reported the sale of 91 1/3-octave, programmable, tamper-proof equalizers to the **Royal Hong Kong Jockey Club Shatin Race Course**. An IBM PC controls all 91 equalizers. **Audio Consultants** of Hong Kong, in conjunction with London's **Shuttle Sound**, will handle the installation. . . Pro audio distributor **Musik Produktiv** has taken delivery of the first of several **Gamble Series EX 56x30** house consoles ordered. Located in Ibbeburen, West Germany, Musik Produktiv is Jim Gamble As-

sociates' exclusive agent for all European sales.

Soundcraft 8000 consoles have recently been sold to **Sound Southwest**, the **Central Church of God** in Charlotte, NC, and the **Club Casino** in Hampton Beach, NH. . . **Pro Tek Audio**, Kansas City, KS, purchased a Soundcraft Series 500 40x12 monitor console to complete their touring system that also includes a Soundcraft 8000 40-channel house console and 32 composite cabinets.

**Rocky Mountain Sound** is a concert sound company in Vancouver that has been in business since 1979. They have another branch in Calgary, Alberta, and primarily do regional touring throughout western Canada. Current road work is with **Doug & the Slugs'** Canadian tour. . . Speaker cabinets for their main system are from Canadian speaker manufacturer **Adamson Acoustic Design Corp.** It is a compact, flyable, 2-box 3-way system matched with a BSS FDS 360 crossover system utilizing special Adamson-provided EQ cards. . . Amplification for their 50 Adamson enclosures (25 stacks) are QSC MX2000s for the bass

bins and 1500s for the mids and highs. **Bryston 4B** amps power three complete monitor rigs and several smaller P.A. systems. Consoles used are a Yamaha PM-3000 40C, Soundcraft 500 and 600 (32x8 with a patch bay), as well as a TAC Scorpion. . . According to owner **Fred Michaels**, past work over the last two years included providing Vancouver's **Expo '86** with an on-stage monitor rig, and leasing a sound system to a major Vancouver nightclub. The **Expo Theater** concert venue, reopened during the summers after the exposition closed, has been using a house and monitor system to service the national acts that pass through. . . Rocky Mountain also had a lot of work at the **Summer Olympics** through their Calgary office. Bose was the official Olympic audio supplier, but much of the sound reinforcement was handled by companies such as RMS. . . Additional summer work involved various music events in conjunction with the famous **Calgary Stampede**.

**More console news:** Manufacturer **Harrison Systems** in Nashville, TN, produces both recording and live



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for our Turbosound TMS-4s to protect the cabinets during trucking. Previously we used vinyl covers, but they didn't last. The truck pack is easier now also."

**Finally** . . . There are two new products from out of the blue that have the potential to make quite an impact in their respective fields. One is now currently available from a relatively unknown Canadian speaker manufacturer, Adamson Acoustic Design Corporation. Using non-traditional

design formulas put forth by **Dr. E.R. Geddes**, Adamson has developed a very high output loudspeaker system for the sound reinforcement industry . . . And the high-end live console market will soon see the introduction of a new player, **Audio Teknology Inc.** Designed to operate as a house or monitor board, it will feature an impressive list of functions, including signal processing on each input. Expect it to be released soon . . . This is

all I'll tell you about these two products until next month!

*Got any news? Call (415) 726-2428, or send press releases, photos, etc., to: Sound Reinforcement News, Mix Publications, 6400 Hollis Street #12, Emeryville, CA 94608.* ■

*Author Mark Herman owns Hi-Tech Audio, a sound reinforcement company specializing in console rentals.*

by Mark Herman

# ON THE ROAD

## SOUND COMPANIES, EQUIPMENT, ARTISTS & PERSONNEL ON TOUR

Artist Sound Company Tour Dates & Region	House Console #1 House Console #2 Monitor Console #1 Monitor Console #2 Crossovers	Main Speakers Other Speakers Subwoofers Monitor Speakers	Main Amplifiers Other Amplifiers Sub Amplifiers Monitor Amplifiers	Engineers: (B) = band (H) = house (M) = monitor
Crosby, Stills & Nash Maryland Sound Ind. June-Sept N. America October, Japan	Yamaha PM3000 40x8x2 ----- Yamaha PM2000 32x12 Yamaha PM2000 32x12 Yamaha	48 MSI/NW2 ----- 8 NW2B Subs MS 2x12, 2x15	Crest 7001 & Ramsa 9220 Crest 8001 Crest 3501, 4001	Stanley Johnson (B,H) Rance Caldwell (M) Bruce Emerick Carlton Brown
Bob Dylan Ultra Sound June-Oct U.S.	Gamble HC 48x16x2 ----- Gamble SC 32x16 ----- Meyer	44 Meyer MSL-3 ----- 16 Meyer 650R2 Meyer UM-1, UPA, MSL-3	Crest 4001 ----- Crest 4001 Crest 3001, 4001	Dave Rob (H) Keith Dirks (M) Robert Fuzzy Fraizer
Waylon Jennings Roadworx Ongoing U.S.	Soundcraft 8000 40x8x2 ----- TAC Scorpion 30x12 ----- BSS 360	16 Woodworx SR-1 ----- ----- Woodworx WXM 1251 WXM 1265	Crest 8001, 4001 ----- ----- Carver 1.5	Hugh Servis (H) Dan Laveglia (M) Billy Thornton Ray Rider
Huey Lewis Sound On Stage Aug-Sept U.S. Oct-Dec Europe	Gamble EX 56x16x2 Soundcraft 800 32x8x2 Gamble SC 32x16 ----- SOS	40 Power Physics 842 20 Cutlass 6 Power Physics 442 SOS Power Physics Custom	Crest 4001, 2501 Crest 4001, 2501 Crest 4001 Crest 4001, 2501	Mark Deadman (B,H) Jim Moran (B,M) John Taylor Roger Rifkind Ricardo Caltigorne Dave Muzzini
James Taylor Showco July-September N. America	Harrison HM-5 32x16x2 ----- Yamaha PM3000 40x8x2 ----- Showco	32 Prism (8 columns) 8 Prism 8 Prism Subwoofer Showco BFM 500	Crown PSA2, MT1200 Crown PSA2, MT1200 Crown MA2400 Crown MT1200	Mark Hughes (H) Randy Hutson (M) Bill Scheppell
Tiffany Audio Analysts Spring-Oct U.S.	Soundcraft Series 4 40x16x2 ----- Gamble SC 32x16 ----- JBL 5234	24 AA Arena ----- AA 2x15, 1x15	Phase Linear 700 ----- ----- QSC 3800	Mario Leccese (H) Hoss Keifer (M) Tiny
Kenny Loggins Clair Brothers Aug-Oct U.S.	Yamaha PM3000 40x8x2 Yamaha PM3000 40x8x2 Harrison SM-5 32x16 ----- Clair Custom	32 Clair S-4 ----- 8 Clair C-4 Clair Custom	Carver 2.0 ----- Crown PSA2 Carver 2.0	Terry Nelson (B,H) Alan Richardson (M) Bob Weibel Blake Suib

by Craig Anderton

# NAMM

## SUMMER REPORT, PART TWO

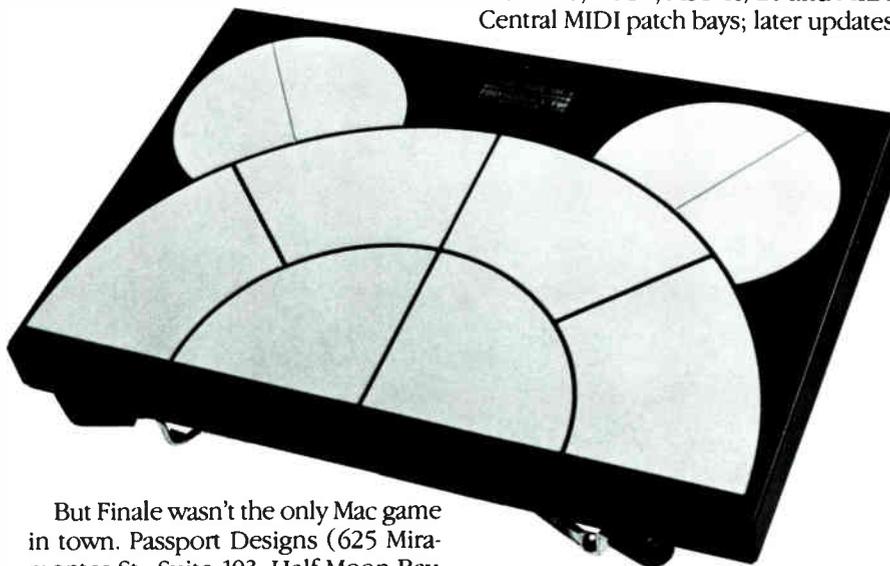
**L**et's continue with our coverage of some of the new musical products and technologies unveiled at the Summer Expo of the National Association of Music Merchants, held June 24-26, 1988, at the Georgia World Congress in Atlanta.

### Software

The next Big Thing in music software is definitely music transcription. Coda Music Software (1401 E. 79th St., Bloomington, MN 55425; [800] 843-1337) got the lion's share of attention with their splashy official debut of *Finale*, a music transcription package for the Mac. *Finale*'s main claim to fame is that it is particularly adept at translating real-time performance into sheet music—not an easy task. An IBM-compatible version is slated for introduction in December.

your scrawl and inserts the appropriate note symbol. Another Mac program, *Encore* (\$395), transcribes and prints out MIDI File-compatible sequences. This would be a good way to turn *Master Tracks Pro* sequences into sheet music. IBM users were not left out in the cold, either; Oberon Systems (3815 W. Burbank Blvd., Burbank, CA 91505; [818] 954-9591) showed their *Oberon Music Editor* (\$695), a music typesetting system that lets you typeset text and music together. It also includes 180 preprogrammed macro keys and 27 preprogrammed style sheets that can be modified as needed.

CTM Development (Box 996, Menlo Park, CA 94026; [415] 323-5054), makers of nifty Mac utilities, showed *Patchworks* (approx. \$125). This MIDI patch bay graphic editor works with the MX-8, MSB+, MSB 16/20 and MIDI Central MIDI patch bays; later updates



But *Finale* wasn't the only Mac game in town. Passport Designs (625 Miramontes St., Suite 103, Half Moon Bay, CA 94019; [415] 726-0280) showed the *NoteWriter* music engraving system (\$295). One of its most impressive features allows the operator to rapidly sketch notes; the program interprets

will accommodate additional units. Intelligent Music (Box 8748, Albany, NY 12208; [518] 434-4110) can also be counted on for interesting programs, and this show was no exception. New

**KAT's MIDI DrumKAT features ten velocity-sensitive pads and memory storage for up to 32 "kits."**

packages for the Atari ST include *Cartographer 1.0* (\$100), which controls all functions of the Axxess Mapper, *MidiDraw* (\$95), a graphics/music program where drawing with the mouse produces music, and *RealTime*, an interactive software sequencer that's almost more of a live performance instrument than what we normally think of as a sequencer.

### Yamaha

Perhaps inspired by Roland's absence at the show, Yamaha (Box 6600, Buena Park, CA 90622-6600; [714] 522-9011) put on a massive new products blitz. The star of their show was the G10 MIDI Guitar Controller and G10C Guitar MIDI Converter (\$2,495 for both). Eschewing traditional pitch-to-MIDI conversion techniques, the G10 uses a sonar-based dedicated controller to provide excellent tracking and fast response. Yamaha thinks they're on to something here; guitarists might balk a bit at the price, but the G10 may be the mass-market MIDI guitar that has so far eluded the industry.

But it was the Professional Audio Division that really heated things up. Their DMP7D Digital Mixing Processor (\$5,995) resembles the DMP7, but has digital inputs and outputs for interfacing with digital recorders and other digital formats. Interfacing is provided by the IFU series of devices, which range from \$595 to \$875, and lets the DMP7D talk to Sony PCM-3324 DASH, Sony PCM-1610/30 or Mitsubishi Pro-Digi formats (a separate interface is required for each); there's also a word clock/bit clock interface for general purpose digital audio systems. If you still want to deal with the analog world, adding an AD808 8-input A/D Converter (\$4,995) and/or a DA202 D/A Converter (\$1,195) will do the job. Finally, the FMCI Digital Format Converter (\$595) converts Yamaha's proprietary digital format to unbalanced SDIF-2 (Sony), CD/DAT and AES/EBU formats. It's unfortunate that there are so many "standards," but since there are, it's a good sign that at least one company is trying to accommodate them all.

—CONTINUED ON PAGE 184



## How to keep an 8-inch splash from getting lost in the crowd.



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Kenny Aronoff

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by Paul Potyén

# RECORDING IN CANADA

## THE MAPLE BRANCHES OUT

**I**t's no secret that the face of the audio recording industry is changing fast. Nowhere is that fact more evident than in the major urban centers of Canada. A *Mix* sampling of various industry observers, movers and shakers revealed a continued trend toward specialization in areas of album production, industrial and A/V produc-

tion, jingle production, and TV and film post-production. Many of those we talked to attributed this to the wealth of creative talent available in Canada, as well as the presence of a growing number of independent record companies, often formed with the help of various agencies of the Canadian government.

It's safe to say that new audio branches are sprouting every day from the trunk of the Canada Maple.

### Toronto

Home of The Canadian Academy of Recording Arts & Sciences and the

Canadian Recording Industry Association, as well as most of the major record labels and manufacturing facilities, Toronto is unquestionably the business center of Canada's recording industry. That fact, coupled with a thriving television production community, makes the Toronto area a logical choice for a successful recording studio. Cherry Beach Sound, Comfort Sound, Eastern Sound, Inception Sound Studios, Kensington Sound, Magder Studio, Manta Sound, Studio 306 and Wellesley Sound Studio are among the many 24-track facilities located in and around the Toronto area.

• • •

"Our viewpoint is not based so much on the record industry as the video post-production industry," states Doug

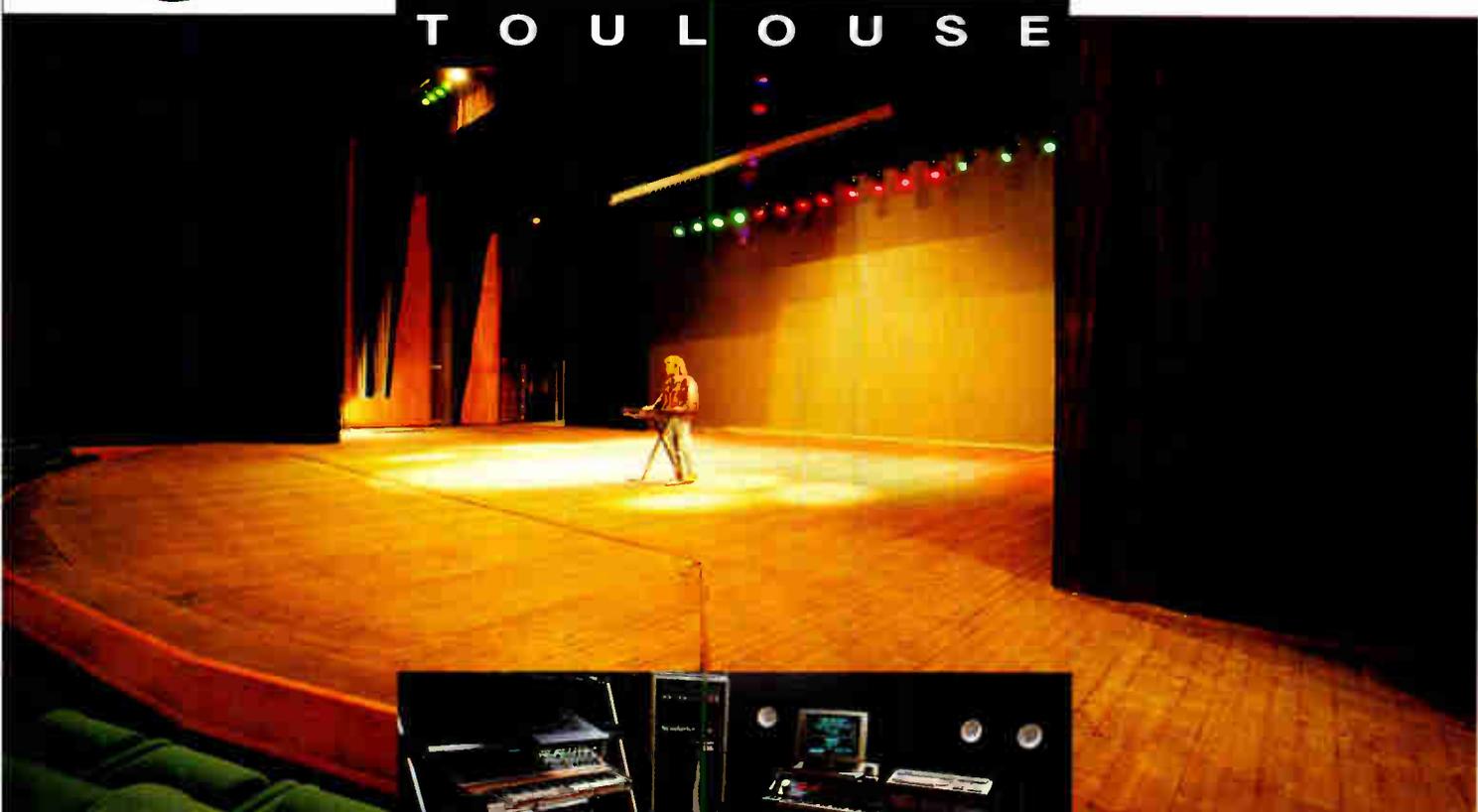
**Shown below is the newly completed Scoring Stage at Master's Workshop outside Toronto. At left, Theatre III is designed for mixing film and TV, and is equipped with a customized 56-channel Neve console.**



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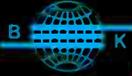
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## INTERNATIONAL · UPDATE

McKenzie, owner of Master's Workshop in Rexdale, Ontario, a suburb of Toronto. The company was started 15 years ago as a music demo studio. Says McKenzie, "In 1980, I felt from the changes I saw taking place in the marketplace—the needs in the broadcast and film sectors for better sound, faster turnaround times, all those sorts of things—that it was time to redirect our company into post-production. We dedicated ourselves to that end, even to the extent of turning down any record-related work."

The company began R&D programs to develop computer technology and multi-track systems for post-production. It was at that time that McKenzie met Bob Predovich, who is now Master's Workshop's vice president and general manager. When they met, Predovich was head of audio at a major television company in Canada, and an expert in the field of time code synchronization post-production techniques. They saw eye to eye on the future, and he came to Master's to help with the development of this new operation. One result was the Sound Master Integrated Audio Editing System and the eventual formation of a sister company to develop, manufacture and distribute it worldwide. Another result was the expansion of Master's Workshop from a company employing seven people and two studios to 30 people and 12 studios. The facility currently includes six 24-track edit rooms, a 48-track TV/music mixing room that looks out to a new scoring stage, a 24-track ADR room, a 24-track Foley stage, a 48-track digital feature film mixing theater, and a 24-track interformat suite with film dubbers and a transfer bay. The growth rate in the last five years has been 40%. With the latest addition of the new scoring stage, McKenzie affirms, "We're sort of creeping back into music by doing scoring for films."

"About 70% of our work is analog," McKenzie estimates, "but as we move more and more into feature films, that's where we see the use of digital. Last year we did ten television series, three or four miniseries and a couple of made-for-TV movies. In Canada we have the Gemini Awards, which are the equivalent of the Golden Reel Awards in the States. We've won Geminis for *The Sword of Gideon* for

HBO. This last spring we also won Golden Reel Awards in the Series (*Captain Power and the Soldiers of the Future*) and Miniseries (*Ford: The Man and the Machine*) categories."

Current film projects include work on a Dolby Stereo picture tentatively titled *Ladykiller*, produced by Stephen Stern of Sharmhill Productions.

• • •

Another of Toronto's larger facilities, Sounds Interchange Inc., has recently undergone extensive remodeling of each of its five rooms. In two rooms they installed Neve V Series consoles, and each room contains Studer A820s with SR cards. Other equipment includes two Mitsubishi Westars and one SuperStar.

"We get tons of commercials, a lot of television work and some albums," remarks Sounds Interchange studio manager Peter Mann. "Our TV work is mainly Canadian and U.S. cable. In addition, we've recently done a couple of sessions for Bruce Hornsby, and there have been some projects by Canadian artists like The Parachute Club and The Nylons."

Mann offers this perspective on the recording scene: "Our experience is that there is less and less album work and more and more post work. Mainly that's because of the difficult state of the Canadian record industry. I think it stems from the radio stations. Twenty years ago, when I turned on a radio station, chances were good that it would be playing brand new music. Today I have a hard time finding one that plays current music. It's all stuff that I used to listen to when I was young. All the kids that we have working in duplicating here are listening to and buying what I listened to 20 years ago. They buy it on CD now, but they're still buying Led Zeppelin. Somewhere in the early '70s, when everybody was building recording studios to make albums, it was because everyone was buying tons and tons of records. That was the weekly entertainment. Now they go out and buy a CD of *Sgt. Pepper*."

• • •

Mississauga, about 20 minutes west of Toronto, is the site of Metalworks Recording Studio. It's primarily an album-oriented studio and gears its business for rock. Metalworks has been used for projects by Canadian bands Red

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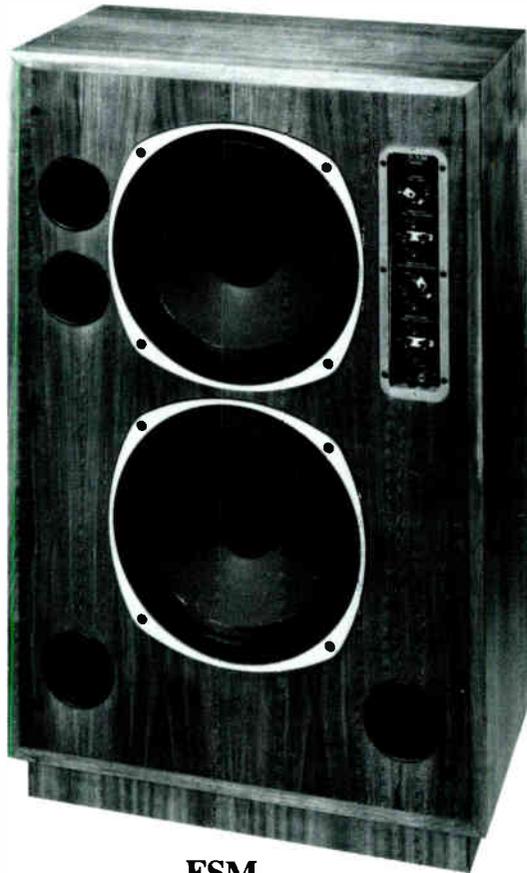
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Rider, Haywire, Platinum Blonde and, most recently, Dan Hill. Laurie Kaake, assistant manager of the facility, reports that among the latest developments is the installation of a new SSL G Series console.

"We work very closely as well with a Canadian funding organization called FACTOR [Foundation to Assist Canadian Talent On Record]," explains Kaake. (See *Mix* November 1987 article on Canadian Recording and Media Production.) "FACTOR has video grants, album grants and grants for other kinds of creative projects, as well as new talent demo grants, which is what we usually see. The new demo award is usually a \$3,500 grant that the organization gives hands to do a quality demo of about three songs. The latest band to come in here under that program was Rendezvous Midnight. There was also a female vocalist named Sue Corrigan, and there's a very well known writer up here named Omar Ales. They do a basement recording and submit it to FACTOR, which has a board of about 15 industry people, ranging from studio managers to record company executives and musicians. This board makes the decision about which bands are best qualified to receive funding.

"Our most recent releases up here, *Honeymoon Suite* and *Glass Tiger*, have placed very well on *Billboard*, but in general we've had an awfully hard time getting our artists known down there [in the U.S.]," laments Kaake about a common Canadian dilemma. "It's a well-known fact that the first priority for the bands up here is to get State-side recognition."

### Quebec

Another lively stage for the recording industry is the province of Quebec, with its urban centers of Montreal and Quebec City. Le Studio Andre Perry is internationally recognized as a world-class audio and video recording and production facility. Other well-equipped studios in the area include Cinar Studios, Inter-Session, Les Studios Marko, Montreal Sound, Studio Place Royale and Studio Tempo.

• • •

Studio Vert, located several hundred miles to the northeast of Toronto in the mountains outside Quebec, is an-

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## INTERNATIONAL · UPDATE

other studio that has been working with various recording artists and a Canadian funding agency. With help from MusicAction, the French counterpart to FACTOR, owner Pierre Tremblay is establishing a new record company as a spin-off from his studio.

"It's a new age label, tentatively called XYZ Records," says Tremblay. "The first artist to be recorded and released is Champagne. We expect the first release to be out by the beginning of October. Distribution will either be through a Canadian company

called Fusion 3 or through PolyGram. It will be partially funded through MusicAction. At least 75% of all the recording projects in Quebec are granted in this way. The program is open to all styles of music, including classical, pop and jazz, in either French or English."

### British Columbia

If Toronto is Canada's business center for the recording industry, then at least in terms of creative talent, Vancouver is Canada's version of Los Angeles. The Pacific Music Industry Association recently completed a study for

the Department of Communications on the status of the music industry, and according to PMIA director Geoff Halton, "One of the things we discovered was with one major record label, 50% of their new artist submissions came from BC." So it's not surprising that British Columbia is also fertile ground for studios.

• • •

Vancouver's Mushroom Studios is home to a legacy of highly successful album projects for artists like Heart (*Dreamboat Annie*) and Loverboy (*Get Lucky and Keep It Up*).

Mushroom's studio manager Linda Nicol explains, "We've been extremely busy, mainly with album projects." Between last October and this February the studio was involved in the production of a debut album for CBS by Barney Bentall & the Legendary Hearts. The group brought in David Tickle from L.A., who has worked with a lot of major artists. Mushroom's involvement in a Red Rider album project for Capitol Records was completed in the first part of July. They worked with producer Don Gehman, who has worked with John Cougar Mellencamp.

"We've also done several albums for local artists, such as Skinny Puppy," says Nicol. "Their record company gets a lot of its funding from FACTOR. Most of the projects that come in here are basically label-subsidized or self-financed."

• • •

Another album-oriented facility is Vancouver's Little Mountain Sound Studios. The complex actually comprises four studios, three of which are 24-track rooms. One is equipped with an SSL 4048 console; the other two have Neve boards.

"In the past two years we've done everything from Bon Jovi and Aerosmith to Whitesnake and Kingdom Come," comments studio manager Alison Glass. "We have Bon Jovi in the studio now doing their next album. They'll be finished at the end of the month, and then we start on The Cult and finish out some stuff we did with Blue Murder. Then we'll be doing some things with Motley Crue. Aerosmith will be coming back in January, then Kingdom Come in April."

Plans are to install a recently purchased SSL G Series console into Stu-

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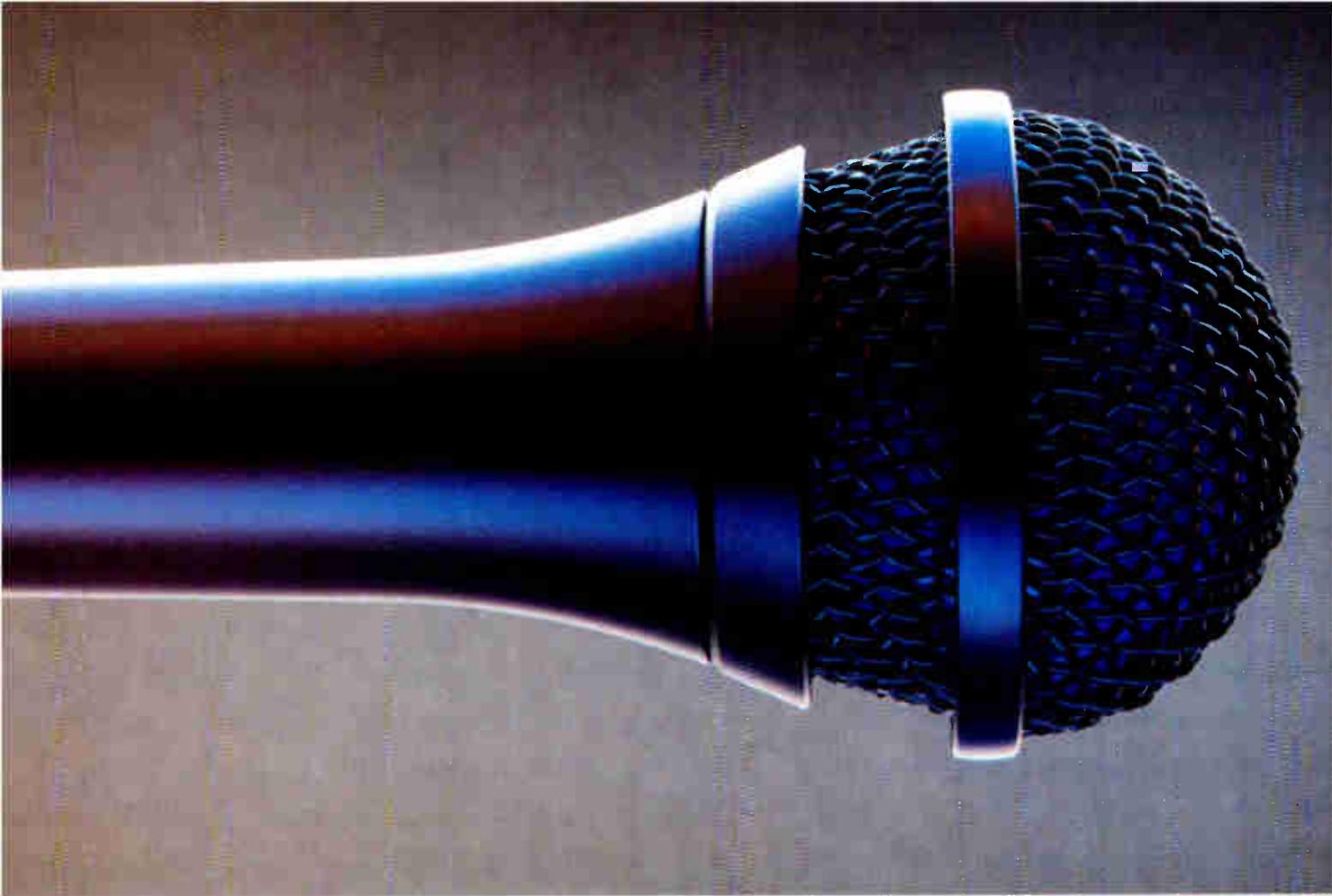
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## INTERNATIONAL · UPDATE

dio A, and the SSL 4048 will then go into B with the computer. By the first part of September, tracking will be done in A, and B will be used for mixing.

The big room is capable of handling a 65-piece orchestra, and in fact the *Platoon* soundtrack was recorded there. "We've done a lot of TV movies for MGM," says Glass, "but we're willing to preempt that room to be able to bring in more feature film projects." She says they do a lot of jingle production, audio-visual production and radio voice-over in their other studios. "We've always been fairly heavy into rock and roll, but we are involved in many other areas as well. We use our post-production facilities mostly for television commercials."

Little Mountain gets involved to a certain degree with FACTOR-funded projects, in terms of doing mixes. "We see a lot of younger bands in Studio B at this point," adds Glass. "That will probably change [when it becomes a mixing room], but we're building another studio that will once again be able to accommodate this sort of thing."

• • •

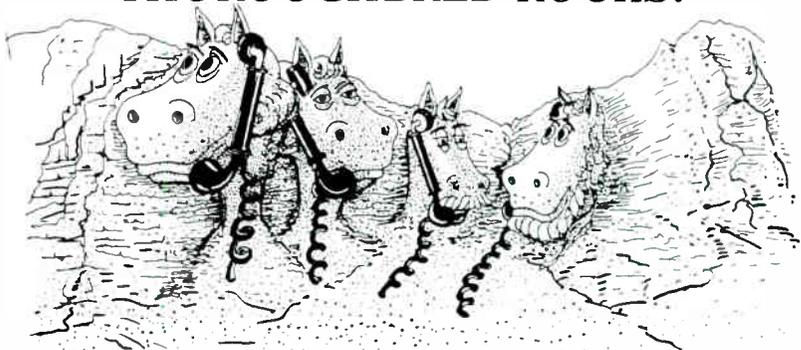
Conveniently situated in downtown Vancouver, Pinewood Studio does post-audio work for everything from 30-second commercials and promos to one-hour U.S. network shows, and everything in between. There are nine edit rooms, a Foley stage, an ADR stage, an audio off-line room, a 48-track mixing theater (soon to be 72-track) and a transfer suite, all with synchronization. Their Foley room is about 30 ft. x 50 ft. and can handle a 25-piece orchestra.

Pinewood's Curtis Staples explains, "We get involved in a number of film projects, typically ADR, because of the number of actors coming through Vancouver working on projects. Among some of the more recent features that we've seen here are *The Great Outdoors* with John Candy and *License To Drive* with Corey Heim."

Started in 1976, Pinewood was originally intended as a recording studio. Geoff Turner, the owner of the company, also designed and built Little Mountain in 1972, and managed it until '76, when he started building Pine-

—CONTINUED ON PAGE 173

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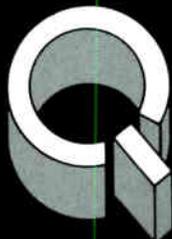
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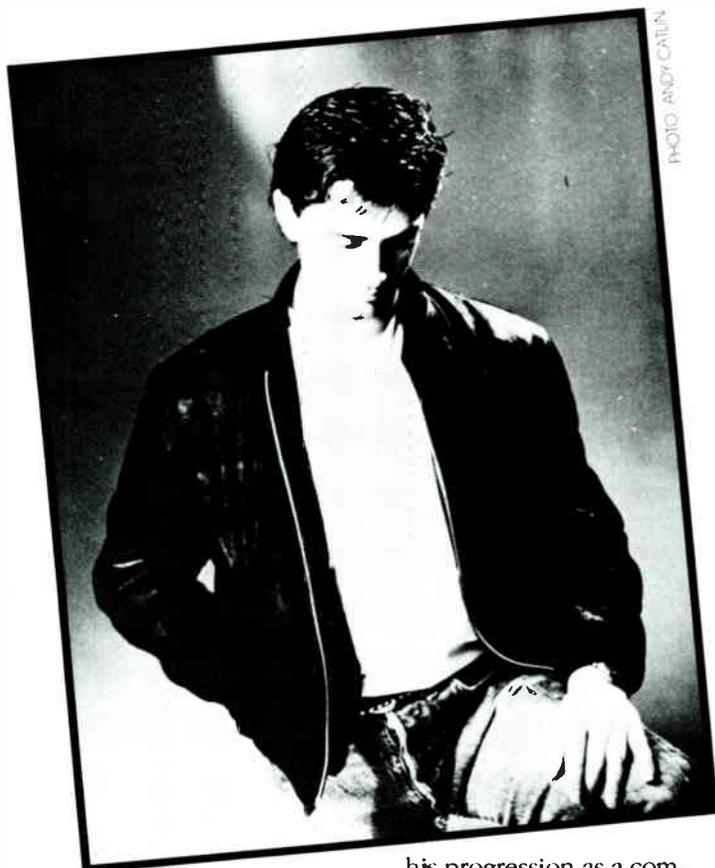


PHOTO: ANDY CATALIN

## MIKE OLDFIELD IS BACK—AND HE NEVER LEFT

by Robin Tolleson

"Radical" is a good word to describe Mike Oldfield's earliest studio experiences, which brought us the memorable 50-minute instrumental suite *Tubular Bells*, a groundbreaking one-man studio performance. Though Oldfield has continued to compose and record since the 1974 release of *Bells* (11 solo albums, studio work with Henry Cow, Gong, Bram Tchaikovsky, score to *The Killing Fields*), very few people in the States know of his later work. His new release, *Islands*, is proof of

his progression as a composer in instrumental and vocal avenues.

On the back cover of *Tubular Bells*, the London-born Oldfield is listed as playing over 20 instruments himself. "In the early days with *Tubular Bells*, there wasn't any computerization, not even any synthesizers. Even varispeeding the tape recorder was a major operation. I was lucky to work with a very good engineer [Tom Newman] and learned a lot about the studio, and we really pushed it as far as it could go at that time. And I've continued to do so.

"Just to let you know how primitive things were, instead of a click track, we had to have a mechanical wooden metronome with a microphone in front of it. Of course it slowed down during the course of the track."

Listening to *Tubular Bells*, or any of Oldfield's work since, one might think mallet percussion is his natural instrument. He's really better founded on guitar and bass, first picking up a guitar to play with his sister Sally's folk group when he was seven. "I can play enough keyboards to get by, and mallet percussion is just a normal extension of the keyboard. The vibraphone is like a baby keyboard. Tuned percussion is a bit more difficult, but I knew the sound that I wanted, and I knew what I wanted it to play. Although I didn't play them terribly well, it was easier for me to spend an afternoon playing with a tympani rather than getting a professional player and scoring the whole thing out and explaining the sort of sound I wanted. Basically, we just hired a whole load of instruments, filled the studio full of instruments, and off we went."

They tried to avoid submixing as much as possible, to save generations on the tape. "We crammed as much as we could onto the tape, without submixing things down, so that there was not really a spare hole on the multi-track. I remember we had more than 1,000 different instrument changes during side one.

"We had a big track sheet pinned over the top of the desk, and we could see what was happening at any one time. But it was such a nightmare to mix it, that since then I've tried to economize on my music. That was, until I got that new Harrison desk, which makes it relatively easy to

mix very complicated things."

The Harrison Series 10 board is "the first fully automated desk in real time," says Oldfield. "Every button push on the whole console is remembered in real time, including equalization, echo sends, routine panning, and, of course, the fader levels."

Bells have always played an important role in Oldfield's music. "I love the sound of bells," he says. "I can remember when I was very small, playing on a building site where there were all these scaffolding pipes, and I remember tapping them with a little piece of stone and hearing all the different sounds that they make. I love the sound of a piece of metal being struck. And church bells, it's the most incredible sound, you know, especially a big beautiful bell. I instantly stop in my tracks and go 'whew, listen to that.' Yeah, I'm a bell addict, a bell freak."

At the end of "Magic Touch," one of *Island's* engaging pop tracks, there's a high bell part that adds a nice crisp edge. "That was a glockenspiel sample from the Fairlight, or a mixture of glockenspiel MIDI'd up to a Super Jupiter just to get certain harmonics to come through. I often MIDI things together to improve the texture of the sound, even small sounds like that."

Oldfield wonders what it would have been like to have MIDI back when he did *Tubular Bells*. "But in a way I think it wouldn't have had the same character," he says. "One of the

—CONTINUED ON PAGE 126

## PATRICK O'HEARN: IN HIS OWN WORLD

by Bruce C. Pilato

Patrick O'Hearn is flopped across the couch in his room at The Mayflower hotel on West 61st Street in Manhattan trying to figure out just who his real audience is. "I never cease to be amazed by who some of the fans are out there," says the curly haired L.A. studio whiz, who has played with everyone from jazz great Dexter Gordon to Duran Duran/Power Station axeman Andy Taylor.

"We started rehearsing

in L.A. last week and there was an up-and-coming metal band in the room next to us. They were kind of a combo speed-heavy-metal band called Keel, and soon they found out we were there. So, the lead singer came over covered with hair and dripping in chains and leather and said, 'Wow, dude! I have all your tapes. When are you gonna play live?' "

After more than a decade and a half as a sideman for some of the heaviest cats in the business, and a five-year stint with Missing Persons, Patrick O'Hearn is finally taking his own music out of the CD player and on the road. And he's determined not to be labeled "just another boring new ager."

"This is the first time



PHOTO: GEN WEXER

I've ever played live under my own name, and I'm very proud of that," says the 33-year-old O'Hearn, who has established himself as both a bassist and keyboard player. "It's time people got a look at the sailor behind the wheel.

"We have a first-rate band, and we're going to take this thing out on the road and burn. The main reason is to establish an identity; there is a face behind this music. It's not just some guy locked up in a bedroom and a garage making solo albums. There's entertainment to be had."

O'Hearn is going out to promote his newest solo album, *Rivers Gonna Rise*, his third for the RCA-distributed new age label, Private Music. After two atmospheric records, 1985's *Ancient Dreams* and last year's Grammy-nominated *Between Two Worlds*, O'Hearn has made a conscious effort to take this LP to a new musical plateau—one that fuses his conventional rock sensibility with jazz and new age

textures. "There was quite an effort to retain identity, but to evolve into something bigger and better as well," he says.

To help him reproduce this new music on stage, O'Hearn has recruited an odd mix of musicians. From Group 87, one of his former bands, comes guitarist Peter Maunu. Since O'Hearn will be playing primarily bass on this tour, he has hired Randy Wane to handle most of the intricate keyboard parts. Brian Ramsa, an old friend and ceramic artist, will play percussion and double on trumpet and flugelhorn. "He has invented a whole family of percussion instruments—all made of clay—that are his and his alone," O'Hearn says. "It's kind of like Dr. Seuss meets the Smithsonian, and worth the price of the show by itself."

Using a hybrid acoustic/electric drum kit is John Balin, who worked with O'Hearn in the Andy Taylor Band. Balin is a former skin basher for Judas Priest, "but," says O'Hearn,

## THE FAR SIDE

By GARY LARSON



What really happened to Elvis

"don't hold that against him, because he's a tremendous musician."

O'Hearn is no slouch either, as his track record proves. Formally educated on double bass and flute, he was introduced to music at a very early age by his parents, who were nightclub musicians in Portland, Oregon.

"From the time I was a small child my family always stressed complete impartiality to music," he recalls. "The criteria for what was good or bad were never established by any particular category. My folks would put on pounding jungle drums, then throw on Brahms' Fourth Symphony."

While still in his teens and early 20s, O'Hearn hit the road as a jazz bassist, working behind the likes of Joe Henderson, Dexter Gordon, Charles Lloyd, Joe Pass and Tony Williams. "Those years were an enriching experience," he says with obvious affection. "I had a chance to play with all of my idols."

Next followed a three-year stint with Frank Zappa's *Joe's Garage*-era band, which introduced O'Hearn to drummer Terry Bozzio, his vocalist wife, Dale, and guitarist Warren Cuccurullo, whom he would later rejoin in Missing Persons. "Working with Zappa was a great and fantastic experience," he says, "and although he could really be a grouch and a taskmaster, underneath this veneer of sternness was a warm and humorous person."

When Zappa folded that band in 1980, O'Hearn joined guitarist Peter Maunu and trumpeter Mark Isham in Group 87, a fusion group with new age leanings that were probably ahead of their time by a few years. But it was playing with Missing Persons, the quirky West Coast new wave group, that introduced O'Hearn to his biggest audience up to that time. After releasing one of the largest selling independent EPs, the group was quickly signed to Capitol Records. Their first full album, *Spring Session M*, sold just under a million copies and spawned several FM hits, including "Words," "Destination Unknown" and "Walking in L.A."

"After the first LP things started going bad," O'Hearn remembers. "By then, Terry and Dale's marriage was on the rocks. Greed and ego surfaced, and eventually the whole thing fell apart, but I stuck it out to the end."

Eighteen months before the demise of Missing Persons, O'Hearn had signed a solo deal with Private Music, the label started by former Tangerine Dream member Peter Baumann. Many critics believed he was wasting his time in the faltering pop group and should concentrate fully on his unique brand of cool astral jazz. In 1986, he took their advice to heart.

In an effort to distance himself from many new age musicians who record and tour with only themselves and a bank of electronic gear, O'Hearn knew the songs on his new LP would only work with a full band. And unlike his previous albums where he played nearly everything himself, O'Hearn recruited several musicians for *Rivers Gonna Rise*. Says O'Hearn wryly, "Samplers are wonderful, but I really wanted live percussion for this album."

*Rivers* was digitally recorded and mixed completely at his home in scenic Simi Valley, California, where he also made *Between Two Worlds*. The studio, which he affectionately named Now You Simi, Now You Don't, went through a major transformation in the period between the two records. For *Between Two Worlds*, O'Hearn connected with a New York-based firm called Audio Force, who air-shipped a digital Mitsubishi X800 32-track tape machine and a custom-built 32 x 32 console that plugged directly into the deck, right to his front door.

"Everything came out of the flight cases and was ready to go. The owner of Audio Force flew out with the gear and within three hours he turned my house into a studio. It was amazing.

"My wife and I moved out of our bedroom, and we were displaced to another room in the house. She was really thrilled about that!" he laughs. "But, really, she was a good sport about it. A lesser woman would have axe murdered someone for what she had to put up with."

For *Between Two Worlds*, O'Hearn took on the entire responsibility of the recording. "I tried to fill the roles of engineer, producer and performer, which was a couple of chairs too many. Never again. I just don't have the finesse or imagination to be a good engineer. I'm more functional."

After the success of *Between Two Worlds*, O'Hearn decided to get more serious about his home studio. "I'd been bitten by the bug of home re-

ording," he says. "It's hassle-free. You can work when you want; work on Saturday, go to the beach on Sunday and never have to worry about someone bumping you out to do some stupid remix."

With the help of engineer Gary Epstein and others, O'Hearn expanded his studio. "We realized I needed more space, so I confiscated the garage. And with a lot of sweat and about 45 sheets of 4 x 8 drywall, we transformed my 20 x 20 suburban garage into a full-fledged studio. We didn't have anybody come out and voice the room or anything fancy like that, but it's certainly garage recording at its best."

O'Hearn also purchased a Harrison MR-2 console with automation, a pair of JBL 4330 monitors and the usual array of processing gear by Yamaha, Roland and others. The album was mixed down to a Sony ES 1000 R-DAT machine, which he recently purchased in Japan for a mere \$1,300 while touring with Andy Taylor. "I'm a very pro-DAT guy, a huge fan. But not knowing the status over here, I bought a lifetime supply of cassettes when I was in Japan."

After his tour, O'Hearn hopes to purchase his own 32-track machine ("Then I will be totally self-sufficient"). But as for his status as a working musician, whether or not O'Hearn will resume working behind others remains unclear.

"That's a good question," he says with uncertainty. "I wrestle with that one constantly. I guess we'll have to see where this avenue takes us first." ■

—FROM PAGE 124

reasons it sounds like it does is because it was made in the very early days, when all these instruments weren't around. We improvised with what we had around us and also used the studio. Instead of getting a sample and playing it high on the keyboard, we'd slow the tape down to get the different harmonics up there."

Now the Fairlight is the heart of Oldfield's system. "The computer is involved just about everywhere, apart from the instruments I'm really good at, stringed instruments. I always record those. And sometimes you can't get what you want using the Fairlight, so it's nice to bring in some real people. It's a very useful instrument, but I don't like to use it all the time."

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Oldfield got into film scoring in 1984, and did a wonderful job on the Academy Award-winning story of the Cambodian occupation, *The Killing Fields*. With his penchant for writing grand, thematic or introspective instrumental mood music, film work seemed like a logical step. But you probably won't find him trying his hand at that anymore. "I prefer to go to a movie to be entertained, and when you're scoring music for a film, you're really working under someone else," he says. "I'd spend three or four weeks working on a piece of music and be really pleased with it. Then when the film comes out, you've got people talking all over it."

Oldfield was the first artist ever signed to Virgin Records, and he put the new label on the map with its first release. Picked up as theme music for the film *The Exorcist*, *Tubular Bells* has sold over eight million copies worldwide. Oldfield enjoys the artistic freedom that Virgin gives him to explore pop and instrumental genres, and to take on a project like his own 45-minute video piece to accompany the music on *Islands*: "It's a lot of computer animation and some live material. I'm definitely getting away from the normal promo video. It's unusual to make a complete video of an instrumental, especially for the artist to do it."

Oldfield filmed some of the footage while on a trip to Bali in Indonesia. There he also got some great samples of a Balinese vocal sound called *kechak*. "It's a real art form there, a percussive thing they do with their mouths." The composer uses a lot of factory samples and modifies them himself, but also likes to find his own, like the Balinese clicking. On "The Wind Chimes, Part Two," the *kechak* sounds like scratching in rap music, the noise of a needle scraping across a record. "I used the sampler as a percussion instrument there," he says.

Oldfield prefers to work exotic locations. "The last couple of albums I've put a portable studio somewhere in the Alps, because I like to ski and spend the winter in the snow. I've hired a chalet up in the mountains, put the portable studio up there, lived there for six months, and did a lot of the work for the album." Oldfield's portable Alps unit included a Studer 24-track recorder, the Fairlight, a Midas mixing console and his keyboards and

guitars.

Oldfield brought in Simon Phillips to co-produce "The Wind Chimes." "He's a very good producer and engineer, and a great drummer, obviously," the composer says. The two men spent a couple of weeks doing live sessions with a bassist and keyboardist, and then chopped and changed between the live stuff and sequenced stuff, mixing in the Balinese gamelan samples.

On "Flying Start," Oldfield gets a massive snare sound that drives the whole track, with a long delay and then a sharp cutoff. "That's an EMT echo machine, which I've had for a long time, and I use that a lot on snares. It's very similar to a lot of these digital echo machines. We use a setting called Non-linear Delay, and it makes the snare drum sound like it's breathing." Oldfield likes to run his bass through an old compressor limiter that he's had since *Tubular Bells* days. "I quite often like to use a live echo from a garage or room with ceramic tile or something."

He MIDI'd his Fairlight through to a Kurzweil, a DX7 and a Super Jupiter. "And I have an old Roland string machine, which I love and can't seem to get rid of. It's an antiquity," he says. He prefers vintage guitars as well—mostly old Fenders and Gibsons. "I don't like new guitars. They have to be at least 10 if not 20 years old before they're any good. I have a few of those. My favorite is a 1960 Strat. And I like Gibson Les Paul Jr.'s actually. There's something about the neck that really fits my fingers well."

As you might have guessed, with technology moving as it is today, many of his patented bell sounds are now performed on the Fairlight from samples. And he's not content to use traditional musical instruments. "I've used cardboard boxes, chairs, nutcrackers. Now with sampling you can get great samples out of glasses and pieces of wood. It doesn't have to be traditional instruments."

For the 35-year-old Oldfield, who is a bigger star in France and Germany than in his native England, there was never a conscious decision to go into music. It just happened and snowballed. "I was crazy about airplanes when I was small. I wanted to be a pilot. But somehow music took over. Since then I've learned to fly, and I have a license for airplanes and helicopters. So I've achieved my ambition, I sup-

pose." Oldfield thinks for a moment, then laughs, "But I think there's more money in music, to be honest." ■

## STEVE REICH A Minimalist Meets the Machine

by Josef Woodard

It was 20 years ago today, give or take a few, that Steve Reich began laying the groundwork for his own private musical revolution, in a style which would later (without the composer's approval) be called minimalism. Like Terry Riley and Lamonte Young earlier in the '60s, and his peer Philip Glass, Reich was reforming the essential approach of classical composition via reductivism. He was taking small units of rhythmic ideas, layering them and basing pieces on texture and pulse as much as melody or—as the prevailing 12-tone system was still emphasizing—process. The Beatles were sweeping the pop music world and helping to stretch the ears of the mass audience, in a way that no doubt made a mass audience ready, by 1978, to accept Reich's *tour de force*, *Music for 18 Musicians*.

In the late '80s, minimalism is almost a household word (still without the composer's consent) and Philip Glass is everywhere. If his public image is slightly more humble, Reich has turned out a number of important pieces in the last several years and shows no sign of creative deceleration. Nor has he depleted the possibilities of his pulse-oriented style. His *Desert Music*, recorded for Nonesuch Records in 1985, was the most ambitious—a sprawling orchestral and choral opus based on William Carlos Williams' text. The 1986 *Sextet* stretches his harmonic palette while adhering to the basic eighth note pulse and textural sweeps characteristic of Reich.

Despite his full plate of works-in-progress, Reich's most recent Nonesuch product is retrospective: reissued and remastered versions of *Early Works*, from the late '60s and early '70s, and a new version of his seminal 1970 piece, "Drumming." Originally released on Deutsche Grammophon, "Drumming" was previously hard to find, and Nonesuch's expansive-minded producer Bob Hurwitz felt it was

—CONTINUED ON PAGE 152

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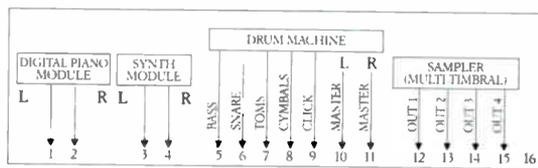
Each mixer has pro line level (+4 dBm) inputs and outputs, balanced XLR outputs and each yields exceptionally high S/N ratio, low distortion and outstanding frequency response. Each channel has input gain, peak indicators, panning control, smooth faders, three (count-em) stereo effect sends/returns plus 1 aux-send which can

be positioned either pre or post master faders. There's also a Phone Mix In jack to facilitate headphone monitoring of the mix or a sequencer click, as well as master level meters, peak indicators, and mic level compatibility on channels one and two.

You might think with all of these features that we didn't leave a thing out. But we did — on purpose. There's no equalization. Why? Because MIDI keyboards and modules already offer much more tonal contour than the shelving equalization found on conventional mixers. Most importantly, adding EQ to a mixer inevitably adds noise — and the M-160 and M-240 were created with low noise as a design requirement, not an afterthought.

Nicest of all, you'll find the price tags on these mixers amazingly low for the features packed inside them. So, if your current mixer is starting to look like a wimp in the face of all your new MIDI equipment, it's time you checked out the new mixers that were designed specifically to

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by Philip De Lancie

# DAT

## THE INDUSTRY GEARS UP

**E**xpansion proceeds on the DAT duplication front, with both small and large scale players jumping into this embryonic market. In addition to its digital editing and CD mastering activities, Northeastern Digital Recording of Shrewsbury, Mass., is putting its half-dozen DAT machines to work making runs in the 300 to 500 range. Clients like Rounder and Rykodisk use NDR's service to test the DAT waters with promotional distribution, as well as limited experimental introduction into retail outlets.

Those with more extensive DAT needs can turn to Technetronics, now accepting orders for DAT work at its facility in West Chester, Pa. Based on its market research, Technetronics is predicting that DAT will "most likely" become a viable consumer format, sustained through an initial period of high hardware costs by interest from the "high-end" audio consumer. The company's start-up capacity exceeds 15,000 units per month.

Suppliers, too, continue to take note of DAT. Maxell (Fairlawn, NJ) has introduced the R-120DM digital audio tape. And Shape Inc. has announced plans to be the first U.S. manufacturer of DAT cassettes. Shape Optimedia, the company's CD division, will be responsible for the winding, duplication and packaging of DAT cassettes. At the same time, Gage Molding, a wholly owned subsidiary of Shape, will manufacture DAT shells and boxes. Capacity is projected to reach 5 million by year's end.

Shape also hopes to refine the current design of the DAT cassette through the efforts of its R&D group, which has seven DAT-related patents pending.

Finally, two developments from Otari signal that Japanese corporation's continuing interest in the future of DAT. The company is now shipping its T-650 DAT cassette loader, featuring fully automatic winding, cutting and splicing of 0.15-inch metal particle or



barium ferrite tape into pre-leadered shells. At eight meters per second, the T-650 has a cycle time of less than 39 seconds for a two-hour tape. An optional cue tone detector allows the machine to be used for loading prerecorded tapes, such as those that might be produced using Thermo-Magnetic Duplication (TMD), a high-speed duplicating system with applications for both video and DAT. TMD was originally developed by Du

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## AFTER · MIX

Pont (see "After-Mix," October 1986), which later teamed up with Otari, as well as Bell & Howell/Columbia Paramount Video Services, to work on bringing actual product to market ("After-Mix," December 1987). Now Du Pont has announced that it has sold its rights to current and pending TMD patents to Otari. Du Pont will continue to consult with Otari on the ongoing development of TMD products, and will supply Mylar-base film and chromium dioxide particles used in making blank tape for TMD duplicators.

• • •

selectable time scales. An auxiliary printer provides hard copy reports of tape condition.

• • •

A new disc mastering facility, Session Masters Inc., has opened in Wheaton, Ill., to serve the Chicago area. The facility features a Neumann SP-79b console and Neumann VMS-80 lathe with SX-74 cutter head. Future plans include CD premastering and real-time cassette duplication... Digital Intelligence Systems Corporation (DISC) of Santa Ana, CA, is now offering a reference disc service for both CD-Audio and CD-ROM. DISC claims low cost and fast turnaround for its

Technetronics predicts that DAT "will most likely" become a viable consumer format sustained through an initial interest from the "high-end" audio consumer.

Increased use of high coercivity metal particle tape for various applications in the video and music industries has created a market for bulk erasers capable of delivering sufficient degaussing force. Two manufacturers recently unveiling products to fill this need are Garner Industries of Lincoln, Neb. and Research Technology International in Lincolnwood, Ill. Garner's Eliminator 4000 generates degaussing force of 4,000 Oersted, allowing erasure of 1,500 Oersted metal tape to -75 dB. The VRS 90 from RTI, which provides 5,000 gauss, achieves 90dB erasure on center tracks of one-inch tape. RTI has also introduced the TapeChek 4150 Pancake Evaluator. Featuring the Micro-Pulse multi-track dropout detection system, the 4150 is designed to check for magnetic and physical defects in new tape at over 200 times play speed. Problems identified are displayed on a color CRT, including dropouts and physical defects shown in bar-graph form in six

CRD (Compact Reference Disc), which is intended to allow evaluation of program material and cue points prior to manufacturing... Philips & Du Pont Optical is opening a new West Coast sales and marketing office in Burbank, CA, with vice president of sales Spence Berland at the helm... Cetec Gauss will be providing BMG Music (RCA/Ariola) with high-speed duplication gear for expansion of cassette production facilities in North Carolina. Equipment will include Gauss's Tape Test System, as well as 480 ips master reproducer/loop bins... Discovery Systems of Dublin, OH, has lowered its CD-ROM pricing, offering mastering services for \$1,500 and replication for \$2 per unit. ■

*Phil De Lancie is our resident voice on record mastering and manufacturing, tape duplication, CD replication, storage and formats. He's also a mastering engineer at Fantasy Studios in Berkeley, CA.*

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by Bob Badami

# AN OFFBEAT SOLUTION

**I**t was late Friday when I heard the assistant's footsteps echoing down the hall near my grungy cutting room. He poked his head in the door and said with a smile, "ILM [Industrial Light & Magic] just called. That shot of the Enterprise pulling out of space dock came up 16 frames short, and the planet shot in reel 5 is seven frames longer. Here are the change notes." He handed me the list of changes and, after a moment of horrified examination, I looked up only to find him gone.

Sixteen frames, two-thirds of a second. For most, it meant less than a moment, but for a music editor and a composer it meant hours of revisions in preparation for a scoring session just days away. I picked up the phone, but instead of calling the composer with the bad news, I called my friend, Dick Bernstein.

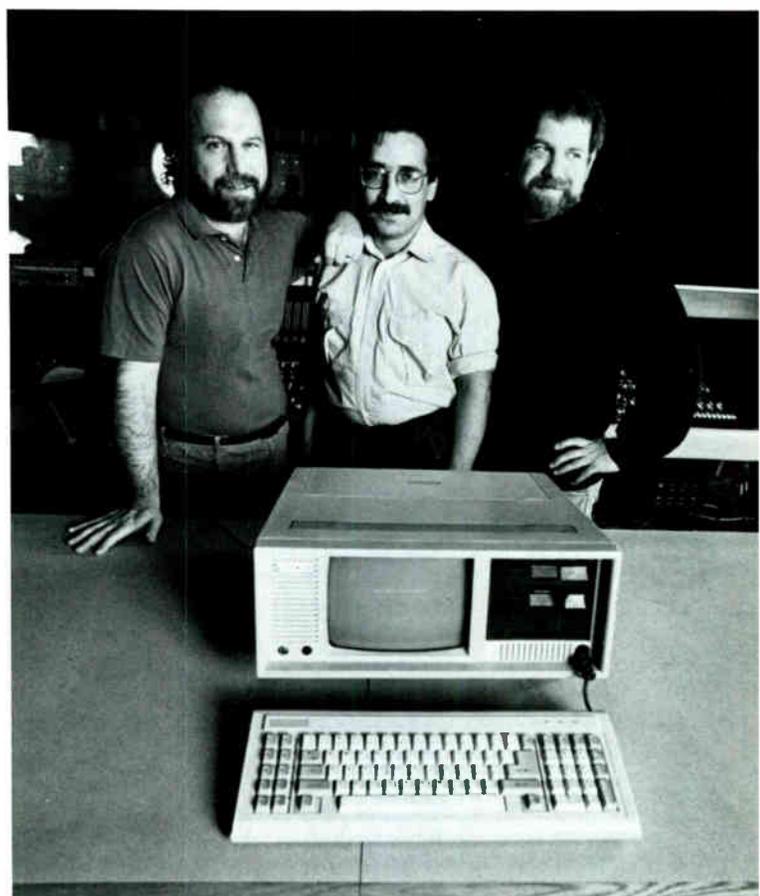
Bernstein was the only other editor I knew who had any kind of interest in computers. We had formed our friendship through hours and hours of post-midnight work on Michael Mann's film, *Thief*. There are projects that are so intense that the people you meet and work with become "war buddies." *Thief* and Dick fell into that category.

Music editors provide composers with a detailed list of the times of all cuts, action and dialog for each music cue. The composer uses these timings to mathematically plot how the music will play against picture with the help of a constant click track. In some cases, the composer needs a variable click track built when a constant one won't

do. In the case of *Star Trek III* it meant redoing some cues that were over six minutes long!

So, after hours of timing note revisions and variable click tracks, I headed to Dick's house with a mission. It's funny how a simple question can trigger years of work and change lives. In this case it was: "Gee, Dick, do you

**(Left to right):  
Dick Bernstein,  
Bob Badami  
and Bill Bern-  
stein.**



think my IBM could play a variable click track?" We sat together staring at the keyboard and monitor and hardly noticed when the sun began to rise. We were hooked.

The hours Dick and I spent together would rival even *Thief* in their numbers. It seems that the task of music editing and composing for films was a perfect application for a personal computer. Composers had been using a computer-generated reference book, the *Knudsen Clickbook*, for years. Carol Knudsen developed this tool about 30 years ago, and it has become the bible for the scoring stage.

We started to dissect the problem. The music editor, armed with an IBM Selectric, needed to prepare these timing lists for the composer. The problem was that when the picture changed, or the composer wished to change the cue's starting place, the notes would have to be revised and retyped. The composer needed to plan and write the score to a high level of accuracy, in most cases dealing with a tolerance of less than a tenth of a second.

Based on our first night's work and our interest in film, music and computers, Dick and I took on the problem. We chose to divide the solution into two parts. Between the two of us, Dick had the real hardcore programming talent. He took on the click track application, while I set to work on the timing notes.

It was easy to see that a word processor was the choice for timing notes. The problem was that a spreadsheet would be better for all the math. We found a word processor with a strong internal macro language that would let us write math functions inside of the processor. It was up to me to learn this arcane language.

Dick, meanwhile, was in deep. He had been an Apple II programmer, but we decided we needed the speed of an IBM. He had to learn a new machine code while hacking his way through the problem. It was amazing how fast he was able to learn a new language *and* come up with a usable piece of software.

Usable indeed! It turned out that we had a "real-world" laboratory in which to experiment. I had been hired to work on *Beverly Hills Cop* with composer and friend, Harold Faltermeyer. Instead of working with a studio or-

chestra in a pressure-packed, three- or four-day scoring session, the music was to be done more like a record. The writing and performing would occur over a four- to five-week period under less intense circumstances, using videotape instead of film. This gave us a chance to use the program in a supportive environment where one mistake would not cost thousands of dollars.

The software actually contributed to the production of the music. This was great. It gave us reason to continue. It also opened up a host of new ideas and problems. We needed to read SMPTE time code. We wanted to be able to do all the things with videotape that we were used to doing with film. This meant we needed to provide visual cues (called streamers and punches), superimposed over the video signal and used by the conductor during scoring.

We headed to Las Vegas and the NAB show with a shopping list. For us the interesting parts of the show proved to be on the outer edges, far from the giant displays. We found some little companies that had the elements we needed. Amazingly enough, we found a lot of answers—and won \$40 at the craps table.

From the contacts and hardware found at NAB, we were on our way to making something more than a piece of software. We were developing an extensive, integrated system. Word was getting out about what we were doing, inquiries were coming in. Our newly formed company needed a name, and the favorite was "Offbeat Systems."

One of the first inquiries came from the music department at Lorimar. They were the first large production company to use videotape instead of film for post-production. The problem was that the music people were not equipped to make the switch to video. They were faced with the prospect of closing down their department and farming out their music editing to an outside contractor. Our product was barely ready, but we let them have our prototype. With a bit of grit and determination, we both made it through the season. We were on our way. We now had a product, the *Streamline Scoring System*.

This type of interaction kept the software changing for the better. Dick's brother Bill joined us to concentrate

on the user interface. We wanted a *complete* system, to serve the needs of the music editor, composer and scoring stage. The trend toward video post-production was growing. This meant to us that everything possible on film should be possible on videotape. We also believed that by using a computer, the tasks performed during scoring could be done easier and faster.

What we created was a powerful tool that frees the composer from the constraints of a constant click. Tempo, timings and beats can be input to create a structure that can vary dramatically or subtly from hit point to hit point. For the music editor, Streamline provides a word processor for timing notes that converts between SMPTE time code, footage and elapsed time, and allows for any type of picture change. The music editor can also create complex variable click tracks and visual cues in five colors.

Streamline is particularly useful on the scoring stage. It works with both film and videotape and allows for remarkable accuracy. In the heat of a scoring session, it is often necessary to change visual cues and click tracks because of directorial whims or picture changes. Streamline can do this in seconds, compared to the five to ten valuable minutes it may take on film.

The hardware has grown, too. Through Dick's tireless efforts, we have developed our own IBM circuit board that reads and reshapes time code, locates itself within a cue, and outputs a studio-quality click.

There is a certain joy now when an assistant editor shows up in my cutting room with a handful of change notes. I sometimes think back on all those sleepless nights that Dick, Bill and I spent programming, while the computer quickly updates the volumes of timing notes affected by these seemingly minor changes.

• • •

I put in a call to the composer with the exact spot and total number of beats to be removed within the cue. I put on my coat to face the rush-hour traffic and the weekend. ■

*Bob Badami is one of Hollywood's top music editors. His Offbeat products continue to receive a trial by fire as Bob brings them into demanding scoring situations. If you've seen Top Gun, Broadcast News or Beverly Hills Cop I & II, you've heard Bob's work.*



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# TALE OF NINE CITIES

In Which Our Writers Explore the Music & Recording Scenes Throughout America's Heartland

## CHICAGO: ON THE HOUSE (AND MORE)

San Francisco's Tower Records has a crowded bin labeled "Chicago House Music," indicating there is more to the Midwestern capital's musical outreach to consumers than distinctive blues and memorable jingles. This Chicago-style music has affected the dance club scene around the world.

House has been hip-hopping on dance floors since 1986, but can't be found in every American record store. Artists such as Liz Torres, Tyree and Raze record 12-inch and EP tracks for small, Chicago-based labels/distributors like DJ International, Trax and State Street. In Tower's bin, just one disc boasts a major domestic label (Full House on Epic/CBS), but Atlantic, Island and Capitol have all recently visited Chicago's River North to work on releases and remixes.

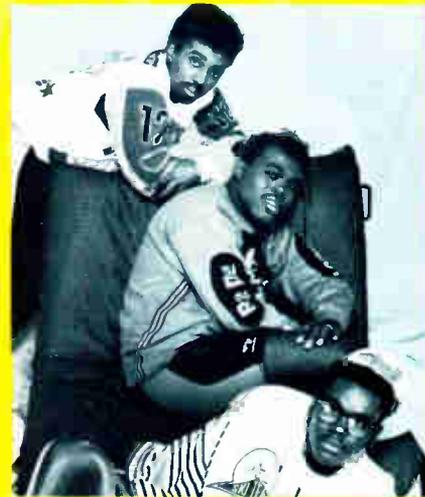
The relatively new, five-studio River North hosts many house artists, whom co-owner Joe Thomas says "emphasize kick and snare, with a unique vocal style and more harmonies and

melodies. Chicago house sounds more pop than other house mixes and rap records." House also incorporates lots of sampling, synths and a disco bass line.

According to Jimmy Dolan of Streeterville, "The house thing went through a dynamic time when many [American] majors came to Chicago to see if any house artists were potential cross-overs, but it really hasn't happened. House music carried business factors that weren't totally clean. Artists were doing records for three, four different [local labels], and companies like EMI or RCA don't want to bump into their artist's product being distributed by other people. But house music is still on the rise."

Chicago Trax (planning an SSL G Series purchase at press time) has been recording three "acid" house (a more guitar-oriented style) artists for Desire Records, a new record company in London. Manager Reid Hyams, however, echoes others when he stresses that house represents only a

CONTINUED ON PAGE 142



Ten City is one of Chicago's many house music makers—and one of the few to get signed to a major label (in this case, Atlantic).

## THAT DETROIT SOUND

To get an overview on what's happening in the Detroit area, *Mix* talked to Stewart Francke, a writer for Detroit's *Metro Times*. He also works at Ron Rose Productions, which he says is the largest commercial production studio in the state. Observes Francke, "The R&B thing is still happening here, despite the departure of Motown. It's real quiet, though. The press doesn't talk much about it. There are people here on major labels selling a lot of records. Anita Baker records here, and Aretha recently recorded at United Sound in Detroit. A local group called Rebel Heels, produced by Rupert Hine, was just signed to Atlantic. There's also a band called Rhythm Corps, produced by Spencer Proffer of L.A., and a heavy metal act called Seduced, who just signed to IRS. But the R&B scene is the thing that's really happening as far as indigenous home-grown music."

—CONTINUED ON PAGE 144



The Synclavier/MIDI Suite at Studio A (Dearborn Hts., MI) is one of two rooms at the facility, which specializes in R&B and gospel projects and commercials.



## CLEVELAND ROCKS . . . AND POLKAS

Cleveland is probably best known in the national music scene as the rock and roll capital, the city whose denizens regularly flood the *Rolling Stone* readers' poll with votes that put their favorites on top. What may not be known is that Cleveland is home to a healthy diversity of music communities, with country, genuine polka and funk also well supported. It's considered an excellent testing ground for popular music because of its rich urban blend and enthusiastic consumption of music. With characteristic "pretzel logic," however, national labels don't seem very interested in pursuing Cleveland's rising stars, and much of what is recorded in town is financed, pressed and distributed by the locals. Even Tracy Chapman had to move out of town to secure a record deal.

Obviously, when musicians are motivated to dig deep into their own pockets for exposure on vinyl, profes-

—CONTINUED ON PAGE 147



Cleveland's Tracy Chapman had a feeling she could be someone.

Sound Factory, located near Kansas City, Kan., is a new facility that handles a wide range of work, from producing album projects for CBS to creating industrial scores for AT&T.



PHOTO: JAYE RHEINELDE ANICE

## KANSAS CITY BLUES?

Long regarded as the Big Band jazz center of the Midwest, Kansas City still supports the jazz scene, including free jazz in the parks every summer. Kansas City musicians do venture into other genres, but local club owners tend to support Top 40 and "oldies" bands. To get their music heard, original artists head for the studio.

Close to many of those artists is Chuck Chapman of Chapman Recording (Missouri), which devotes days to commercial and corporate audio-for-video, and cut-rate nights to band demos and major/indie label projects. The bands that do well in KC, Chapman says, "play a fusion type of jazz, or innovative, new music rock—not mainstream. The Count Basie, Big Band era is still here, and I think new age music is helping to revive it. That's because [new age] is an instrumental type of music, and it's adult music, like jazz. There's one new age radio station in town, and they play the Yellowjackets, jazz/fusion-type things that get the younger people asking questions about jazz."

—CONTINUED ON PAGE 149

## "TWIN SONS OF DIFFERENT MOTHERS"

The Twin Cities are fraternal, not identical twins. "A lot of the commercial [jingle] work is done in Minneapolis because that's where the agencies are," observes Tom Mudge, studio manager of St. Paul's Studio M. "There is a studio three minutes' drive from downtown Minneapolis, and there are numerous voice-over facilities five minutes' walk from an agency's office."

Many arranger/composer/producers are taking advantage of new technology to build their own facilities as one-person operations. Aware of this apparent trend, St. Paul's largest recording studio is thriving on album work and post-production for owner Minnesota Public Radio's *St. Paul Sunday Morning*, *High Performance* and *Prairie Home Companion* national broadcasts, and various local programs.

Mudge reflects on the breadth of the Twin Cities scene: "Red House Records [an acoustic music label] is

—CONTINUED ON PAGE 149

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**Composer/synthesist Chris Lieber (left) and creative consultant Bill Mallers at the board at Indy's September Recording.**

## INDIANAPOLIS: BACK HOME AGAIN

The Indianapolis recording industry continues to grow right along with the city. Back when the Hoosier capital was known as "India-no-place," most studios followed the "jingle-during-the-day, rock-all-night" format. No big names, but good, steady business. During the 1980s, however, Indianapolis has seen sustained economic growth, and the city's major recording studios have all shifted emphasis to adapt to the changing market, which now includes post work and film scores.

Andy Symons, chief engineer at TRC Mid-America Recording Center, explains: "Three or four years ago we had two good-sized rooms that were both busy with a lot of jingle producing. Now, [the clients] all have their own 8-tracks and sequencers and computers, and do their own demos. They come over here when they *need* to, as opposed to when they *have* to. So, we had to evolve into something else, which is why we set up the MIDI rooms."

The evolution at TRC included a complete overhaul of studio B to accommodate film-for-video mixing. Staff writers John Cascella (on the Mac) and Bill Baker (on IBM) are set up in two MIDI composition rooms, and the addition of a 1-inch layback and 35mm/16mm mag transfer serv-

ices attracts those who want to finish on video.

"No one in the state is doing it quite like us," Symons says. "There are a lot of clients here in Indy who are going out of state for film and video mixing. We're looking at a situation where there's demand but no supply. People go to Cincinnati, and they go to Chicago all the time to mix their sound either for television commercials or industrial films. There's a lot of industrial films shot in this town."

At September Recording, meanwhile, post work, jingles and film scores fill the 9 a.m.-to-5 p.m. "commercial music house," according to studio manager Bill Mallers. The development of ASA Productions, a sister company and in-house production facility, has placed September in the national market, attracting clients including Kodak, Stouffer's, McDonald's and GMC Trucks.

One of the attractions of the Indianapolis area, according to Mallers, is the quality of music available: "Indianapolis has a good music industry, a good talent pool, and that's why a lot of business is beginning to come in from out of state. The difference between this talent pool and, say, New York, Chicago or Los Angeles is not in terms of quality, but in terms of depth of sections.

"For example, whereas in New York or L.A. they may have 50 to 75 first-call violinists, we might have ten. And it

really doesn't matter because the quality is there. Our rhythm players are hot. We might be three or four deep in guitar where New York has 30 great players. But you only need one for a session."

Over at Hit City, co-owner Tim Brickley says the creation of a production company in the last year has brought in more jingle business, but the emphasis—day or night—is on rock recording. Bands on some of the larger independent labels regularly work at Hit City, hoping to find their way to a major label. These bands include Toxic Reasons, The Inbred, Great Plains and Indy's own Howard Stern-type DJ team, Bob and Tom.

"Our love is in the music," Brickley says. "We've been able to carve an audience out there, and we've just had a rash of bands signed to major labels. Henry Lee Summer signed with CBS and just had an album come out. He did some demo work here. Duke Tomatoe did work over at TRC, and he's cut here. And Voyage just signed with Motown. Indy is really growing as a music center, believe it or not. It's like a mini-Minneapolis thing."

—Tom Kenny

## UP & DOWN IN CINCINNATI

"Cincinnati is kind of like a chameleon," says Bob Rowlette, manager of that city's Lausche Recording Studios (LRS). "So the studios here do all different kinds of work. A lot of studios are jingle-oriented, some are black music-oriented, others do country music, and we mainly work with independent rock groups. And so far there seems to be room for everybody."

Indeed, as a medium-sized Midwest recording market, Cincinnati has a bit of everything. It's home to several major corporations, including Proctor & Gamble. Since James Brown's tenure in the city in the late '60s and early '70s, it has had a very active and successful black music scene. Located just across the Ohio River from Kentucky, Cincinnati also boasts a vibrant country music establishment. And there has always been a great deal of interest in mainstream, meat-and-potatoes, hard rock and roll. At the same time, the city isn't really in a position to compete with Chicago or Nashville, and Cleveland, in the northern part of the state, exerts its own special influence on much of Ohio.

The biggest "name" in Cincinnati music these days is undoubtedly Reg-

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gie Calloway, a writer/producer who has earned eight gold records in the past few years, working with the likes of Natalie Cole, Gladys Knight, LaVert and Teddy Pendergrass. The former leader of the popular band Midnight Star, Calloway is the chief client of Cincinnati's QCA Studios. "Reggie does almost all his work here," says Jim Bosken, owner of QCA. "What he normally does—for example, on the Teddy Pendergrass project—is use local Cincinnati musicians and cut the tracks here, often doing a lot of it himself. In that case, he took the 2-inch tape to Philadelphia, because Teddy lives there, and he put his vocals on there. He usually mixes at a place like Larrabee in L.A. It's a way for him to keep his production in line, budget-wise, because obviously it's cheaper to work here, and he doesn't want to live in L.A. anyway." Recently Calloway has been working at QCA with a local band called Sharpe.

Though Calloway has helped put QCA on the map, Bosken says the studio accounts for only about 5% of his company's business. "The studio is not real profitable, though it pays its bills," he says. "But it's the most interesting part of our business and a lot of fun." QCA's bread and butter comes from its record pressing and high-speed cassette duplication facilities.

Just as QCA attracts black music clients because of Calloway, Jewel Re-

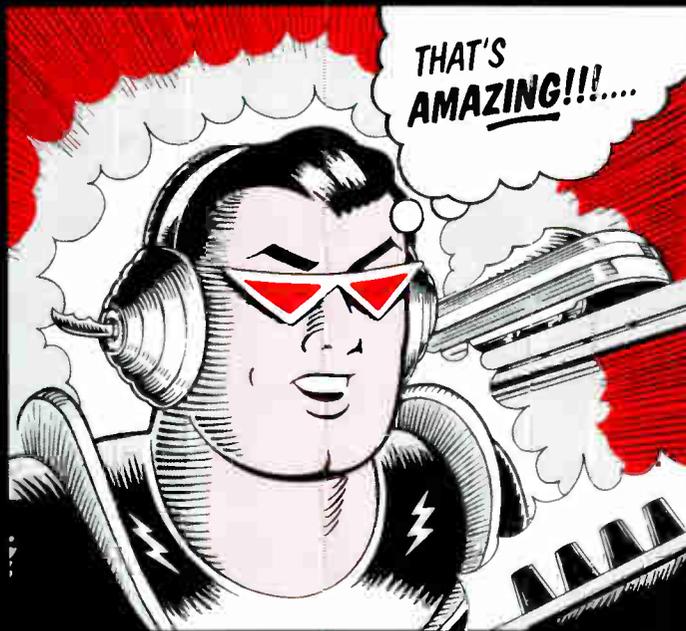
ording has managed to draw top country acts because of the presence of Junior Bennett, who has produced acts like George Jones, Ray Price, Tammy Wynette and Charlie Pride over the course of a distinguished career. "The word is out on him," says studio owner Rusty York, who notes that his studio's attractive rates also bring in clients who might ordinarily go to Nashville. "We've been here for 27 years and have a track record, even if we don't have the 'name' some studios have.

"Our business is way up," he continues, "almost double what it was last year." A good chunk of the studio's work is recording for industrials and small cassette productions for nearby colleges like Northern Kentucky, Bowling Green and Xavier, but York admits, "The studio alone probably wouldn't support us," so it also does a lot of cassette duplication and other non-recording services.

Charles Brown Recording is primarily a commercial studio, and owner Brown reports that business has been a little flat in '88. "We expanded in '87, predicting that '88 would be better than it's been. I have two studios and two Synclaviers but frankly, right now I could get by with one." Brown blames some of his troubles on the peculiarities of the market:

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in audio and video—Synclaviers, Paintboxes, a Wavefront. We've got all this killer gear in these fantastic studios and the clients—or *their* clients in a lot of cases—don't have the sophistication level to demand it. We've oversupplied the market." Which explains why Brown has taken one of his Synclaviers and opened an office in Chicago. "A job there pays two, maybe two-and-a-half times what it does in Cincinnati, and needless to say, the level of client awareness is much higher. I love Cincinnati, but it's become fairly discouraging working here lately."

—Blair Jackson

## MEETING THEM IN ST. LOUIS

When asked point-blank about the music scene in St. Louis, three of the city's studios weren't very enthusiastic at first, but we kept them talking, and it turns out that there *is* music happening there.

New Earth Productions' owner/studio manager, Tom Brooks, sees definite movement in Christian pop/rock music. In fact, a high percentage of their work is recording this scene for Integrity Music, a worldwide distributor of the albums.

"There's a whole new movement in Christian music, sort of pop/rock/new age-sounding Christian music. That's a lot of what we do," says Brooks. "There's a whole clan of musicians that play that type of music. It's about the only sound that's coming out of here."

"All we're doing is setting the Bible to more pop melodies. It's got a contemporary beat, contemporary melody. It involves synthesizers, drum machines, the whole works, in addition to traditional orchestra," adds Brooks. New Earth is in the process of installing their second 24-track room. "We've already got an automated 24-track setup here. We're building a second one basically as a keyboard overdub room, more oriented to a control room and MIDI setup."

"They say if it can play in St. Louis, it can play anywhere!" declares Grace Dalzell of Premier Film Video & Recording. With 2,200 recordings under its belt, this studio should know. And the music Dalzell sees coming out of St. Louis right now is "country gospel."

"We have a lot of people recording original tunes that are absolutely phenomenal. And we don't have a few of them, we have a *lot* of them," says

Dalzell. "Their work is unique and they're beginning to find distribution." Along with country gospel, the studio is currently recording a lot of jazz and rock recordings.

Unlike the other two facilities, Clayton Studios spends its 9-to-5 day recording radio commercials, a big business in St. Louis, according to Clayton engineer Chris Miller. "It keeps us going most of the time. We have three studios and usually keep them booked up." Evenings are open for bands to come in to work up demos, with two or three bands coming in a month. Music styles cover the gamut, according to Miller, from Dixieland to rock and roll to country.

Right now, the folks at Clayton Studios are pondering the future. They built Studio Four a little over a year ago, hoping to get into more music, but they weren't sure about the demand. "We're in the middle ground now and have to make some decisions on where we want to go," says Miller. "Do we want to get a one-inch video machine and turn it into a post-sweetening, or what? We're not sure yet."

—Karen Margroff Dunn

## MILWAUKEE ON THE MARCH

"It's just booming!" exclaims Breezeway studio manager Kathy Bosch, when asked to describe the local recording scene. "Milwaukee is starting to gain recognition for its music," Bosch continues. "Most of the studios are doing really well, and the bands aren't just waiting around to be 'discovered'—they're going out and doing projects on their own."

Besides keeping busy with a steady flow of LPs and demos from a variety of local bands ranging from new age to heavy metal, the 24-track studio (located in nearby Waukesha, Wisconsin) has seen an increasing number of jingle and commercial sessions. Another factor involved in the studio's success was its decision to upgrade with an automated Neotek Elite console last year, which according to Bosch, has attracted clientele from all over the state. One client who didn't have to travel far was Semi-Twang, an act recently signed to Warner Bros. Since Breezeway staff engineer Mike Hoffmann plays guitar with the group, it's no surprise that the band records at the studio.

Certainly one sign of a vital and growing recording scene is the construction of new facilities. By now, the

pounding of hammers and the drone of power saws have subsided on the tenth floor of the 411 Building in the hub of downtown Milwaukee. However, this new studio—named A.D. Productions and slated to open in September—is anything but ordinary. Master acoustician Steve Durr's unique all-glass design for this multi-room digital recording complex not only spotlights spectacular views of Lake Michigan, it also takes advantage of the special properties of a new acoustic glass made by Vircon and supplied by Coolidge Glass of Waukesha. The glass walls are angled and pitched, providing a diffuse recording environment, with adjustable vertical blinds for additional acoustical control.

According to co-owner Tal Andersen, the expansive 40 x 38 control room will feature a 48-input Neve V Series console with Necam automation, Sony PCM-3324 recording, Tannoy SSM monitors and a separate machine room for tape transports. A MIDI pre-production room equipped with an E-mu Emulator III connected to Yamaha DMP7 digital mixers (via the new Yamaha-to-Sony digital interfaces) allows for direct transfers to the 3324 in the digital domain.

The big question is whether the area can support a world-class facility, but Andersen is confident. "A lot of the film, video sweetening and record label market is going down to Chicago, and we're going after that business," he explains. "We'll be one of three studios in the Midwest with digital [multi-track], and there's plenty of work up here. We're ready for it."

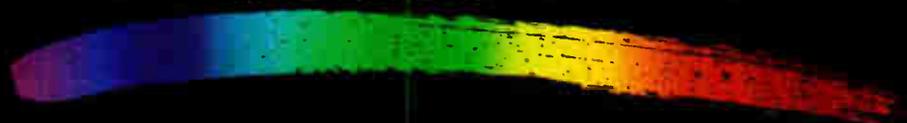
—George Petersen

—FROM PAGE 136, CHICAGO

portion of Chicago's growing musical activity. "We did the debut records for a rock group, The Insiders, and for a hardcore/alternative rock band, the Slammin' Watusis, both from Chicago and both for Epic," he says. "We also recorded The Colourtones' release for Pasha/CBS—it's techno-pop but with real players. Everybody wants to talk about the dance music here, but there's a lot more going on."

Indeed, many R&B artists have been frequenting River North: club performers for demos, the local R&B group Entourage for a Capitol Records release and local jingle producer Butch Stewart for a major R&B project on Curb Records.

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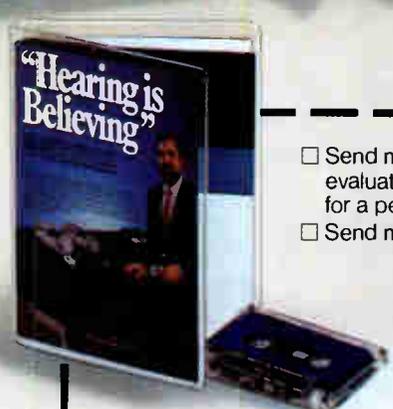


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Stewart represents a trend in Chicago: top music production people, who have honed their chops on 30- and 60-second, music-heavy spots, are venturing into record-making. Streeterville's Dolan reports, "There's a music production house at Universal Recording doing a major project for Geffen. And one of our big music houses signed a music publishing deal with MCA. We're also involved in the Michelob campaign: when Phil Collins' 'Tonight' wasn't chosen for his album, [the ad agency] picked it up and based the Michelob campaign around it. A few months later, Phil Collins decided to put out the record. An aspiring artist might think, 'As long as I'm sending my tape to all these [record companies], I just might send it to the ad agencies, because they'll break my record.'"

Alligator Records artists have also been at Streeterville, turning out 10 to 15 (mainly blues) LPs each year, including Steve Goodman's Grammy-winning releases produced by Jim

Tullio of Tullio/Rans (a music production house with many major national accounts). Tullio just finished producing a Dave Mason record for MCA/Voyager, also at Streeterville. Dolan happily notes, "To service people for advertising music—and then turn around and work with them on a major record release—is wonderful."

—Linda Jacobson

—FROM PAGE 136, DETROIT

According to Francke, the most active studios doing music projects here are Sound Suite, The Disk (where George Clinton recently worked) and Seller Sound, where Ready For The World recorded their current release.

"The production scene is also healthy here," says Francke. "A lot of little studios here keep pretty busy. Detroit is sort of the Hollywood of industrial film." Ron Rose Productions, which caters to the advertising business, does "very little music production," he notes. The company has six

### Miller MIDI Productions, Warren, Mich.



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8- and 4-track radio rooms, a 24-track post-production room and two other post-production rooms at other locations in Detroit. Another studio that specializes in commercial and industrial film work is Joseph Productions. Jay Scott, chief mixing engineer, says, "We're now getting into post-production on feature films as well. The studio handles sound effects, music, ADR and mixing, using a Dyaxis digital workstation running off a Mac II with *Q Sheet*, and a new, automated Harrison MR-3 board for mixing."

"There are a lot of rap things happening in Detroit now," remarks Michael Grace, owner of Detroit's Sound Suite. "At one time maybe 10% of our sessions were rap, and now it's more like 40%." Grace's facility consists of two 24-track studios: one has an SSL 4000E 48-input board, and the other is a 24-track MCI room. "We get a lot of local acts in through our MCI room, whereas we see many major acts in the SSL room as well as some local acts, such as the R&B group, R.J.'s Latest Arrival. They recently had the Number Five record on the Black charts." Local artists who have been working there lately are Jerry Warren and a gospel group called The Evereadys.

Studio A co-owner Eric Morgeson comments, "Here at Studio A, I'm involved in a lot of R&B and gospel work. I produced several cuts on the new Billy Always album on Epic and some cuts on a new album for Epic by a group out of L.A. called Krystol. Sharon Bryant, the former lead singer from Atlantic Star, was also in recently to do some work on her new album."

Morgeson's commercial jingle company has also been very busy. He estimates his work to be about 50% records, 15-20% jingles and 15-20% film.

Ben Grosse, owner of Pearl Sound in Canton, announces that his two-room facility has a new Neve V Series console, "the only one in the central U.S. at this time." Grosse thinks of his facility primarily as a music studio that does label work. Recent projects include Bootsy Collins' newest release, an album by Malcolm McLaren and Jeff Beck, an effort by a rock band called Rhythm Corps, and a Microwave album, all for CBS. He feels that "rock and roll is as strong as ever, and techno music is happening on an underground level."

One of the studios that seems to be emerging from the underground is

Miller MIDI Productions. According to Tennelle Miller, "We have an extensive MIDI setup with two Atari 1040STs and Dr. T's sequencing software, which gives us 96 MIDI tracks, and a Fostex 16-track with an autolocator. We've been in our new location since last November.

"We are seeing a lot of rap music here, because this kind of facility lends itself to that kind of thing. We worked on two albums that were scheduled for August release through a new local record company, Oneida Records. One is Nicky Shy, and the other is a female rap group. We just finished up a series of shows with per-

formers who are performing live to tape. That's a trend we're observing in this area because entertainers aren't getting paid very much, and they are doing whatever they can to stay in the business and keep their costs down."

—Paul Potyten

—FROM PAGE 137, CLEVELAND

sional studios are used sparingly. And because nightlife centers around clubs in the Cleveland "flats" that feature Top 40 cover bands, those playing original music work hard to produce quality demos, used to procure record contracts or for actual pressings, rather

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than as audition tapes for live gigs. In fact, Phil Salem from Take 1 Studios has noticed a trend in "basement groups" that don't even play in public but strictly practice for recording. Salem describes a local, Roxy Music-influenced band called Serious Nature, now working on an album project, that has generated a following after releasing their own single and hustling local airplay.

Such artist self-sponsorship can change the nature of the recording process, and a lot of studio work is increasingly being done at home. "Frankly, in the past year-and-a-half, professional studio business has been dropping," says Pamela Ross from On Sound Productions Recording Studios, which specializes in funk music. While she believes that pro studios are being hurt by the do-it-yourself technological revolution, and estimates that four of the area's established studios have closed in the past year, she also feels that local recording is a "feast or famine" activity, and the region *does* support local projects. Most of the music that's been produced at On Sound has been independently pressed by the artist or producer, and can sell well in the region with help from rotation on WZAK, the local black music station. Since Cleveland has a number of independently owned record stores, local product does get distributed and sells on conignment.

Given this DIY climate, a studio's emphasis on expensive, sophisticated equipment may easily price them right out of the Cleveland market, a concern that prevents the folks at Audio Recording Studios from delving into digital multi-track. According to Reed Wheeler, business at Audio Recording has been affected by its recent acquisition of Sleeping Giant, a company specializing in post-production for video. Branching out in this direction has allowed the studio to record more original music. A recent project

employed 22 musicians to record the score for the children's special *Runaway Ralph*. A constant client of Audio Recording since its inception 35 years ago is the Cleveland Orchestra, and studio personnel manage a control room in each of the orchestra's two concert venues. Recently, Audio Recording has also worked on remote recording projects featuring local gospel groups. One of the musicians currently working at the studio is a country/blues artist named Brad Thomas, and client Billy Sullivan, a rocker who has generated a strong local following, is poised to sign with a major label.

J.F. Presby Jr. at Presco Productions caters his 16-track facility to up-and-coming songwriters. He keeps it affordable for people just starting out, mostly playing folk and country music. Presby's clientele has remained fairly consistent over the years, and he senses that the more traditional musical forms are making a local resurgence. His business is diversified with commercial clients, such as psychiatrists who record messages for their patients.

It appears that the bands booking the most time in Cleveland recording studios this past year are heavy metal acts. Tom Gagen from Clockwerke Sound Studio figures that metal is the trend, because these players are "the people with disposable income." He adds, "We've had back-to-back heavy metal and polka sessions," which demonstrates the more and less traditional client base booking time around town. Business at Clockwerke has been augmented by an increase in cassette duplication for independent music, audio newsletters and training tapes.

As for the burning question concerning the national Rock and Roll Hall of Fame, the folks in Cleveland don't seem to be getting any real information, and some, like Gagen, call it the rock and roll "ball of flame."

—Rachel McBeth

**"We've had back-to-back heavy metal and polka sessions this year."**

Tom Gagen, Clockwerke Sound Studio, Cleveland

**"I've had fun doing a flash metal group, which was just for grins—they were all doctors."**

*Evan Smalley, The Studio, Kansas City*

—FROM PAGE 137, KANSAS CITY

Chapman also heads Fifth Street Records, one of the area's only independent labels. It carries country, rock, gospel and other artists from around the Midwest. One of Fifth Street's most innovative Kansas City-based groups, he reports, "is BCR, an 'Afro/funk/nuclear reggae' band with bass clarinet, sax, drums, bass, keyboards, guitar and harmonica."

Ron Ubel, who's earned a rep for jazz engineering, owns Soundtrek (Missouri), a studio with two locations focusing on music for advertising. Although he does some gospel work and has provided live, digital 2-track mixes for some local jazz groups, he comments that more local musicians are recording in home studios—or in other cities. "For the most part, people think they have to go to Nashville, Chicago or L.A. to get what they need."

Those are the ones who want to make it big. Others simply want to record for posterity, and in some cases, to get The Word out. Gospel music is extremely popular, both in churches and in small concert halls. One Kansas City facility, The Studio (Missouri), earns much of its income tracking contemporary Christian music. The low budget, "constantly over-booked" Studio works mostly on private-label cassette and album projects. Studio owner Evan Smalley reports, "I do a lot of new acoustic music, new age music, even power funk. I had fun doing a flash metal group, which was just for grins—they were all doctors. But half my work is contemporary Christian. That's a very happening thing in this part of the country."

Among other services, The Studio offers its clients an Emulator. It once offered a sizeable synth/sampling setup, but "had to sell it because people actually want to *play* music," Smalley says. The album-oriented Sound Factory (Kansas), however, "works on intensely synthesized stuff," says owner Gary West. Sound Factory has loads of MIDI gear, yet "people use [synths]

more in a supplementary fashion, synching to pre-existing tape. But in areas like metal music, which is pretty intense here, they go for live tracks." Along with metal music, according to West, Kansas City boasts "a lot of R&B artists, some great country acts and some hot jazz players."

"Because we're in the Midwest, we get a blend of everything," concurs Ron Dabbs, co-owner of Sound Recorders (Missouri), a high-end facility that services mostly commercial clients. Occasionally Dabbs works with signed artists and American Gramophone musicians, recording new wave, "semi-hard" rock, country and jazz. Dabbs points out a growing trend among local artists: "A lot of musicians are independent; they're not in a band, but they put down tracks on each others' projects. A country bassist might come in to lay rock tracks for a friend, for instance."

Finally, there is also classical music in Kansas City. Although the venerable Kansas City Philharmonic disbanded in 1980 (having run out of money), about three years ago a local banker underwrote a symphony that's now doing well. To "give something back to the community," Ron Ubel's Soundtrek digitally records every symphony subscription concert—at no charge—for broadcast on the local classical radio station later in the season. Says Ubel, "It's our little way of trying to keep music alive in this town."

—Linda Jacobson

—FROM PAGE 137, MINNEAPOLIS

strong, and the blues scene is definitely still happening. This is a vital area, both for new music and the music that's been here. I do jazz for the radio shows, although I don't know of a jazz label in town. Terry [Lewis] and Jimmy ["Jam" Harris] continue to be successful, and Prince is going to continue." Rock, as always, is very strong in the area.

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**Studio M, the home of Minnesota Public Radio, is St. Paul's largest recording facility.**

neapolis, Creation Audio's studio manager/co-owner Terry Grant focuses on national label acts and a thriving jingle market. "Years ago we did mostly jingles, then we drifted into doing records, and now we're back into the jingle and post work," Grant declares. "We've grown a lot in the radio and TV sweetening post-production areas in the last three or four years. The album work didn't change, but the jingle work grew."

Creation does some audio-for-video, typically three- and four-machine lockups, but albums for artists such as Steve Miller, Ben Sidran and Deniece Williams are a larger part of their business. "We're a little pricey for the local acts," Grant admits, although ex-Husker Du member Grant Hart recorded at Creation for the SST label. Grant notices continuing pressure from producers and labels to keep to a fixed budget: X dollars for a set number of songs.

Many clients' free-spending habits may have been curbed, but business is good. In addition to the Minneapolis ad agencies, "we have a lot of out-of-town agencies coming here to draw on the local talent pool, especially voice talent," Grant notes. "It makes them sound different than their competition." He is optimistic about the Twin Cities music industry: "This is one of those places people transfer into and don't want to transfer out. It's a dynamic atmosphere."

Paisley Park has a full schedule of album projects, a healthy share of the Minneapolis jingle work, and some audio-for-video and film work. Prince's audio castle mostly hosts national projects for Paisley Park's house label and various major labels, including rock, R&B, pop, classical, Latin and salsa acts. Salsa in Minneapolis? "We get salsa work out of Chicago," responds studio manager Harry Grossman. "They come to Minneapolis for technology, Twin Cities style."

That technology includes a new, small-scale, 24-track room with an MCI/Sony 24-track and a Soundcraft TS-24 console; another Studer A800 and R-DAT have been added to the equipment list. Recent Paisley Park projects include Tony LeMans (a hot new Paisley Park artist), George Clinton, Jermaine Jackson and Fine Young Cannibals. And plenty of Minneapolis-style jingles.

—Steve Oppenheimer

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## MUSIC · NOTES

—FROM PAGE 128

time to bring things up to date, historically and sonically. There was the matter of an inadequate mix in the original recording—Reich, then a young, impressionable musician new to the recording game, trusted the German engineers who failed to understand the balances of the piece and thus downplayed the vocals in the mix. In releasing *Early Works*, we're reminded of Reich's prototypical dealings with tape looping and splicing; "Come Out" and "It's Gonna Rain," with their stuttering and echo-

ing speech texts, predate recently popularized work by Laurie Anderson and John Zorn, and even manifest in the scratch language of hip-hop.

"At the moment, I'm working on a piece for the Kronos String Quartet, which will be done and recorded in October," he says. "That will be on a record of which one side will be a piece I wrote for Pat Metheny called "Electric Counterpoint," and the other side will be the Kronos piece. That piece goes back to these tape pieces, i.e., it uses the spoken voice as source material for a piece of music, by combining the spoken voice with instruments."

Slated for recording in the fall backed with the Metheny work, "Different Trains," as Reich is calling the piece, promises to offer a new horizon in his conceptual thinking. When he originally approached a commission to write for the Kronos, Reich had planned to pursue his interest in multiples by plotting the string quartet against four others on tape. But another germ of an idea took root. As a child in the '40s, Reich shuttled across the continent between his separated parents, living on either coast. Often in the ensuing years, Reich has reflected on the sorts of horrific train rides taken by Eastern European Jews during that same period. For this piece, he began distilling those feelings into a musical construct, fusing it with the Kronos work.

"To prepare for the piece, I recorded the voice of the woman who took care of me as a child, my governess, who now lives in Queens. I recorded a retired black Pullman porter who used to run on the very lines that I traveled. And I went up to Yale University and made recordings from their holocaust survivors archives, people about my age talking about grim circumstances in Europe at that time. That is the piece, along with steam locomotives from America, Germany and Poland.

"All of this serves as raw material for the piece. What I'm doing is literally listening to the voices of these people and selecting fragments, the way I did in "It's Gonna Rain" and "Come Out," but this time, instead of looping them and making them the whole piece, I'm writing out in musical notation how they speak, so to speak. The tone of voice serves as the genesis for the melodic material for the Kronos. That's what's happening. I'm using sampling machines as a way of storing the material and accessing it. In a way, it's incredibly more flexible and more musical than chopping up tape.

"If this Kronos piece works out—and it seems to be, beautifully—I'd like to extend that to include video images as well as audio, to use sync sound and video documentary material as a basis for a new kind of musical theater, with musicians on stage and large video monitors and computers behind them. This is a whole general direction of which these tape pieces

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# NORTH CENTRAL STUDIOS

Information in the following directory section is based on questionnaires mailed earlier this year and was supplied by those facilities listed. *Mix* claims no responsibility for the accuracy of this information. Personnel, equipment, locations and rates may change, so please verify critical information with the companies directly.



General Motors Corporation's audio post studio in Detroit is used primarily for corporate training films and radio and TV commercials, although the facility is also used by outside clients such as ad giant N. W. Ayer. The control room features a Harrison Pro-7 console with Audio Kinetics MasterMix automation. Two adjacent Grass Valley ISC-equipped edit suites are also linked to the control room for post-production.

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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. There is a nominal charge to list a Boldface Listing (name, address, contact) and an Extended Listing (equipment, credits, specialization and photo or logo). If you would like to be listed in a *Mix* Directory, write or call the *Mix* Directories Department, 6400 Hollis Street #12, Emeryville, CA 94608; (415) 653-3307.

### Upcoming Directory Deadlines:

Northwest Studios: **October 14, 1988**

Southeast Studios: **November 14, 1988**

Independent Engineers/Producers: **December 15, 1988**

International Directory (U.K. and Western Europe): **December 15, 1988**

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# NORTH CENTRAL STUDIOS

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# NORTH CENTRAL

[24+] **AIRE BORN STUDIOS;** also *REMOTE RECORDING*; 4600 Northwest Plaza, E. Dr.; Zionsville, IN 46077; (317) 876-1556. Owner: John Bolt, Mike Wilson. Studio Manager: Mike Wilson

[24+] **THE ALLIANCE RECORDING COMPANY;** also *REMOTE RECORDING*; 8449 Parshallville Rd.; Fenton, MI 48430; (313) 632-5653. Owner: Al Hurschman, Mark Farner. Studio Manager: Al Hurschman. Engineers: Al Hurschman, Dee Hurschman, Don Pushies, Jacques Mersereau, independent. Dimensions: Room 1: studio 36 x 40, control room 20 x 24. Room 2: control room 18 x 20. Mixing Consoles: NEOTEK IIIIC 56 x 24, Hill J Series 24 x 8. Audio Recorders: MCI JH-114 24-track, MCI 110-A 2-track, MCI 110-B 2-track, Otari MkII 8-track, Scully 280B 2-track. Echo, Reverb, & Delay Systems: Lexicon 224XL, EMT 140TS, ART 01A, Sound Workshop 262, Eventide H910 Harmonizer, Marshall Time Modulator, DeltaLab DL-2, DeltaLab TimeLine, Eventide 1745, Yamaha analog delay, Dynacord Time Tech tape delay, Yamaha SPX90II, Lexicon LXP-1. Other Outboard Equipment: (2) UREI 1176, (2) dbx 165, (2) dbx 166, Scamp rack w/limiters, gates, EQs, Orban 418A, Orban 424A, Omni Craft noise gates, Teletronix LA-2A, Eventide Instant Phaser, MXR flanger/doubler, Inovonics limiter, Valley People Dual Dyna-Mite. Microphones: Neumann U89, Neumann U87, Neumann KM84, Neumann KM86, Neumann U47 (tube), AKG 414, AKG 451, AKG C-28, AKG 109, AKG 190, E-V RE20, E-V CS15, E-V RE55, E-V RE15, E-V 635, E-V 666, E-V DS35, Sennheiser 421, Sennheiser 441, Beyers 500, Beyers 260, Beyers 101, Shure SM81, Shure SM57, Shure SM58, Shure SM54, Altec M30, Crown PZM, Monitor Amplifiers: SAE, Crown, McIntosh. Monitor Speakers: UREI 813B, JBL 4311, JBL 4312, JBL 4301, Yamaha NS-10, Auratone. Musical Instruments: Ensoniq Mirage, Yamaha DX7, Korg Polysix, LinnDrum, Ludwig drums, Fender Rhodes, Fender, Peavey, Roland, AIMS and Marshall instrument amps, Yamaha RX5, Oberheim Matrix-6, Peavey MegaBass. Other MIDI Equipment: Macintosh 512e (modified), Macintosh Plus, Southworth JamBox/4, Southworth JamBox/4+ Video Equipment: Synchronizer, 3/4" deck and monitor available for post scoring. Other: Peavey 1516 speaker cabinet. Rates: Available on request.

[24+] **AMBIENCE RECORDINGS;** 27920 Orchard Lake; Farmington Hills, MI 48018; (313) 851-9766. Owner: Charles Schenck. Studio Manager: Dennis Forbes

[24+] **ARS RECORDING & TAPE DUPLICATION;** also *REMOTE RECORDING*; 11628 S. Pulaski Rd.; Alsip, IL 60658; (312) 371-8424. Owner: ARS Enterprises Inc. Studio Manager: Allen L. Keilman

[24+] **ATTICA RECORDING STUDIO;** 2614 5th Ave., Rock Island, IL 61201; (309) 786-9832. Owner: Greg Ballard. Studio Manager: Greg Ballard. Engineers: Greg Ballard, Alanson Clark. Dimensions: Room 1: main studio 14 x 20 x 12. Room 2: control room 14 x 20 x 10. Room 3: drum booth 10 x 10 x 8. Room 4: vocal booth 6 x 8 x 8. Mixing Consoles: Soundcraft 1600 24 x 24 x 8. Audio Recorders: 3M 79 24-track, Otari 5050B 2-track, Pioneer 2-track, TEAC A4010 4-track, Tascam 80-8 8-track. Cassette Recorders/Duplicators: Sony, Aiwa, Pioneer. Echo, Reverb, & Delay Systems: Lexicon 200, Yamaha SPX90, (2) DeltaLab DL-4, ADA 256, (3) ADA 1000. Other Outboard Equipment: MXR doubler/flanger, MXR pitch controller, Yamaha doubler, Aphex Aural Exciter, (4) Symetrix compressor/limiter, (2) Symetrix noise gate, (4) Omni Craft noise gate, Roland RE-201, (2) Symetrix parametric EQ, (3) Yamaha 31-band EQ. Microphones: (2) Neumann U87, (12) Shure SM57, (4) Sennheiser 421, RCA 77DX, Sony 37-P, E-V RE20. Monitor Amplifiers: BGW, QSC. Monitor Speakers: (2) Yamaha, (2) Auratone, (2) E-V. Musical Instruments: Bradbury grand piano, Yamaha DX7, Korg CX3, Ludwig drum set (5-piece), Drumulator 700D. Other: Computer system interfaced to our Soundcraft for mid-disk assistance. Rates: \$50/hr., but vary according to final contract.

[24+] **AUDIO GRAPH PRODUCTIONS, INC.;** also *REMOTE RECORDING*; 2810 Bennett Rd.; Okemos, MI 48864; (517) 332-3272. Owner: Doug Monson, Glenn Brown. Studio Manager: Jerome Fox. Engineers: Glenn Brown, Jerome Fox, Lisa

Cousino. Dimensions: Room 1: studio 30 x 23, control room 18 x 17. Room 2: studio 13 x 16, control room 13 x 17. Mixing Consoles: NEOTEK Series II 32 x 24. Audio Recorders: Studer A80 MkII 24-track, Studer A810 2-track, (2) Otari MX-5050BII 2-track, Cassette Recorders/Duplicators: Studer A710, Revox B215. Technics Synchronization Systems: Adams-Smith 2600 System Echo, Reverb, & Delay Systems: Lexicon 224XL digital reverb system, (2) Lexicon PCM70 digital reverb system, Yamaha REV7, Yamaha SPX90, live chamber. Other Outboard Equipment: Lexicon 93 Prime Time delay, Lexicon Prime Time II delay, Lexicon PCM42 delay, Eventide H910 Harmonizer, Eventide FL201 Instant Flanger, UREI 1176LN compressor, UREI 1178LN compressor, (2) dbx 160X compressor, Orban de-esser, Valley People Kexep II and Valley People Gain Brain II, Teletronix LA-2A and more. Microphones: Neumann, Sennheiser, Sony, Crown PZM, Beyers, Shure, E-V, AKG. Monitor Amplifiers: (4) McIntosh, (3) Crown. Monitor Speakers: UREI 813A, JBL 4311, JBL 4310, Yamaha NS-10M, Auratone, Studer. Musical Instruments: Kimball 1929 grand, Oberheim OBXa, Oberheim DMX, Oberheim DSX, Emulator II w/huge library, Simmons SDS-1000, MTM MIDI trigger, (3) Marshall stack, misc. vintage, Fender and Gibson amps, Mesa/Boogie, Scholz Rockman rack, Yamaha DX7. Video Equipment: Sony 2600 3/4" deck, Sony BVU-950 3/4" deck, JVC monitors. Other: Roland Vocoder, 2-channel Dormeyer Food Fixer, stereo mixer. Rates: Call for rates.

[24+] **THE AUDIO LOCK UP;** 345 N. Canal; Chicago, IL 60606; (312) 993-3499. Owner: Tony Hugar. Studio Manager: Pat Azzarello

[24+] **AUDIO RECORDING STUDIOS, INC.;** also *REMOTE RECORDING*; 601 Rockwell Ave.; Cleveland, OH 44114; (216) 771-5112. Studio Manager: Bruce Gigax. Dimensions: Room 1: studio 20 x 60, control room 24 x 22. Room 2: studio 9 x 15, control room 19 x 15. Mixing Consoles: Sony MXP-3036. Sound Workshop Series 30 12 x 8. Audio Recorders: Ampex MM-1200 24-track, (3) Ampex ATR-800 2-track, MCI JH-110C 8-track, (3) Electro Sound ES-505 1-, 2-, 4-track, Sony APR-5003, Sony PCM-3102. Echo, Reverb, & Delay Systems: Lexicon 224XL, EMT 240, Master-Reverb, Eventide Harmonizer, TC Electronic 2290, ART DR1, ADA Digitizer 4. Other Outboard Equipment: dbx and Symetrix limiters, Orban and Ashley EQ, Quad Eight noise gates, EXR Exciter, Symetrix phone interface. Microphones: Neumann, AKG, Shure, Sennheiser, B&K, E-V, RCA. Monitor Amplifiers: Spectra Sonics, NAD. Monitor Speakers: JBL 4333, JBL 4411, JBL 4401, MDM-4, Yamaha NS-10M. Auratone. Musical Instruments: Yamaha grand piano, Yamaha KX88 keyboard controller, Yamaha TX816 rack, Roland MKS-20 digital piano, E-mu SP-12 drum machine, Sequential Circuits Prophet-2002, Kurzweil 1000 PX, Korg EX-8000. Other MIDI Equipment: Roland SBX-80, Yamaha MJC-8 switcher, Mac Plus w/Sound Designer, Performer and TX editor/librarian software. Video Equipment: BTX Softouch SMPTE interlock system, Sony VO-5800 U-matic, Beta Hi-Fi and VHS Hi-Fi, Sony, Panasonic monitors. Other: PCM-701, PCM-501, (3) Sony Betamax, Nagra III, (2) Technics turntable, (2) Sony CD player. Rates: Upon request.

[24+] **AUDIOCRAFT;** also *REMOTE RECORDING*; 915 W. 8th St.; Cincinnati, OH 45203; (513) 241-4304. Owner: E.T. Herzog, Jr.

[24+] **BEACHWOOD STUDIOS;** also *REMOTE RECORDING*; 23330 Commerce Park Rd.; Beachwood, OH 44122; (216) 292-7300. Owner: EDR Production. Studio Manager: Joel M. Solloway, George A. Sipl. Engineers: George A. Sipl, Joel M. Solloway, Dave Wilson, Jim Demain, Dave Jonke. Dimensions: Room A: live room 26 x 29, rhythm room 35 x 29, control room 27 x 27. Room B: rhythm room 31 x 30, control room 24 x 20. Mixing Consoles: MCI JH-600 automated 36 x 24, MCI JH-600 automated 28 x 24. Audio Recorders: (3) MCI JH-24 24-track, (6) MCI JH-110B 2-track, (3) Sony APR-5002 2-track, (3) Otari MX-5050 2-track 1/4", Sony 2-track Beta Hi-Fi, (2) Tascam 44-OB 4-track, Otari MTR-10 2-track. Echo, Reverb, & Delay Systems: Lexicon 224XL w/LARC, Lexicon 224, Klark-Teknik DN780, (2) Ecoplate, Lexicon PCM41, Lexicon PCM42. Other Outboard Equipment: (2) Teletronix Tube limiter, UREI LA-2, UREI LA-4, UREI 1176 limiters, AMS har-

monizer, Eventide H969 and Eventide H949 Harmonizers, (2) Aphex Aural Exciter, (2) Eventide Flanger, (2) Klark-Teknik graphic EQ, Gain Brain II and Kexep II. Scamp noise gates and compressors, Dolby 32 channels, Yamaha SPX90 reverb, Sony PCM-501, Scientific Atlantic digital satellite dish/processor. Microphones: Neumann, AKG, Beyers, Shure, Sennheiser, Samson "TD Concert" Series wireless w/DPX chip. Monitor Amplifiers: McIntosh Z300, BGW 710, Crown DC-300. Monitor Speakers: UREI 813 Time Align. Musical Instruments: Yamaha 9' and 7' grand pianos, Hammond organ. Video Equipment: Adams-Smith 2600 video interlock, RCA 25" and (2) Panasonic 13" color monitors, JVC 850CR 3/4" video, V05850 video. Rates: Please call.



**BIG DOG STUDIO**  
Wichita, KS

[24+] **BIG DOG STUDIO;** also *REMOTE RECORDING*; 412 1/2 E. Douglas; Wichita, KS 67202; (316) 263-4464. Owner: Sheldon Coleman, Jr. Studio Manager: John F. Salem. Engineers: John F. Salem, Bo Reusch. Dimensions: Room 1: soundstage 135 x 35, control room 20 x 18, studio 19 x 18, studio 16 x 16, piano room 8 x 16, drum room 15 x 25. Mixing Consoles: Aneke Angela 2B x 24, Carvin 16 x 8 x 2 w/all new Linear Technology chip upgrade. Audio Recorders: Studer A80 MkIV 24-track, Sony ADR-5000 2-track 1/4" and 1/2", Otari MX-5050B 2-track, (2) Sony PCM-2500 DAT. Cassette Recorders/Duplicators: (2) Tascam 122 MkII decks. Noise Reduction Equipment: dbx 190A 24-channel, (2) Rocktron Hush II 2-channel. Echo, Reverb, & Delay Systems: Lexicon PCM-70, live chamber (35 x 95), (2) Yamaha REV7, (4) Yamaha SPX90, Lexicon PCM41, Lexicon PCM42. Other Outboard Equipment: Aphex Type B Aural Exciter, Studio Technologies AN2 stereo simulator, Orban Model 672A equalizer, Symetrix 544 4-channel noise gate, (4) dbx 166 comp/lim/gate, dbx 160 comp/lim, (2) Orban 536A sibilance controller, (8) Stewart active direct box, Scholz Rockman rack module, Countryman DIs, Jensen DC Twin Servo stereo mic preamp. Microphones: Neumann, (2) AKG C-414EB, Beyers M 88, (6) Sennheiser 421, (5) Shure SM81, (12) Shure SM57, E-V N/DYM 308, Neumann U87 and Stephen Paul 3 micron Diaphragm U87A. Monitor Amplifiers: (2) Hafler P-500, Crown DC-75, Biamp monitor headphone amp, QSC studio monitor. Monitor Speakers: (2) Tannoy S6M 3000, (2) Yamaha NS-10, (2) JBL 4411 control monitor (2) E-V Sentry 100, (10) AKG K-240 DI headphones. Musical Instruments: Yamaha C7 7' 4" conservatory grand piano (1985), Gretsch 4-piece drum set, various cymbals and percussion. Simmons SDS7 electronic drums, Roland DDR-30 electronic drums, Linn LM1 drum machine, Yamaha RX11 drum machine, Ensoniq Mirage, Ensoniq ESQ-1, Roland S-50sampler, Yamaha master keyboard controller, Yamaha CP electric grand, Marshall JCM800 guitar amp. Other: Roland JC120 Jazz Chorus guitar amp, Fender pre-CBS Concert amp, Mesa/Boogie guitar amp, all Mogami, Canare and Monster cabling. Rates: \$70/hr. or \$700/day block out \$100/hr. with recording theater, \$900/day theater block out. Studio 5-day week block \$3,000, 2-week block \$5,700. Extras & Direction: 3,000 square foot newly built soundstage recording theater with stereo PA (flown), monitors, stage lights, seating for 300, food and beverage service. Designed specifically for live-with-audience recording, satellite uplinks, live broadcast, orchestral sweetening, live album cuts, great echo chamber; video possibilities incredible. Also, piano is one of the best recording grands you will find anywhere, must hear to believe.

[24+] **BLACKBERRY WAY RECORDING STUDIOS, INC.;** 606 13th Ave. SE; Minneapolis, MN 55414; (612) 378-2466. Owner: Mike Owens, Kevin Glynn. Studio Manager: Mike or Kevin.

[24+] **BREEZEWAY RECORDING STUDIOS INC.;** 363 W. Main St.; Waukesha, WI 53186; (414) 547-5757. Owner: Steve Grodz, Pat Bosch. Studio Manager: Kathy Bosch. Engineers: Lee Crooks, Paul Wehr ey, Mike Hoffmann, Jim Altz, independent welcome. Dimensions: Studio 32 x 18, control room 18

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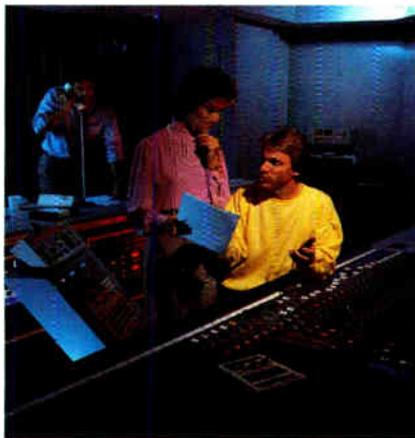
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Music Annex offers an outstanding environment for audio production. Our two studios, located in the heart of downtown San Francisco, give a client access to the finest technology available for television, radio and media production.

Our award-winning staff is dedicated to providing you with the highest level of service anywhere. We specialize in creating, assembling and mixing audio and video soundtracks for a wide variety of clients. We can also develop original music and sound design utilizing our Emulator III/Macintosh II/Dyaxis digital audio workstation.

Take the opportunity to visit our studios, have a cup of our great coffee and listen to our reel. You'll hear why our clients keep coming back.

### Services & Equipment Offered

**Facility Manager:** Angela Goodison **Engineers:** Randy Bobo, Patrick Fitzgerald, Roger Wiersema, Linda Lew. **Dimensions:** Control One- 28X23; Studio One- 12X16; Foley One- 12X8X15; Control Two- 18X12; Studio Two- 13X12. **Consoles:** AMEK 2500 w/ automation 28X24; AMEK/TAC 16X8; **Audio Recorders:** MCI 24 TRK, Otari MTR-12 2-TRK w/CTC, Otari MTR-10 1/2" 4-TRK, Otari MX5050-III 8-TRK, **Synths/Computers:** EMU Emulator III, Apple Macintosh II, IMS Dyaxis. **Video & Film Equipment:** Sony BVH-1100 1" C-type VTR w/TBC, JVC CR850U (2), JVC VHS hi-fi, MTM Mag Dubber. **Other:** audio duplication of cassette and reel-to-reel for distribution and broadcast. Original music composition and scoring available; comprehensive music and sfx libraries.

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# BUSINESS PAGES!

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## MUSIC ANNEX, INC.



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**ARM, MIDI, WP, APPV,  
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Music Annex offers an outstanding environment for audio production. Our two studios, located in the heart of downtown San Francisco, give a client access to the finest technology available for television, radio and media production. We are within walking distance to SF's largest advertising and corporate clients.

Our award-winning staff is dedicated to providing you with the highest level of service anywhere. We specialize in creating, assembling and mixing audio and video soundtracks for a wide variety of clients. We can create original music and sound design or edit existing music directly to picture. We can also develop original music and sound design utilizing our Emulator III/Macintosh II/Dyaxis digital audio workstation.

Take the opportunity to visit our studios, have a cup of our great coffee and listen to our reel. You'll hear why our clients keep coming back.

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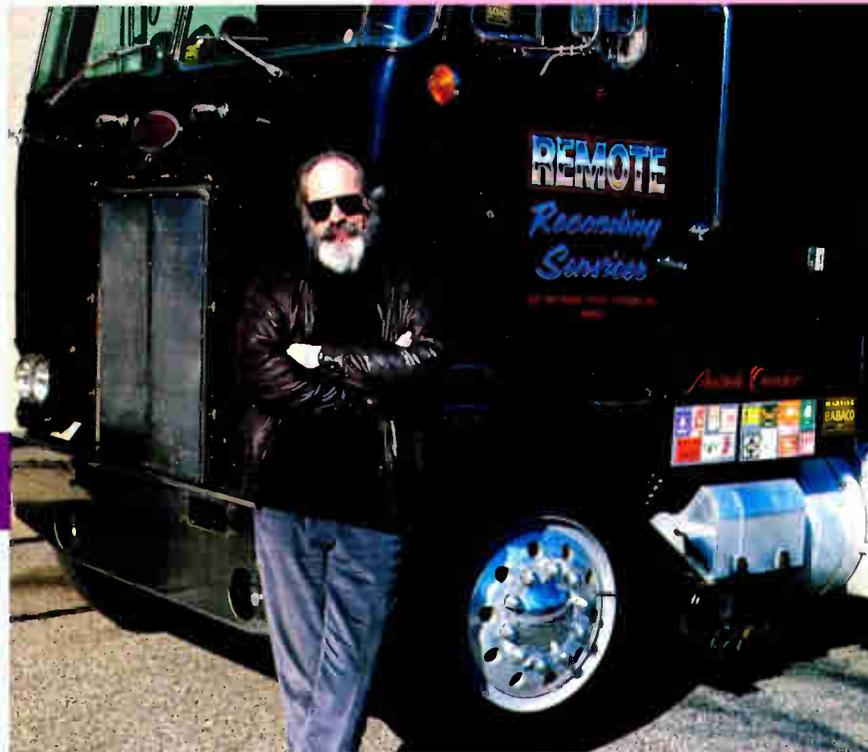
**Facility Manager:** Angela Goodison **Engineers:** Randy Bobo, Patrick Fitzgerald, Roger Wiersema, Linda Lew. **Dimensions:** Control One- 28X23; Studio One- 12X16; Foley One- 12X8X15; Control Two- 18X12; Studio Two- 13X12. **Consoles:** AMEK 2500 w/ automation 28X24; AMEK/TAC 16X8; **Audio Recorders:** MCI 24 TRK, Otari MTR-12 2-TRK w/CTC, Otari MTR-10 1/2" 4-TRK, Otari MX5050-III 8-TRK, Ampex 2-TRKS. **Cassette Recorders:** TASCAM 122 (5); **Noise Reduction:** Dolby A (24), Dolby SR (4), dbx 150 (8). **Synchronizers:** AK Q-

Lock 4.10 (2). **Signal Processing:** Lexicon 480L, Lexicon 224, Yamaha & ADA delays. **Microphones:** AKG, Sennheiser, RCA, Shure. **Monitors:** JBL, Yamaha, Auratone. **Synths/Computers:** EMU Emulator III, Apple Macintosh II, IMS Dyaxis. **Video & Film Equipment:** Sony BVH-1100 1" C-type VTR w/TBC, JVC CR850U (2), JVC VHS hi-fi, MTM Mag Dubber. **Other:** audio duplication of cassette and reel-to-reel for distribution and broadcast. Original music composition and scoring available; Comprehensive music and sound effects libraries.

World Radio History

# D RIVING FORCES

## TEC WINNER'S PROFILE



Criss-crossing the country in his Black Truck, David Hewitt has brought the best in remote audio services to many of the world's top recording artists. *Mix* readers voted him winner of the 1987 TEC Award for Film/Video/Broadcast Production Engineer. David Hewitt knows what it takes to succeed, and what it feels like when you do:

**Life on the Road:** "I'm not sure what puts people on the road. I think all engineers are kind of eccentric and unusual. To me, it's always been kind of an addictive lifestyle. I enjoy the travel and the comraderie with people."

**Magic Moments:** "Something happens when the band is really playing. Everything works and the show kind of mixes itself. This doesn't happen very often, but when it does you know it. It's those moments that make the whole thing worthwhile."

**The TEC Awards:** "This is a people business and it's great to give the folks a chance to sit down and scratch their heads and say: 'Who's out there who works well and doesn't get the kind of recognition he deserves?'"

**Mix magazine:** "I've been reading *Mix* a long time — I really use the thing. Once Pink Floyd decided with less than a week's notice to get this very complex package together. I grabbed *Mix* and started calling around, making all the arrangements. It was very, very crazy but we got it down — due, in no small part, to *Mix*."



**MIX** THE RECORDING INDUSTRY MAGAZINE

Photos (Top) Claude Rolo, (Bottom) C.R. King

The 1988 Technical Excellence and Creativity Awards will be held Nov. 3 in Los Angeles. Call 415-653-3307 for information.

# NORTH CENTRAL

—CONTINUED FROM PREVIOUS PAGE

x 15 Mixing Consoles: NEOTEK Elite 26 x 26 w/8 stereo audio subgroups (over 40 total returns), Audio Kinetics MasterMix disk-based automation. Audio Recorders: MCI JH-24 24-track (16 optional), MCI JH-110 1/2-track, Otari 5050B 1/2-track, Nakamichi DMP-100 2-track digital processor (F-1 type). Cassette Recorders/Duplicators: Sony TC-D5M, Technics RSM-85 MkII, Harman Kardon TD302. Noise Reduction Equipment: Dolby 361-A, dbx 180 available on 1/2-tracks, Dolby 361-SR. Echo, Reverb, & Delay Systems: Klark-Teknik DN780 digital reverb, Ecoplate II, Ecoplate III, Lexicon PCM70 reverb, Lexicon PCM60 reverb, Lexicon Prime Time 93 w/MEO, Yamaha SPX90 and Yamaha REV7 processors, Roland SDE-3000, DeltaLab Effectron II, ADM 1024. Other Outboard Equipment: Limiters: dbx 160, dbx 160X, dbx 165, UREI 1176LN, UREI LA-4; Valley People Dyna-Mite stereo limiters/gates, Omni Craft GT-4 gates, Drawmer DS201 gates, Aphex Type B stereo Aural Exciter, Studio Technologies AN-2 stereo simulator, Eventide 910 Harmonizer, MXR flanger/doubler, Orban 674A stereo paragrahic equalizer, Orban 536A de-esser, Wendel Jr. drum replacer, other outboard equipment available upon request. Microphones: AKG C-24 stereo tube, AKG 414EB, AKG 451, AKG D-112, Neumann U47 tube, Neumann U87, Bruel & Kjaer 4006, Sennheiser 441, Sennheiser 421, E-V RE20, Shure SM57, Shure SM58, Shure SM81, Shure SM7, Sony C-48, Beyer M 500, Beyer M 88, Crown PZM. Monitor Amplifiers: SCS 2600, UREI 6500, UREI 6250, UREI 6150, BGW 250C. Monitor Speakers: UREI 813B, Yamaha NS-10M, JBL 4311, Auratone 5C. Musical Instruments: Yamaha Recording Series drums w/Zildjian and Paiste cymbals, Kawai 6'8" grand piano, Hammond B-3 organ w/Leslie, Roland S-50, Roland D-50, Roland JX-10, Ensoniq ESQ-1, E-mu SP-1200 drum machine. Other MIDI Equipment: Southworth Jam-Box/4 SMPTE sync box, Roland Octapad, Macintosh SE w/Opcode Studio Plus MIDI converter, Performer 2.0 and Professional Composer software plus other items. Other: Proton 19" video monitor, Beta and VHS VCRs, Technics SL-1200 turntable w/Shure Type V cartridge, Stanton preamp, Toshiba CD player. Rates: Upon request.

[24+] **BROWN & BROWN RECORDING AND MUSIC PRODUCTIONS;** Box 224; Portage, MI 49081; (616) 327-8352. Extras & Direction: Brown & Brown is located precisely between Detroit and Chicago, specializing in original music for broadcast production, multi-track recording, voice-over and AV soundtracking. In addition to 2-track digital remote recording, we offer a well-appointed control room using the MCI JH-24 (2" 24-track) and Ampex 440-C (1" 8-track). Clients appreciate our large recording room, digital mixdown, excellent processing gear and experienced engineers. Original award-winning musical image packages are airing in the Midwest and across the U.S. We are always producing demos and album projects for several clients and are helping with project packaging services. This year we are adding full audio/MIDI/video lockup post-production and 32-track capability.



Chicago MIDI Garage

CHICAGO MIDI GARAGE  
Chicago, IL

[24+] **CHICAGO MIDI GARAGE;** 1840 W. Hubbard St. (alley entrance); Chicago, IL 60622; (312) 243-MIDI; mailing address: PO Box 562, Winnetka, IL 60093. Owner: Larry Burns. Studio Manager: Larry Burns. Engineers: Larry Burns, Brad Spalter, Mike Szarzynski, Bob Kearney. Dimensions: Studio 35 x 30, control room 25 x 14. Mixing Consoles: TAC Scorpion 24 x 16, (2) Hill Multimix 16 x 6. Audio Recorders: Otari MX-80 24-track, Fostex E-22 3-track, Tascam 32 2-track, Sony PCM-

601 2-track, Nakamichi DMP-100 2-track. Cassette Recorders/Duplicators: Aiwa F990, Aiwa 6700. Synchronization Systems: Adams-Smith Zeta III. Echo, Reverb, & Delay Systems: Lexicon 200, (2) Lexicon PCM70, Lexicon 93, TC Electronic 2290 w/32 sec of memory, Yamaha SPX90, Roland SRV-2000. Other Outboard Equipment: Aphex Type B Aural Exciter, Aphex stereo Compellor, dbx 160X, (4) dbx 166, (2) Ashly SC-66, Ashly SC-50. Microphones: (2) AKG 414, (5) AKG 421, (2) B&K 4007, (2) Beyer M 88, (3) Beyer M 160, (3) Beyer M 260, (2) Beyer MC713, Beyer MC740, (2) Neumann KM84, (2) Shure SM57. Monitor Amplifiers: Crown Micro-Tech 1000, Yamaha P2075. Monitor Speakers: UREI 809, Yamaha NS-10M, Auratone. Musical Instruments: Yamaha TX816, Yamaha TX802, (2) Yamaha DX7, Yamaha RX5, Roland S-550, Roland D-550, Roland MKS-70, Roland MKS-80, Yamaha TX1P. Other MIDI Equipment: Roland Octapad, (2) Mac Plus computer w/software for all MIDI gear w/Performer and Opcode sequencers, J.L. Cooper MSB+ Video Equipment: Sony 5850, Sony SLHF-750 1/2" Beta. Rates: Call (312) 243-MIDI to interface.

[24+] **CHARLES BROWN MUSIC, INC.;** 1349 E. McMillan St., Cincinnati, OH 45206; (513) 281-5212. Owner: Charles Brown. Studio Manager: Jan Wiggeringloh.

[24+] **CARAVALL STUDIO; also REMOTE RECORDING;** HCR 5, Box 2400; Branson, MO 65616; (417) 334-7040. Owner: Keith O'Neil. Studio Manager: Keith O'Neil.

[24+] **CAVE RECORDING STUDIO;** 1275 E. Miner Rd.; Mayfield Hts., OH 44124; (216) 449-3511. Owner: RSC Productions. Studio Manager: Rick Cohen.



CHICAGO RECORDING CO.  
Chicago, IL

[24+] **CHICAGO RECORDING CO.;** 232 E. Ohio St.; Chicago, IL 60611; (312) 822-9333. Owner: Alan Kubicka. Studio Manager: Hank Neuberger, Jo Sturm. Engineers: Hank Neuberger, Chris Sabold, Gus Mossler, Phil Bonanno, Tim Butler, Bill Kovach, John Titak, Michael Coyle, Tom Hanson, Ian Burgess, Joe Daniels, Cleon Wells. Dimensions: Rooms 4 & 5. studio 78 x 32, control room 28 x 28. Room D: studio 67 x 37, control room 26 x 26. Room H: studio 20 x 12, control room 26 x 26. Plus seven additional studios. Mixing Consoles: Focusrite 60 x 32 w/GML automation, SSL 6000E 48 x 48 w/Total Recall, Neve 8068 32 x 32 w/Necam, MCI 556D 56 x 48 w/Diskmix, Cadac Series E 36 x 32, Harrison, Sphere, Trident. Audio Recorders: Studer A800 24-track, Studer A80 24-track, (6) MCI JH-114 24-track, AMS Audiofile, Sony PCM-601 digital, Sony PCM-701 digital, Sony D-01E. Cassette Recorders/Duplicators: Nakamichi, Yamaha, Studer, Infonics. Noise Reduction Equipment: Dolby A 48-track. Synchronization Systems: (8) BTX Softouch Echo, Reverb, & Delay Systems: Lexicon 480L, AMS RMX 16, AMS 15-80S, (4) Lexicon PCM-70, EMT 251, (6) Yamaha REV7, (8) Yamaha SPX90, Lexicon 200, (5) EMT 140 plate, (12) Lexicon PCM41, Lexicon PCM42. Other Outboard Equipment: Wendel Jr. drum sampler, API graphic EQ, (12) Drawmer gate, Fairchild (tube) limiters, Aphex, Scamp, Pultec, dbx, ADR. Microphones: Neumann, AKG, Schoeps, Sennheiser, Sony, Shure, E-V and many tube mics. Monitor Amplifiers: Tannoy, Studer, Crown. Monitor Speakers: Tannoy Dreadnought, Tannoy FSM, UREI 813, Yamaha NS-10M, Auratone. Musical Instruments: Bosendorfer grand piano, Bechstein grand piano, (2) Steinway grand piano w/MIDI interface, (4) Hammond organ, (4) Fender Rhodes electric piano, Wuritzer piano, Hohner Clavinet, tympani, Sonor, Rogers, Slingerland drums. Other MIDI Equipment: Yamaha DX7, Akai sampler. Video Equipment: (8) BTX SMPTE Softouch systems, (12) JVC and Sony 3/4" videocassette recorders, Sony Type C 1" master videotape recorder, complete audio-for-video sweetening for all studios. Other: AMS Audiofile hard disk recorder (tapeless). Extras & Direction: Since we opened our doors in 1975 we have grown from one studio to 12; and remain Chicago's world-class facility. We are in the final stages of a \$3 million expansion that has resulted in five new studios so far, with more under construction. We continue to lead the way with the Midwest's first Focusrite console

personally designed and constructed by Rupert Neve. Recent clients include Huey Lewis, the Insiders, Dirty Dancing and Elton John. After our Grammy-winning records, gold albums and Clio-winning commercials, we know how to provide the best.

[24+] **CHICAGO TRAX RECORDING;** 3347 N. Halsted; Chicago, IL 60657; (312) 525-6565. Owner: Chicago Trax Inc. Studio Manager: Reid Hyams. Engineers: Al Ursini, Julian Hertzfeld, Chuck Kawal, Dave Sears, Steve Spapper, Keith Auerbach, Steve Weeder, Cy Price, Jim Carlsen, Bob Kearny, Jim Rondinelli, Dan Pinault, Ron Gresham, John Patterson. Dimensions: Room 1: studio 35 x 24, control room 24 x 18. Room 2: studio 16 x 11, control room 14 x 13. Room 3: control room 8 x 7. Mixing Consoles: Harrison MR4 32 x 24 w/Audio Kinetics Master-Mix automation, Soundcraft 2400 24 x 24. Audio Recorders: (2) Otari MX-80 24-track, (2) Studer A810 2-track, Studer B67 2-track, assorted 4- and 1/4-track decks. Cassette Recorders/Duplicators: (12) Tascam 122 MkII. Noise Reduction Equipment: dbx 155. Echo, Reverb, & Delay Systems: AMS DMX 15-80S dual delay/stereo sampler/harmonizer, AMS RMX 16 digital reverb system, Lexicon Prime Time I, Lexicon Prime Time II, (2) Lexicon 200 digital reverb, (2) Lexicon PCM42, Lexicon PCM60 digital reverb, (3) Yamaha SPX90, Ecoplate II reverb, Klark-Teknik 780 digital reverb. Other Outboard Equipment: Eventide Harmonizer, Akai S900 digital sampler, Aphex II studio Aural Exciter, (2) dbx 165 comp/limiter, (2) dbx 160X comp/limiter, (2) UREI LA-4 comp/limiter, (2) Telitronix LA-2A comp/limiter, (2) Tubetech EQ, Pultec EQ, (4) Drawmer gate, (2) Valley People Dyna-Mite, (4) Omni Craft GT4 gate. Microphones: Neumann M49, (2) AKG C-12A, (2) AKG 414, (2) Neumann KM84, Neumann U87, (5) Sennheiser 421, (2) Sennheiser 441, (2) E-V RE20, (2) AKG 451, (2) Beyer M 260, (2) Crown PZM. Monitor Amplifiers: Crown Micro-Tech 1200, Halter P500, UREI 6250. Monitor Speakers: (2) UREI 813, (2) UREI 811, (2) UREI 809, (6) Yamaha NS-10M, (2) Genelec 1019A, (2) JBL 4313. Musical Instruments: Yamaha C5 grand piano, Hammond B-3 w/Leslie, Sonor drum kit w/4 snare drums, E-mu Emulator II+HD, E-mu SP-12, Oberheim Matrix-6, Oberheim OB-8, Sequential Circuits Prophet-5S, Sequential Circuits Prophet-2000, Roland D-50, Yamaha DX7, Fairlight CMI. Rates: Upon request.

[24+] **CREATION AUDIO RECORDING, INC.;** 2543 Nicollet Ave. S.; Minneapolis, MN 55404; (612) 870-0028. Owner: Terry Grant, Steven Wiese. Studio Manager: Terry Grant. Engineers: Steven Wiese, Al Flour, Chopper Black, Peter Martinson, Dennis Stech. Dimensions: Room 1: studio 42 x 32, control room 18 x 14. Room 2: studio 35 x 18, control room 18 x 14. Room 3: studio 12 x 8, control room 16 x 12. Mixing Consoles: Sony MXP-3036 44 x 24 w/hard disk automation, Sony MXP-3036 36 x 24, Soundcraft TS 12 24 x 24. Audio Recorders: (2) Sony 3324 24-track digital, (2) Sony 3402 2-track digital, Sony PCM-1630 2-track w/DMR-4000, Sony JH-24 24-track, (2) Sony 5003 2-track analog w/center-track time code, (2) Sony JH-110C 2-track w/Dolby SR. Cassette Recorders/Duplicators: (4) Yamaha C300 2-track, Magneflex 1/4" 5-slave w/15 ips master, (10) KABA real-time cassette duplicator. Noise Reduction Equipment: (4) Dolby SR, (4) Dolby A. Synchronization Systems: Adams-Smith 2600 4-machine Echo, Reverb, & Delay Systems: Publison America Internal 90 w/22-sec. memory, (2) Lexicon 480L w/sampling, AMS RMX 16, Quantec QRS-L, (2) Klark-Teknik DN780, Lexicon PCM70, (2) Yamaha REV5, (3) Roland SRV-2000, (4) Lexicon PCM42 w/2-sec. memory, (2) Eventide H949. Other Outboard Equipment: TC Electronic 2290 sampler, Yamaha SPX90, (2) Aphex Dominator, (2) Aphex Compellor, (6) Drawmer stereo gate, Telitronix LA-2A limiter (tube), (8) dbx 166 stereo limiter/gate, (8) Valley People Kepex II, (8) Valley People Gain Brain II, (2) dbx 165 over easy limiter. Microphones: (2) Sanken C-41, (2) Telefunken U47 tube, (2) Neumann U87, (4) AKG C-414EB, Neumann U47 FET, AKG C-12, (2) AKG 451EB, (2) Sennheiser MD-441, (3) Sennheiser MD-421, E-V RE20, AKG D-12E. Monitor Amplifiers: (8) JBL 6290, (5) JBL 6260, JBL 6230. Monitor Speakers: (2) Westlake BBSM-15, (2) Westlake BBSM-12, (4) JBL 4412, (2) JBL 4411, (2) Tannoy, (6) Yamaha NS-10M. Musical Instruments: Yamaha C7D 7'4" grand piano, Hammond B-3 organ w/Leslie speaker, Linn 9000 drum machine, Yamaha DX7iFD synth. Video Equipment: MCI JH-110C LB layback 1", JVC 8250 3/4" Other: Technics SLP-1200 CD player, UREI digital metronome, Omni Craft SP-2A sync pulse generator. Rates: \$50/hr. thru \$150/hr., block rates available.

[24+] **CREATIVE AUDIO GROUP;** PO Box 83094; Troy, MI 48083; (313) 828-8528. Owner: R.A. Crane. Studio Manager: Katie Haewski. Engineers: Geoff Michael, Tom Gordon, Bob Crane, Tom Jurek, Rob Karjenke. Dimensions: Studio 18 x 25, control room 16 x 14. Mixing Consoles: NEOTEK IIC 28 x 24. Audio Recorders: Otari MX-80 24-track, Otari 5050 2-track, Ampex 2-track. Cassette Recorders/Duplicators: Technics, Onkyo, Tascam, Aiwa. Echo, Reverb, & Delay Systems: Lexicon 480L w/sampling, Lexicon PCM70 Vers 3.0, Roland SRV-2000, Yamaha REV7, Yamaha SPX90, TC Electronic sampler/delay, Lexicon PCM42, Ibanez SDR-1000, Effectrons. Other Outboard Equipment: Valley People Kepex, Valley People Gain Brains, gates, Symtrix compressors, Audio Logic compressor, Aphex Type C Aural Exciter, BBE 802, Rane graphic EQs, Pultec tube EQ. Microphones: Neumann, Sennheiser, Shure, E-V, Toa, AKG. Monitor Amplifiers: Halter. Moni-

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24

TRACK  
STUDIOS

## NORTH CENTRAL

—CONTINUED FROM PREVIOUS PAGE

tor Speakers: E-V. Yamaha, Auratone. Musical Instruments: Any Roland products currently available, Kawai R-100, Steinberger bass, Fender amps, Marshall amps, Pearl drums, anything you request, as we are also a full-line music store. Other MIDI Equipment: Roland MC-500, Steve Schuetz. Rates: Please call.

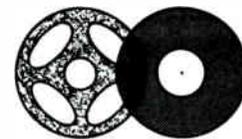
[24+] **CREATIVE COMMUNICATIONS COMPANIES**; 3700 S. Hawthorne; Sioux Falls, SD 57105; (605) 334-6832. Owner: Wm Prines III. Studio Manager: Vesta L. Prines.



**CYBERTECHNICS CREATIVE RECORDING**  
Dayton, OH

[24+] **CYBERTECHNICS CREATIVE RECORDING**; 1953 E. Third St.; Dayton, OH 45403; (513) 258-2463. Engineers: Aaron Freckman, freelance engineers. Dimensions: Studio 25 x 30, control room 25 x 18. Mixing Consoles: Custom automated 24 x 24. Audio Recorders: MCI JH-114 24-track 2"; MCI JH-100 16-track 2"; Sony 100-C 2-track 1/2"; (2) Ampex AG-440 2-track 1/4"; Ampex AG-440 4-track 1/2". Cassette Recorders/Duplicators: Revox B215, Technics. Noise Reduction Equipment: dbx. Echo, Reverb, & Delay Systems: (2) EMT 140 stereo tube, (2) EMT 140 mono tube, Lexicon 224XL w/LARC, Yamaha REV7, Lexicon PCM60, Korg DRV-3000, Lexicon Super Prime 97, Lexicon PCM42, (2) DeltaLab DL4, DeltaLab DL2. Other Outboard Equipment: (2) Yamaha SPX-90, EXR IV, EXR SP2, (2) BBE 802, Eventide phaser, (3) Orban 516EC de-esser, Orban EQ, (4) API 550A, (3) API 560A, (2) UREI 1176LN, (2) dbx 162. Microphones: (5) Neumann U87, (2) Neumann KM84, (2) Neumann U64, Telefunken 251, Telefunken 250, (2) AKG C-12A, AKG 451, AKG 202E, Shure SM57, (2) Sennheiser 421, (2) Sennheiser 441, (2) Sony ECM-22, (2) E-V RE20, E-V RE16. Monitor Amplifiers: Crown, Phase Linear. Monitor Speakers: E-V Sentry III, E-V 100, Yamaha NS-10M, Auratone, JBL 4401. Musical Instruments: (2) Marshall 100-watt stack, Music Man Twin Reverb, Ampeg B15, Slingerland drums, Gretsch drums, Yamaha piano, Yamaha DX7, Alesis HR-16 drum machine, Atari ST w/Hybrid Arts SMPTE track, Roland D-50, Roland PG-1000, Korg M-1, Kawai K3M, (2) Yamaha FB-01. Other MIDI Equipment: Atari 520 1MB, MSQ 700. Video Equipment: Complete video production. Rates: Call. Extras & Direction: Established 1970. Big fat sound, warm feeling, good engineering, complete music production, professional quality. Demos, records, commercials, many happy clients, reasonable rates. Clients include Capitol, Atlantic, Warner Bros., Motown, etc. Many Billboard chart successes.

[24+] **THE DISC LTD.**; 14611 E. Nine Mile Rd.; East Detroit, MI 48021; (313) 779-1380. Owner: Greg Reilly, Bob Dennis, Tom Gelardi. Studio Manager: Greg Reilly. Engineers: Greg Reilly, Robert Dennis, Michael Harrell. Dimensions: Room 1: studio 20 x 40, control room 20 x 18. Room 2: control room 18 x 16. Mixing Consoles: SSL G Series 32 x 32, API 32 x 24 custom. Audio Recorders: Otari MTR-9011 24-track, Ampex MM-1000 24-track, Mitsubishi 2-track digital, Ampex ATR-102 2-track, (2) MCI JH-110B 2-track. Cassette Recorders/Duplicators: Technics, (3) Aiwa. Noise Reduction Equipment: dbx for 24- and 2-track, Dolby for 24- and 2-track. Synchronization Systems: BTX 4600. Echo, Reverb, & Delay Systems: Lexicon 200, (2) EMT plate, Lexicon PCM70, Lexicon PCM42, Lexicon PCM41, Yamaha REV5, Yamaha REV7, (2) Yamaha SPX90, DeltaLab DDL 1. Other Outboard Equipment: Aphex Auralex Exciter, TC Electronic 2290 (sampler, delay), Valley People Dyna-Mite (compressor, gates), dbx 166, Loft delay flanger,



**THE DISC LTD**

**THE DISC LTD.**  
East Detroit, MI

(3) Teletronix compressor, Pultec EQs, Orban parametric EQ, Harmonizer. Microphones: AKG 414 transformerless, Neumann U47 tube, Neumann U67 tube, Neumann U87, Neumann U85, E-V RE20, E-V RE15, E-V RE10, E-V RE55, AKG 635A, Sennheiser MD-421, Beyer. Monitor Amplifiers: McIntosh, Crown. Monitor Speakers: DLC Design ACUs w/UREI horn, Acoustic Research modified, Yamaha NS-10, Auratone. Musical Instruments: E-mu Emulator III, Roland Super Jupiter, Yamaha grand piano, (3) Yamaha TX7 sound modules w/ sounds stored on a Macintosh SE, Ensoniq Mirage, Sequential Circuits Prophet-5, E-mu SP-1200 drum computer, Premier drum set, tympanis, vibes, marimbas, chimes glockenspiel. Other MIDI Equipment: Macintosh SE w/Opcode 2.5 sequencing software, Opcode sound libraries, Yamaha MIDI patch bay, Yamaha KX76 controller. Video Equipment: Sony BVU-800 3/4". BTX synchronizers and tape controller, BTX time code generator, Panasonic color monitor. Rates: Give us a call. Extras & Direction: Our recently installed Solid State Logic 4000 G Series console reflects our continuing commitment to provide our clients with the best possible creative environment. We are now able to do 48-track recording. We have a separate edit/MIDI room for MIDI productions and editing or duplications. Credits include, *One Way*, produced by Deodato (MCI), *Atomic Dog* by George Clinton (Capitol), *Michele Goulet* (Island), *Ready For The World*, by Ready For The World (MCA), *Bert Robinson* (Capitol), *Heard It Through The Grapevine*, Roger Troutman (Warner Bros.), and most recently *One Way* for Capitol. We are also licensed by the state of Michigan under the name The Recording Institute of Detroit to teach recording engineering classes.

[24+] **DRESS REHEARSALS LTD.**; 1840 W. Hubbard; Chicago, IL 60622; (312) 829-2213. Owner: Don Grayless. Studio Manager: Brandy Albert.

[24+] **FAST TRAX RECORDING STUDIO**; 2737 Baldwin St.; Jenison, MI 49428; (616) 669-3400. Owner: Robert B. Reister. Studio Manager: Colleen M. Horgan.

[24+] **HARTWOOD RECORDING**; 4607 Jeffers Rd.; Eau Claire, WI 54703; (715) 834-5122. Owner: John & Ruth Hartzell. Studio Manager: Ruth Hartzell.

[24+] **HIT CITY RECORDING**; also **REMOTE RECORDING**; 707 E. 54th St.; Indianapolis, IN 46220; (317) 257-0764. Owner: Dave Langfitt, Tim Brickley. Studio Manager: Dean Lozow. Engineers: Paul C. Mahern, Jon Quest, Brad Rector. Dimensions: Room 1: studio 28 x 22, control room 19 x 15. Room 2: studio 12 x 15, control room 15 x 13. Mixing Consoles: Soundcraft 1600 24 x 24, Ramsa. Audio Recorders: Studer A80 MkIV 24-track, Scully 280 16-track, Tascam 80-8 8-track, (2) Otari 5050B 2-track. Cassette Recorders/Duplicators: (3) JVC KD-V6. Noise Reduction Equipment: (2) Dolby SR, (2) Dynaflex, (2) Symetrix 511. Synchronization Systems: Foxstep Chase. Echo, Reverb, & Delay Systems: AMS RMX, Lexicon PCM70, Lexicon PCM60, Yamaha REV7, Yamaha SPX90, Roland SDE-1000, Eventide H910 Harmonizer, Klark-Teknik DN780, Korg DRV-3000. Other Outboard Equipment: Akai S900 sampler, (2) Aphex Compellor, (2) Aphex Auralex Exciter, (2) UREI 1176LN, (2) dbx 160, (2) dbx 162, (2) Valley People Dyna-Mite, (8) Kepex, (8) Gatec, Goldline Model 30 RTA. Microphones: (2) AKG C-451, AKG D-224E, AKG C-414, Neumann U47, Neumann U87, (2) Neumann KM84, (6) Sennheiser MD-421, (10) Shure SM57, (2) Crown PZM. Monitor Amplifiers: Crown DC-300, Crown D-150, Haller. Monitor Speakers: (2) UREI 809B, (2) JBL 4313B, (2) Polk 5A, (2) Auratone. Musical Instruments: Linn 9000 SMPTE full sampling update, Yamaha DX7IIDF, Oberheim Matrix-6R, Yamaha TX7, Ensoniq Mirage, Yamaha CP70, (2) Stratocaster, P-Bass, Rickenbacker 12-st., Emmons D12 pedal steel, Roland D-550, Korg DSS-1, Korg EX-8000. Other MIDI Equipment: SBX80, Macintosh Plus. Video Equipment: 3/4" and 1/2" VCR. Other: Fender Deluxe, Roland JC-120. Rates: Studio A \$65, studio B \$50, block call.

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[24+] **J.E.M. RECORDING**; 1428 Noyes St.; Evanston, IL 60201; (312) 328-8801. Owner: J. Scott Exum. Studio Manager: J. Scott Exum.

[24+] **JOR-DAN, INC.**; 1100 Wheaton Oaks Ct.; Wheaton, IL 60187; (312) 653-1919. Owner: Grace Jordan, Dan Zimbelman. Studio Manager: Mal Davis.

[24+] **JOSEPH PRODUCTIONS, INC.**; also **REMOTE RECORDING**; 21759 Melrose Ave.; Southfield, MI 48075; (313) 353-7300. Owner: Sheldon J. Nueman. Studio Manager: Sandra R. Sussman. Engineers: Sheldon J. Nueman, Jay Scott, Chris J. Staels. Dimensions: Room 1: studio 15 x 13, control room 12 x 23. Room 2: studio 15 x 13, control room 12 x 11. Room 3: studio 15 x 13, control room 12 x 11. Mixing Consoles: Harrison TV-3 40 x 24 x 4 x 2 52/24 w/MasterMix automation, NEOTEK 16 x 4 x 2, (2) Yamaha DMP7 8 x 2. Audio Recorders: Otari MTR-90 24-track, Otari MTR-12 4- and 2-track, (3) Otari MTR-12 2-track w/center-track time code, Ampex 440 1-track, (2) Ampex ATR-700 2-track, Otari MX-7800 8-track. Cassette Recorders/Duplicators: (3) Tascam 122, Otari DP-4050-C2 high-speed cassette dubber. Noise Reduction Equipment: dbx Type I, Dolby A, Symetrix 511. Synchronization Systems: The Boss, (3) BTX Shadow, Otari EC-401 Universal Resolver, Lynx Echo, Reverb, & Delay Systems: Lexicon 224XL, (2) Yamaha PCM70, Ursa Major 8 x 32 digital reverberator, (2) Lexicon PCM42 digital delay, (2) Yamaha SPX90II. Other Outboard Equipment: Dyaxis digital audio processor, Magna-Tech 10000 16/35 dubber, Magna-Tech MR436 16/35 dubber, Magna-Tech Resolver, (2) Aphex II Aural Exciter, (2) Aphex Compellor, Orban stereo synth, Orban parametric EQ, Orban de-esser, Neumann dialog mastering compressor, UREI comp/limiters, UREI graphic EQ, Technics SL-P1200 CD, Sony CDP-48 CD. Microphones: AKG "The Tube", AKG 414, Neumann U89, any mic of producer's choice from our in-house rental dept. Monitor Amplifiers: Crown PS400, Crown PS200, Crown D-75, Haller 500. Monitor Speakers: JBL 4411, UREI 813C, Auratone, JBL 4401. Musical Instruments: E-mu Emulator III w/Mac II, others on request (Original Music Production). Other MIDI Equipment: Sonus SMX-2000 SMPTE to MTC, Opcode Studio Plus. Video Equipment: Hitachi HR-230 Type C 1" VTR, Sony VO-5850 3/4" VCR, Mitsubishi stereo Hi-fi 1/2" VCR, Sony VO-2600 3/4" VCR, Hitachi TC-230 TBC 9-bit, NEC 12" monitors, Panasonic 19" monitor, Mitsubishi 35" monitor. Other: Macintosh II w/Digidesign O-Sheet, Sound Designer, BTX Cypher, BTX 5400 time code generator/reader. Rates: By hour, block and project; available upon request.

[24+] **KOPPERHEAD PRODUCTIONS INC.**; 935 Schneider Rd.; North Canton, OH 44720; (216) 494-8760. Owner: Lee R. Kopp. Studio Manager: George E. Payne. Dimensions: Master room: studio 900 sq. ft. 17' ceiling, control room 400 sq. ft. Production room: studio 132 sq. ft., control room 275 sq. ft. Synclavier control room 540 sq. ft. Mixing Consoles: Soundcraft 3B 32 x 24, Tascam 15-S 20 x 16 x 8. Audio Recorders: MCI JH-24 24-track w/dbx, Tascam 90-16 16-track w/dbx, Tascam 90-H8 8-track w/dbx, Ampex ATR-100 2-track 1/2" and 1/4", Sony PCM-F1 2-track digital, (2) Tascam 25-2 2-track w/dbx. Cassette Recorders/Duplicators: Nakamichi, Eumig, JVC, Technics, Sony Noise Reduction Equipment: dbx available on all multi-tracks. Echo, Reverb, & Delay Systems: Lexicon 224, (2) Yamaha REV7, Korg DRV-3000, EMT plate, Ecoplate, MasterMix, AKG, Orban, Eventide Harmonizers, DeltaLab, Yamaha D1500. Other Outboard Equipment: Eventide flanger and Omnipressor, Orban de-essers and parametric EQs, Kexpex and Valley People Dyna-Mite gates, dbx and UREI compressor/limiters, Vocal Stresser, Exciter, 27-band real-time analyzer. Microphones: Neumann U87, Neumann U89, Neumann KM84, Neumann KM85, AKG 414, Sony C-55, Sony 150, Sennheiser 421, E-V RE20, E-V RE15, Shure SM57, Shure SM81, Crown PZM, Beyers 500 and assorted. Monitor Amplifiers: Yamaha B1, Crown PSI, Crown D-150 and various. Monitor Speakers: UREI 813A, Yamaha NS-10, JBL 4311, JBL 4310, E-V Sentry, Boss 310, Auratone. Musical Instruments: Synclavier digital music system w/32 polyphonic sample voices and 32 FM voices, 8-channel multi-outs, velocity/pressure keyboard, 50k stereo/100k mono sample-to-memory, music printing and full terminal support, MIDI and SMPTE, Baldwin grand piano, Steinway grand piano, Ludwig drums, Linn drums, various MIDI modules and analog synthesizers. Video Equipment: 3/4" and 1/2" video playback and Synclavier post scoring. Rates: By hour, block and project; available upon request.

[24+] **LAKESITY RECORDING STUDIO**; 2554 Boone Ave. S.; Saint Louis Park, MN 55426; (612) 546-8331. Owner: Les Walstein. Studio Manager: Les Walstein, Rob Genadek.

[24+] **LOGOS PRODUCTIONS**; 6500 Southway Rd.; Clayton, OH 45315; (513) 832-3723. Owner: James K. Hazelwood. Studio Manager: Steve Mathews. Engineers: Steve Mathews, Jim Hazelwood. Dimensions: Room 1: studio 39 x 28, control room 12 x 9. Room 2: studio 6 x 5. Room 3: studio 112 x 120. Room 4: studio 59 x 28. Mixing Consoles: Soundcraft TS 12 32 x 24. Audio Recorders: Otari MX-80 24-track, Fostex B16 16-track, Revox PR99 2-track. Cassette Recorders/Duplicators: Yamaha K1020, JVC KD-W110 dual. Noise Reduction Equipment: Dolby SR 361, Dolby C on board, Fostex B-16, Symetrix 511. Synchronization Systems: Fostex 4050 autolocator SMPTE Time Code Echo, Reverb, & Delay Systems: Eventide H3000 Ultra-Harmonizer, TC Electronic TC2290 dig-

# Logos

The Christian Alternative

LOGOS PRODUCTIONS  
Clayton, OH

ital delay and effects processor, (2) Yamaha REV7, Lexicon PCM60, (2) Yamaha SPX90, Yamaha D1500 digital delay, Master-Room XL-210. Other Outboard Equipment: dbx 160X, Orban 422A, Symetrix Quad noise gate, Aphex Aural Exciter, Ibanez HD-1500 Harmonics Delay, ADA 64I digital delay, Yamaha PB1 preamp, Scholz Rockman stereo/chorus/delay/sustainer/track-mount Microphones: AKG 414, AKG 451, AKG D-12E, Neumann KM84, AKG 452EB, Crown PZM, Shure SM81, Shure SM58, Shure SM57, E-V PL77. Monitor Amplifiers: Haller 500, Yamaha P2050, Yamaha P2200. Monitor Speakers: UREI 809, Yamaha NS-10M, Realistic Minimus-7, MCM high-definition monitor, Sony BHP-1062 Inter Vox. Musical Instruments: Yamaha DX7, 360 Systems digital keyboard, Ensoniq Mirage, Kurzweil 1000 PX, Yamaha TX516, Yamaha TX802, Yamaha RX5 drum machine, Roland D-110 and controller, Kawai 8' grand piano, Young Chang 5' 10" grand piano. Other MIDI Equipment: Yamaha KX88 controller, Yamaha MJC8 MIDI junction controller, Mac Plus using Mark of the Unicorn Performer II and Professional Composer, 20 MB hard drive. Other: Commodore 128 computer, various sequence and voice libraries. Rates: 16-track \$25/hr., MIDI production \$25/hr., 24-track \$65/hr. Extras & Direction: Logos Productions Recording Studio strives to produce the highest quality recordings while offering clients an opportunity to creatively work in a Christian environment. Making use of state-of-the-art audio technology, Logos can produce today's sounds at yesterday's prices. Logos Productions Recording Studio is located at Salem Church of God, 6500 Southway Road, in Clayton, Ohio. It is easily accessible from Interstate 70 and Interstate 75. From eastbound I-70, exit Route 49 south (Salem Avenue) and turn right on Southway. From westbound I-70, exit at Hoke Road. Turn left on Hoke, right on Route 49 (Salem Avenue) and then left on Southway. Salem Church of God is located 1/4-mile west on Southway Road.

[24+] **LRS-LAUSCHE RECORDING STUDIOS**; 9526 Winton Rd.; Cincinnati, OH 45231; (513) 521-0015. Owner: Lou Lausche. Studio Manager: Bob Rowlette.

[24+] **MASTER VIEW RECORDING**; also **REMOTE RECORDING**; 2236 Jefferson Rd.; Otsego, MI 49078; (616) 694-6322. Owner: Master View Ltd. Studio Manager: Tom Gray. Engineers: Richie Dekker, Brent MacDonald, Paul Dams. Dimensions: Studio 23 x 15, control room 25 x 19. Mixing Consoles:

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Otsego, MI

AmeK/TAC Matchless 26 x 24, Tascam M512 12 x 8. Audio Recorders: Otari MX-80 24-track, Tascam 40 8-track, Otari MTR-12II. Cassette Recorders/Duplicators: Nakamichi MR-2. Synchronization Systems: Audio Kinetics Pacer w/pad and

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24

TRACK  
STUDIOS

## NORTH CENTRAL

—CONTINUED FROM PREVIOUS PAGE

VTC converter, Synchronous Technologies SMPTE system Echo, Reverb, & Delay Systems: Lexicon PCM70 EFX processor, (2) Lexicon PCM60 reverb, ART DR-1 FX processor, Roland SDE-2000 delay, Ibanez HD-1000 delay, DeltaLab ADM-1024 delay Other Outboard Equipment: dbx 160, (2) dbx 166, (2) Symetrix 525 para EQ Microphones: E-V RE20, (6) Sennheiser 421, Sennheiser 441, (4) Shure SM57, (4) Shure SM58, (3) Shure SM81. Monitor Amplifiers: (2) Crown DC-300A, Crown DC-150A, Halfer P-250 Monitor Speakers: UREI 813C, Yamaha NS-10M. Musical Instruments: Tama 5-pc studio kit, (2) Oberheim Matrix-6R, Roland S-550 sampler, Yamaha DX7IID, Roland TR-909 drum machine, Yamaha RX11 drum machine, Yamaha TX1P piano module Other MIDI Equipment: Kurzweil MIDIboard 88, Roland GM-70 pitch-to-MIDI converter, IBM PC XT w/Roland MPU-401 MIDI interface and Roger Powell Texture 2.5 Series sequencer software Video Equipment: Sony VO-5850 ¾" U-matic, NEC PM1991 monitor Rates: Call for rates. Extras & Direction: Master View is a newly opened 24-track music production and recording facility offering area advertisers, producers and video post houses custom music, special FX and multi-track recording for all types of projects.

[24+] **MASTERTRAX**; also **REMOTE RECORDING**; 1844 N St.; Lincoln, NE 68508; (402) 474-7540. Owner: Tom Larson, Jim Rupert Studio Manager: Lawrence Baldwin Engineers: Tom Larson, Jim Rupert Dimensions: Room 1 studio 30 x 20, control room 18 x 12 Room 2 studio 8 x 6, control room 11 x 10 Room 3 iso room 8 x 12 Mixing Consoles: Amek Matchless 26 x 26, Interface 16 x 16, Hill B Series 8 x 4. Audio Recorders: Otari MX-80 24-track, Sony DTC-1000 2-track DAT, Otari MX-5050 2-track, Scully 280B 2-track. Cassette Recorders/Duplicators: (8) NAD, Technics, Pioneer Noise Reduction Equipment: dbx Type I Synchronization Systems: Fostex 4030/4035. Echo, Reverb, & Delay Systems: Lexicon PCM70, Yamaha SPX90, Roland SRV-2000, Echotron 4096, Ecoplate III Other Outboard Equipment: dbx 166 comp/limiter, Valley People Dyna-Mite, Omni Craft GT-4A gate, dbx 160 comp/limiter, BBE 402 sonic maximizer, Aphex Type B Aural Exciter, (2) Rane ME30 1/3-octave graphic EQ. Microphones: (4) Neumann U87, (2) AKG 414, (7) Sennheiser 421, Sennheiser 441, (2) Neumann KM84, AKG D-12E, (3) Shure SM57, E-V RE20. Monitor Amplifiers: Audionics of Oregon Monitor Speakers: UREI 811B, (2) JBL 4401, E-V Sentry IV, (2) Auratone Cube, Altec Model 15. Musical Instruments: Steinway M grand, Yamaha DX7II, Roland D-550, Oberheim Matrix-6R, Sequential Circuits Prophet-2000, Hammond B-3 w/Leslie, Roland TR-707 drum machine. Other MIDI Equipment: Southworth JamBox/4. Video Equipment: Sony SLHF-900 Super Beta, Hitachi VHS. Rates: Call.

[24+] **METRO MOBILE LOCATION RECORDING**; only **REMOTE RECORDING**; 2009 Johns Dr.; Glenview, IL 60025; (312) 998-6420. Owner: Timothy R. Powell Engineers: Timothy R. Powell, Mark Harder, John Nevin. Dimensions: Remote truck 14 x 8 Mixing Consoles: NEOTEK Elite 50 x 24 Audio Recorders: (2) Sony/MCI JH-24 24-track, Fostex E16 16-track, Tascam 40-4 4-track, Scully 280B 2-track, Technics 1500US 2-track, Sony PCM-601, Sony 950 2-track Beta digital. Cassette Recorders/Duplicators: (10) Awa F350, Nakamichi MR-2 Noise Reduction Equipment: dbx 18-ch., Dolby C 16-ch. Echo, Reverb, & Delay Systems: Yamaha REV7 digital reverb, Yamaha SPX90 digital processor, Yamaha SPX90II digital processor, Lexicon PCM60, (3) Yamaha D1500 digital delay, ADM 256 Effectron digital delay, Sound Workshop 260 reverb, Alesis Microverb II. Other Outboard Equipment: Studio Technologies AN-2 simulators, Aphex Aural Exciter, Burwen 1201 noise reduction, (2) dbx 160X limiter, (2) dbx 166X limiter, (2) dbx 263X de-esser, (2) dbx 463X noise gate, (2) US Audio GateX noise gate, Eventide Omnipressor, Aphex Compellor Microphones: (8) Shure SM57, (4) Shure SM58, (4) Sennheiser MD-421, (2) Shure SM81, (2) Neumann KM84, (2) E-V 757, (2) AKG D-202, AKG D-112, Sony C-500, (2) Sony ECM-377, Beyer M 260, (6) E-V 357, plus more Monitor Amplifiers: Carver 1.0 stereo amp, Crown D-150A stereo amp, Rane HC headphone amp Monitor Speakers: UREI 809, JBL 4313, Yamaha NS-10, Calibration Standards MDM-4, Fostex RD785, Auratone 5C. Video Equipment: Toshiba color cameras, Sony 1270 color monitor, Sony SL-950 Beta. Other: Cables, snakes, stands, 48-channel splitter w/transformers, (10) direct box, Clear-Corn intercom system. Rates: Call for quote.

[24+] **METRO STUDIOS**; 200 3rd Ave. N.; Minneapolis, MN 55401; (612) 338-3833. Owner: Tom Tucker, Good Music Agency Studio Manager: Marci Meyocks Extras & Direction: Specialization: albums, audio-for-video Recent projects: Hiram Bullock-Atlantic, Daquiri-EMI, Deon Estus-PolyGram, Dugan McNeill-Wing/PolyGram, Sarah Jane Morris-Jive/RCA, Tyka Nelson-Chrysalis, St Paul Peterson-MCA, Slave Raider-Jive/RCA, Paul Shaffer-Capitol, Boz Scaggs-CBS, Nu Shooz-Atlantic

[24+] **MIDWEST RECORDERS, LTD.**; also **REMOTE RECORDING**; 807 W. Oklahoma; Milwaukee, WI 53215; (414) 483-5055. Owner: Rick Singer. Engineers: Dave Neitzke Dimensions: Studio 25 x 22, control room 20 x 18, keyboard suite 9 x 16. Mixing Consoles: Harrison Raven 32 x 24 w/automation, custom built keyboard/mixer. Audio Recorders: Otari MTR-90II 24-track, Otari 5050BIII 8-track, Otari MTR-10 2-track, Ampex 440C 2-track, Studer /Revox A-700 2-track, Sony PCM-F1 2-track digital. Cassette Recorders/Duplicators: Tandberg 3004 Echo, Reverb, & Delay Systems: Lexicon 224XL, Lexicon 93 Prime Time, ART DR-1, Eventide H910, (3) Ibanez SDR-1000+, (3) Roland SDE-3000. Other Outboard Equipment: dbx 3BX expander, Orban 622B parametric EQ, Delta Graph EQ-10 graphic, (2) UREI 1176LN limiter, (2) UREI LA-4 limiter, (2) Audioarts 1200 limiter, (2) Omni Craft GT-4 noise gate, Furman QN-4A noise gate, Eventide 2830 Omnipressor, Rocktron RX2H Exciter/Imager/Hush II Microphones: Neumann U87, Neumann U47, Neumann U67, Neumann KM84, AKG 414, AKG 452, AKG D-12E, Sennheiser 441, Sennheiser 421, E-V RE20, Shure SM58, Studer SMK-5U, Crown PZM 30-APG, RCA 77DX Monitor Amplifiers: Crown DC-300A II, Banner 300, Crown D-75. Monitor Speakers: JBL 4435, JBL 4333, Yamaha NS-10M, Auratone. Musical Instruments: Kurzweil K-250 w/large library of sounds, Roland S-50, Roland S-330, Alesis HR-16, Roland Octapad, an assortment of guitars, basses and amps, Tama, Pearl, Ludwig and Slingerland drums. Other MIDI Equipment: Macintosh 2 MB w/60 MB hard drive running MIDI Paint, Performer, Up-Beat, Sound Designer, Southworth JamBox/4+ Video Equipment: Sony Pro Feel 25", JVC CR-6300U ¾" Rates: \$35/hr block

[24+] **MILLER RECORDING STUDIO**; 203 W. 26th; North Newton, KS 67117; (316) 283-7556. Owner: Jon Miller. Studio Manager: Larry Funk Engineers: Larry Funk Dimensions: Studio 12 x 20, control room 12 x 20 Mixing Consoles: TAC Matchless 36 x 24 Audio Recorders: MCI JH-24 24-track, TEAC /Tascam 85-16B 16-track, Fostex E-22 2-track ½" center-track time code, Otari MX-5050B 2-track ¼", TEAC 2340-SX 2-track. Cassette Recorders/Duplicators: Tascam 122 MkII, Tascam 122, various others available Noise Reduction Equipment: dbx 155, dbx unit for Tascam 85-16B, Rocktron Hush IIC Synchronization Systems: Roland SBX-80 Echo, Reverb, & Delay Systems: Lexicon 200, (2) Korg SRV-2000, Korg SRV-3000, Ibanez 1000+, (2) Roland SDE-2000, Roland SDE-3000, Eventide 910 Harmonizer, Roland Dimension D, Rocktron Pro-Chorus. Other Outboard Equipment: Orban 424A comp/de-esser, (2) Rocktron 300 comp/Hush, (2) Roland SEQ-331 31-band EQ, (2) EXR IV exciter, Gaines Audio 2-ch mic preamp, BBE 802 processor, Ashly SC-33 noise gate, Omni Craft GT-4 gates, Biamp quad limiter, Biamp EQ-230 2/3-octave EQ, (2) Ibanez MSP-1000 comp/EQ. Microphones: Neumann U87, Neumann U89, Beyer 740, (2) Beyer 701, (2) E-V RE20, (4) Sennheiser 421, (3) Sennheiser 441, (2) Shure SM81, (2) AKG D-12E, (2) Shure SM57, plus many more from various companies. Monitor Amplifiers: Biamp XA-600, Roland SPA-120, Audiopro MOS 500 Monitor Speakers: Tannoy LGM-12, Boston Acoustics A-40, JBL 4313 Musical Instruments: Sundown guitar amp, Roland pad drum set, Tama Swingstar drum set, Yamaha 6' grand piano, Roland JX-10 synth, Yamaha PF80 keyboard, Roland D-550 synth, Roland S-550 sampler, Akai S900 sampler, Roland MKS-20 piano, Ibanez Strat-type guitar, Ibanez Musician bass, Korg SDD-1 drum machine. Other MIDI Equipment: Roland MC-500 MIDI sequencer, huge sample library and complete MIDI operation, Akai ME30p MIDI switcher, Roland PM-16 pad-to-MIDI converter.

[24+] **MUSICOL, INC.**; also **REMOTE RECORDING**; 780 Oakland Park Ave.; Columbus, OH 43224; (614) 267-3133. Owner: J W Hull, B P Niederlander Studio Manager: Doug Edwards.

[24+] **NUMARK, INC.**; 51308 Peach Tree; Utica, MI 48087; (313) 739-6940. Owner: John & Mark Antos Studio Manager: Mark Antos

[24+] **PANDEMIC MUSIC, INC.**; 3546 Briggs Blvd. NE; Grand Rapids, MI 49505; (616) 361-0733. Owner: Fred Baker. Billy Vits. Studio Manager: Gus Baker.

[24+] **PARAGON RECORDING STUDIOS, INC.**; also **REMOTE RECORDING**; 9 E. Huron St.; Chicago, IL 60611; (312) 266-0075. Owner: Marty Feldman. Studio Manager: Nancy Gardner. Engineers: Marty Feldman, George Warner, Scott Barnes, freelancers welcome Dimensions: Room 1: studio 20 x 40, control room 16 x 24 Room 2 studio 20 x 25, control room 20 x 20. Mixing Consoles: Flickenger/Paragon custom 44 x 24 w/3-band para EQs, noise gates, 2 stereo foldback, muling, Flickenger/Paragon custom 16 x 16. Audio Recorders: 3M 79 24-track, 3M 56 16-track, (3) Studer B67 1- and 2-track, 3M 79 2-track, (4) Scully 1-, 2- and 4-track, multi-track magnetics. Cassette Recorders/Duplicators: (3) Awa, (4) Nakamichi Noise Reduction Equipment: Dolby A 40-ch., Dolby SR 2-ch., dbx 4-ch. Synchronization Systems: Adams-Smith Zeta III, SBX time code generator/reader, API Minimag, Echo, Reverb, & Delay Systems: (4) EMT 140 reverb plate, (2) Yamaha REV7, Yamaha SPX90, (2) Eventide Harmonizer, Lexicon 102 delay, Lexicon 200, Effectron delay, Yamaha D1500 delay, UREI/Cooper Time Cube, Paragon "Marble Hallway". Other Outboard Equipment: Akai S900 sampler, (7) Pullec EQ, (12) API 550 EQ, (24) Flickenger noise gate, (2) ADR Complex comp/limiter, ADR Vocal Stresser, (10) UREI LA-3A limiter, (6) UREI 1176i compressor, UREI 1176 tube compres-

sor (8) Langevin tube preamp. Microphones: AKG, Altec, Beyer, E-V, Neumann, PML, Sennheiser, Sony, Shure, Telefunken, many rare tube mics. Monitor Amplifiers: Crown, Monitor Speakers: (12) JBL. (2) Yamaha NS-10, (6) Auratone Musical Instruments: Baldwin grand piano, Hammond B-3 organ w/Leslie, (2) Carco drum set, (3) conga drum, Fender Rhodes w/Boss chorus, celeste, Yamaha RX11 drum machine, ARP 2600, Baldwin harpsichord, Yamaha DX7, (2) Fender amp, Ampeg amp, Simmons drum set, all percussion instruments. Video Equipment: Sony 5600 3/4", Sony 1/2", Sony Beta Hi-Fi. Rates: Please call, rates to suit all budgets. Extras & Direction: Chicago's Paragon Recording Studios celebrates its 20th anniversary as specialists serving the international audio community with over 40 gold and platinum records. Thanks to the following artists: Gladys Knight, Commodores, Johnny Griffin, Natalie Cole, Dr. John, PolyGram Records, Virgin Records, A&M, Atlantic Records, Michael Jackson, Sandy Torano, the "Chicago 6" (Walter Payton, Dan Hampton, Dave Duerson, Gary Nylund, Curt Frasier and Troy Murray), Peter Gabriel, Pete Special and Gene Barge.

[24+] **PEARL SOUND STUDIOS**; 47360 Ford Rd., Canton, MI 48187; (313) 455-7606. Owner: Ben Grosse. Engineers: Chris Andrews, Mark Childress, Scott Kinzie. Dimensions: Room 1: studio 40 x 50, control room 16 x 20. Room 2: control room 10 x 30. Mixing Consoles: Neve V Series 48 x 48 w/MasterMix automation, Soundcraft Series 500 24 x 8. Audio Recorders: Studer A80 MkIII 24-track, Studer A80 MkIII 2-track (1/2" format), Sony PCM-501 2-track, Otari MTR-10 2-track, Otari MX-5050B 2-track, Tascam 80-8 8-track, Fostex 80-8-track, Hitachi 2-track digital. Cassette Recorders/Duplicators: (2) Studer/Revox B215, (2) Tascam 122B Noise Reduction Equipment: Anything on request. Synchronization Systems: Fostex 4000 Series. Echo, Reverb, & Delay Systems: Lexicon 480L, Lexicon 224XL, AMS 15-80S, Lexicon Super Prime Time, Lexicon Prime Time, Klark-Teknik DN780, Yamaha REV7, Yamaha SPX90, Ursa Major Space Station, EMT 140ST (stereo tube type plate), Audicon large plate reverb, J.L. Cooper Time Cube, Loft 440, DeltaLab Efectron II, ART DR1, Ibanez HD-1000, Alessis MIDverb. Other Outboard Equipment: Teletronix tube limiters, Pultec tube EQs, API 550 EQs, API mic preamps, Eventide Harmonizer, Eventide Instant Flanger, Eventide Instant Phaser, Drawmer gates, Valley People Gain Brains, Valley People Kepex, Orban parametric EQ, dbx 160X, Orban de-esser, BBE exciters, Aphex Aural Exciters, EXR exciters. Microphones: All sorts of grey, silver and brown ones. Some have tubes. Monitor Amplifiers: Perreux, UREI, Haller Monitor Speakers: Sierra/Hidley TM-8 (TAD components), Yamaha NS-10M studio, E-V Century 100, Yamaha NS-10M, Auratone Musical Instruments: E-mu Emulator III, E-mu Emulator II, Yamaha DX7, Yamaha TX7, (2) Roland D-550, Roland JX-10, Roland MKS-20 digital piano, Sequential Circuits Prophet-2002, Sequential Circuits Prophet-5, Sequential Circuits Prophet-600, Chroma Polaris, Ensoniq ESQ-1, Korg DW-8000, Casio CZ-101, Oberheim Matrix-6, Roland TR-707 drums, Oberheim DMX drums w/MIDI, Korg DDD-1 drums, Yamaha RX11 drums, Casio RZ-1 drums, Roland Octapad, Simmons SDS7 drums, large amp collection, Fender P-bass, Tama drums, Hammond M-3 plus Leslie, Yamaha piano, Knabe piano. Other MIDI Equipment: (2) Roland SBX-80 sync box, Simmons MTM MIDI trigger device, MXI trigger device, J.L. Cooper 1620 MIDI routing box, Apple Mac Plus w/Tons of MIDI software, IBM XT computer, Commodore 64 computer. Video Equipment: NEC 19" built-in monitors, anything on request. Other: All main cable runs are wired w/Monster cable. Rates: Call.

[24+] **PENGUIN PRODUCTIONS**; 1026 Carole; Saint Louis, MO 63021; (314) 394-0267. Owner: Richard Byron. Studio Manager: Richard Byron

[24+] **PEPPERMINT PRODUCTIONS CORP.**, also **REMOTE RECORDING**; 803 E. Indianola Ave., Youngstown, OH 44502; (216) 783-2222. Owner: Gary Rhany. Studio Manager: Richard Willmitch. Engineers: Gary Rhany, Richard Willmitch. Dimensions: Room A: studio 40 x 30 x 15 ceiling, control room 10 x 35. Room B: studio 20 x 15, control room 10 x 15. Mixing Consoles: Custom console, utilizing the best individual components by UREI, API, Altec and Modular Audio Products, includes 3-band parametric and conventional EQs, built-in compressors, limiters and noise gates. Audio Recorders: Sony digital PCM stereo mixdown, Scully 24-track on professional 2" tape format, Ampex 1/2" and 1/4" machines, Technics 1500 2-track, Pioneer 1/4-track, 30 ips mastering for no noise recording. Cassette Recorders/Duplicators: Pioneer, Marantz, Sony, Infonics Echo, Reverb, & Delay Systems: Eventide Harmonizer, DeltaLab, Loft and Fostex digital delays, acoustic echo chamber, tape echo, Lexicon digital reverb. Other Outboard Equipment: Variable speed on all machines, dbx and API comp/limiters, EXR exciter, graphic EQ, flanging and phasing. Microphones: The finest and most desired microphones by Neumann, Telefunken, Shure, E-V, Sennheiser, Sony, RCA, AKG, Crown PZM. Monitor Amplifiers: Crown, McIntosh. Monitor Speakers: JBL 4320, Altec Voice of the Theatre, Sennheiser and Koss headphones. Musical Instruments: Steinway grand piano, Hammond C-3 organ w/Leslie, string ensemble, tympani, xylophone, bells, percussion instruments. Video Equipment: Moviola flat-bed editing table, Canon 16mm camera w/crystal sync, Nagra tape recorder, Magna-Sync dubbers, Betamax VTR w/time code readout, lighting and crew, original music soundtracks. Rates: Available upon request.

[24+] **PINEBROOK RECORDING STUDIOS, INC.**, also **REMOTE RECORDING**; State Rd. 9 S., PO Box 146; Alexandria, IN 46001; (317) 724-7721. Owner: Bill Gaiher. Studio Manager: Jim Rogers

[24+] **PREMIERE RECORDING STUDIO (DIVISION OF ARK)**; 100 Phlox; Wausau, WI; (715) 355-1565. Owner: Mitch Viegut. Dave Sandon. Studio Manager: Bob Tesmer

[24+] **PUMPKIN STUDIOS INC.**; 6737 W. 95th; Oak Lawn, IL 60453; (312) 598-3045. Owner: Gary Loizzo. Studio Manager: Gary Loizzo

[24+] **QUALITY MEDIA PRODUCTIONS**; 1425 W. Whittaker; Salem, IL 62881; (618) 548-3566. Owner: Douglas Cosby. Keith Bailey. Studio Manager: Keith Bailey

[24+] **RAINBOW RECORDING STUDIOS INC. RAINBOW PRODUCTIONS OMAHA**; 2322 S. 64th Ave.; Omaha, NE 68106; (402) 554-0123. Owner: Niles Anders Erickson. Studio Manager: J.E. Van Horn



THE RECORDING WORKSHOP  
Chillicothe, OH

[24+] **THE RECORDING WORKSHOP**; 455 Massieville Rd.; Chillicothe, OH 45601; (614) 663-2544. Owner: Jim Rosebrook. Studio Manager: Brian Stritenberger. Engineers: Dave Egan, Jeff Ling, Dan Smart, Lisa Michael, Rusty D'Agno, Tom Johnson, Jim Wilson, Jeff Redefier, Rob Brumfield, Tony Cottrill, Marty Van, Eric Brown, Rot Gough, Chris Breck, Larry Pester, Darlene Hall. Dimensions: Room A: studio 15 x 12, control room 18 x 12. Room B: control room 11 x 8. Room C: studio 30 x 40, control room 30 x 20. Room D: studio 15 x 20, control room 15 x 17. Room E: studio 30 x 35, control room 30 x 27. Room F: studio 25 x 24, control room 15 x 16. Mixing Consoles: (2) MCI 636 36 x 36, Sound Workshop Series 30 28 x 28, (2) TAC Scorpion 16 x 16, Sound Workshop Logex 20 x 8. Audio Recorders: (3) MCI JH-24 24-track, (2) Otari MX-70 16-track, Otari Mark III 8-track, MCI JH-110 2-track, (12) Otari 5050 2-track, Sony PCM 501, (2) Sanyo 1900 Hi-Fi VCR Cassette Recorders/Duplicators: (3) Nakamichi, (4) Tascam. Synchronization Systems: Fostex 4030/4035. Echo, Reverb, & Delay Systems: Lexicon 224X, Klark-Teknik DN780, Lexicon PCM70, Lexicon PCM60, Lexicon PCM41, Yamaha SPX-90, Eventide Harmonizer. Other Outboard Equipment: dbx, UREI, Pultec, Orban, Scholz, Galax, Aphex, Rane, Orban, Teletronix. Microphones: All major manufacturers and models. Monitor Amplifiers: Crown. Monitor Speakers: UREI, JBL, Fostex. Yamaha Musical Instruments: Yamaha 77" conservatory grand piano, Yamaha KX8B, Yamaha TX416, Yamaha RX11, Yamaha DX7, Ensoniq ESQ-1, Roland RD-1000, Roland MKS-20. Other MIDI Equipment: Atari 130, Atari 520ST, Atari 1040ST computers, Hybrid Arts MIDI track ST/SMPTE, Hybrid Arts DX Droid, 360 Systems MIDI patcher. Video Equipment: JVC VEP-2 video editing. Rates: Available upon request. Extras & Direction: The Recording Workshop is the leading educational institution featuring a "hands-on" approach towards learning the recording arts. Our training programs cover all aspects involved in the operation of state-of-the-art professional recording equipment. In-studio experience in music production is a prime feature of our curriculum, as well as classes in commercial production, audio-for-video and MIDI application. Our programs also feature training in studio maintenance and troubleshooting, including "hands-on" experience in tape machine alignment. No previous experience is required to participate in the Workshop training. Classes are conveniently offered seven times annually, and on-campus housing is available. On the road and in the studio, Workshop graduates are working with such artists as Bon Jovi, Whitney Houston, Miami Sound Machine, REO Speedwagon and many other of today's biggest talents. Call today for a free brochure. Find out how we can help you get started and get ahead.

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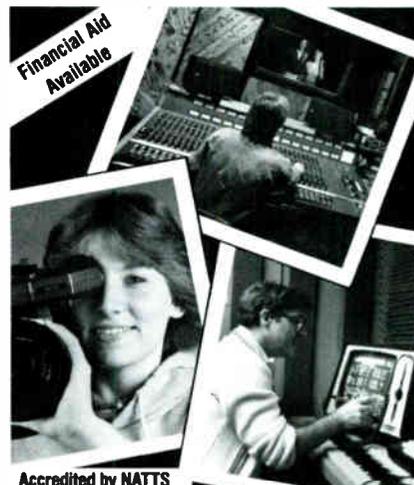
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TRACK STUDIOS

## NORTH CENTRAL

—CONTINUED FROM PREVIOUS PAGE

[24+] **REFRAZE RECORDING STUDIO**; 2727 Gaylord Ave.; Dayton, OH 45419; (513) 298-2727. Owner: Mark A. Frazee. Studio Manager: Mark A. Frazee, Gary King.

[24+] **RIVER CITY: THE RECORDING STUDIO**; also *REMOTE RECORDING*; 147 Goodrich SE; Grand Rapids, MI 49503; (616) 456-1404. Studio Manager: J. Stephen Thrall

[24+] **RON ROSE PRODUCTIONS LTD.**; 29277 Southfield; Southfield, MI 48076; (313) 424-8400. Owner: Ron Rose. Studio Manager: Don Wooster



**ROYAL RECORDERS**  
Lake Geneva, WI

[24+] **ROYAL RECORDERS**; c/o Americana Resort, Hwy. 50; Lake Geneva, WI 53147; (414) 248-9100. Owner: Ron Fajerslein. Studio Manager: Jeff Schroeder. Engineers: Rich Denhart, Michael Koppelman, Dan Harjung, Dave Kent. Mixing Consoles: SSL 4072E 64 mono, 8 stereo channels, 80-input w/G Series computer. Audio Recorders: (2) Mitsubishi X850 32-track digital, (2) Studer A800 MkIII 24-track, Mitsubishi X80A 2-track digital, Mitsubishi X86 2-track digital, Studer A80 2-track 1/2", Studer A80 2-track 1/4" Noise Reduction Equipment: (2) Dolby SR, (2) Dolby A. Synchronization Systems: Adams-Smith 2600SP Echo, Reverb, & Delay Systems: Publison America Infernal 90 (20.9 sec. stereo sampling and SMPTE), (2) AMS DMX 15-80S (Dual Loc-In 6.515 secs.), (2) AMS RMX 16 digital reverb, Ecoplate I reverb, EMT 140T plate reverb (tube), Lexicon 224XL w/LARC, Lexicon PCM70 digital reverb, Lexicon Super Prime Time DDL, Lexicon 200 digital reverb, (2) Yamaha REV7 reverb. Other Outboard Equipment: (8) Focusrite ISA 110 EQ, (2) GML parametric EQ, (2) Pultec EQP-1A EQ, (2) Pultec EQP-H2 EQ, (9) API 550A EQ, (4) Orban 622B parametric EQ, (5) Teletronix LA-2A (tube) limiter, (4) dbx 160X limiter, (2) UREI LA-4 limiter, (8) Drawmer DS-201 dual noise gate. Microphones: (2) AKG C-24 tube, (7) AKG C-12 tube, Telefunken M251 (tube), (2) Schoeps 221B (tube), (3) Neumann M250 (tube), (2) Neumann M269 (tube), (2) Neumann KM254 (tube), (5) AKG 451E, (4) AKG C-12A, (6) Sennheiser MD-421, (7) Shure SM57. Monitor Amplifiers: (3) Times One power amp, (2) Yamaha PC2002 power amp, (2) Crown DC-300A. Monitor Speakers: Lakeside custom monitor, (2) Yamaha NS-10M studio, Yamaha NS-10M, Fostex RP80, Visonik David 9000, Auratone. Musical Instruments: Synclavier system w/direct-to-disk and guitar interface, Roland D-50 w/PG-1000 programmer, Roland Super JX-10 w/PG-800 programmer, E-mu Emulator II+, Yamaha DX7, Sonor 5-pc. drum kit, E-mu SP-12, Fender Precision bass, Yamaha C7 grand piano, Black Beauty snare drum. Other: Marshall 100-watt stack, Hammond B-3 organ w/Leslie, Roland Jazz Chorus 120, Traco Elliot bass rig. Rates: Negotiable. Extras & Direction: Royal Recorders offers one of the finest recording environments in the world, combined with the beauty and amenities of the Americana Resort in Lake Geneva, Wisconsin. In addition to the studio's 80-input SSL 4072E console with G-Series computer and Mitsubishi 64-track digital/Studer 48-track analog capabilities, Royal recently purchased a Synclavier featuring: 32-voice polyphonic sampling, 32-voice stereo FM synthesis, 32 MB RAM, Optical Disk sound database plus 8 tracks direct-to-disk. The studio offers a full complement of outboard gear and one of the largest vintage tube microphone collections in the world. Royal is dedicated to recording music and soundtrack albums. Having just completed its second year in business, Royal has had the privilege of working with the following artists: The Bears,

Adrian Belew, The Bodeans, Bon Jovi, Cheap Trick, Gavin Christopher, Enuff Z'Nuff, Jerry Harrison, Robert Plant, Scorpions, Daryl Stuermer, Survivor and T'Pau. Soundtrack albums: *Rocky IV* and *Top Gun*.

[24+] **THE SCHOOLHOUSE STUDIOS**; also *REMOTE RECORDING*; PO Box 2095; Ann Arbor, MI 48106; (313) 994-9325. Owner: David Henry Weck, Pete Bankert. Studio Manager: Henry Weck

[24+] **SEAGRAPE RECORDING STUDIOS**; also *REMOTE RECORDING*; 5740 N. Western Ave., Chicago, IL 60659; (312) 784-0773. Owner: Tom Haban, Mike Konopka. Studio Manager: Audrey Haban. Engineers: Tom Haban, Mike Konopka, Herb Fields, Loudon Fassit. Dimensions: Room 1: studio 50 x 25, control room 20 x 20. Room 2: studio 15 x 12, control room 12 x 7. Mixing Consoles: NEOTEK Series III 50 x 24. Audio Recorders: MCI JH-24 24-track, MCI JH-16 16-track, Otari MX-5050 2-track, Sony PCM-F1 2-track digital, Otari MTR-10 2-track 1/2" and 1/4". Cassette Recorders/Duplicators: Otari DP-4050, Nakamichi 700, Nakamichi BX-100. Synchronization Systems: MCI JH-48 SMPTE auto-lock synthesizer provides 40-track audio recording and video sweetening w/slave Echo, Reverb, & Delay Systems: Lexicon 200, Lexicon Super Prime Time, Lexicon PCM60, Eventide 949, MICMIX 515, TC Electronic 2290, Ecoplate II, MXR digital delay, MICMIX 305, MICMIX 121. Other Outboard Equipment: UREI 1176, Commodore 64 w/MIDI software, (2) Tapco Graphics, (2) Symmetrix gate and limiter 2-ch, dbx 166 limiter, Aphex Type B Aural Exciter, Mini-Doc, Omni-Craft gates 4-ch. Microphones: (3) Neumann U87, (2) Neumann U47, (2) Neumann KM84, (4) Sennheiser MD-421U5, RCA 44, (2) Crown PZM-30-GP13, (2) Crown PX-18B, (4) AKG C-451EB, (10) Shure various models, (7) E-V various models, Beyer M 120N(c). Monitor Amplifiers: (2) McIntosh MC2205. Monitor Speakers: (2) JBL 4430, (2) Yamaha NS-10, (2) JBL 4311, (2) Auratone 5C Sound Cubes, (2) B&W 801, (2) KLH28. Musical Instruments: Yamaha CP70 piano, Hammond B-3, Ensoniq Mirage digital sampling keyboard, Casio CZ-101 keyboard, Oberheim DMX digital drum machine, Roland GR-300 guitar synthesizer, Roland Alpha Juno-1 keyboard synthesizer, Slingerland drum set, (2) Moog and Taurus bass pedal, St. Blues guitar, (3) Gibson guitar, (2) Fender guitar, Harmony guitar. Other MIDI Equipment: Syntech Studio I sequencing software w/Commodore 64 computer and disk drive. Other: Yamaha SPX90, 6710 Vocoder, TEAC A2300 1/4-track recorder, Heath real-time analyzer, (2) Roland RE-301 Space Echo. Rates: 40-track \$100/hr.; 24-track \$80/hr.; 16-track \$65/hr.; 2-track \$40/hr.

[24+] **SEPTEMBER RECORDING**; 5210 E. 65th St.; Indianapolis, IN 46220; (317) 842-4955. Owner: Bob Arris, John Strong, Rich Arris. Studio Manager: Bill Mallers

[24+] **74TH ST. STUDIO, INC.**; 5250 W. 74th St.; Minneapolis, MN 55435; (612) 835-9952. Owner: Scott Rivard, Paul Martinson, Tom Lecher, Mike Jones. Studio Manager: Scott Rivard



**SISAPA STUDIOS**  
Columbus, OH

[24+] **SISAPA STUDIOS**; 394 Mt. Vernon; Columbus, OH 43215; (614) 228-2228. Owner: Sisapa Record Co. Inc. Studio Manager: J.D. Blackfoot. Engineers: Dave Egan, Jim Dutt, Tom Johnson. Dimensions: Studio 57 x 36, control room 21 x 20. Mixing Consoles: Neve V Series MkIII 60 x 48 w/60-ch. GML automation. Audio Recorders: (2) Studer A820 48-track, Studer A820 2-track 1/2", Studer A820 2-track 1/4". Cassette Recorders/Duplicators: (2) Studer A721. Noise Reduction Equipment: Dolby SR 48-ch. Synchronization Systems: (2) Lynx SAL module. Echo, Reverb, & Delay Systems: 8' echo plate, Lexicon 480L, AMS RMX 16. Yamaha REV7, Klark-Teknik DN780, Eventide H3000, AMS SDMX digital audio processor, TC Electronic 2290, Dyno-My-Piano tri-stereo chorus. Other Outboard Equipment: Panscan, (2) Drawmer dual ch. gate, Drawmer M500, (2) Teletronix LA-2A, ADR Vocal Stresser, Pultec EQ. Microphones: Neumann, AKG, Sennheiser, Shure, Fostex, B&K, Beyer, Sanken, Calrec. Monitor Amplifiers: (3)

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Haffer P-500A, (2) Genelec 1025A, (2) Genelec 1024B, (2) Genelec 1019A. Monitor Speakers: (2) Genelec 1025A control room main, (2) Genelec 1024B control room, (2) Genelec 1019A, (2) Yamaha NS-10M. Musical Instruments: Yamaha C7 grand, E-mu Emulator II modified, (2) DW Drums, Roland D-50, Yamaha DX7IIDF, (3) Martin acoustics, Marshall amp, Fender amp, Leslie cabinet. Other MIDI Equipment: As needed. Rates: Per project. Extras & Direction: Directed toward major label and independent record companies' album projects.

[24+] **SMITH/LEE PRODUCTIONS**; also **REMOTE RECORDING**; 7420 Manchester Rd., Saint Louis, MO 63143; (314) 647-3900. Owner: David Smith. Barry Lee. Studio Manager: David Smith

[24+] **SOLID SOUND, INC.**; also **REMOTE RECORDING**; PO Box 7611; Ann Arbor, MI 48107; (313) 662-0667. Owner: R.G. Martens, J.W. Spencer.

[24+] **SOLID SOUND RECORDING STUDIO, INC.**; also **REMOTE RECORDING**; 2400 W. Hassell Rd., Ste. 430; Hoffman Estates, IL 60195; (312) 882-7446. Owner: Judd Sager. Studio Manager: John Towner, Phil Bonnet.

[24+] **SONG SKETCHES RECORDING PRODUCTIONS**; also **REMOTE RECORDING**; PO Box 36483; Detroit, MI 48236; (313) 886-3757. Owner: Robert Payne. Studio Manager: Robert Payne. Engineers: Robert Payne. Dimensions: Studio 16 x 17, control room 13 x 10. Mixing Consoles: Allen & Heath 18 x 2, TAC Scorpion 28 x 24. Audio Recorders: Tascam 38 8-track ½", Tascam 32 2-track ¼". Cassette Recorders/Duplicators: Technics M228X w/Dolby and dbx, Magnavox VCR 4-head stereo/Dolby (VHS), Echo, Reverb, & Delay Systems: Roland SRV-2000 digital reverb, DeltaLab 1024 digital delay, DeltaLab 1030 digital delay, Yamaha SPX90, DigTech 128. Other Outboard Equipment: Aphex Type B Aural Exciter, Valley Audio Gate noise gates, (2) Symetrix 544 noise gate, (6) Symetrix 501-01 comp/limiter. Microphones: Neumann U89, Neumann U47, Neumann KM84, (4) AKG 414EB, (2) Crown PZM-GPB, (2) Beyers M 201, (8) Sennheiser 421, (6) Shure SM57. Monitor Amplifiers: QSC 41. Monitor Speakers: JBL Control 1, Auratone, E-V S15-3. Musical Instruments: Korg DW-8000, Yamaha RX11 digital rhythm programmer, Pearl drums, Marshall amps, AKG/Koss headphones. Other MIDI Equipment: Macintosh SE w/software. Rates: Upon request. Special block rates available

[24+] **THE SOUND FACTORY**; also **REMOTE RECORDING**; 110 River Rd., Olathe, KS 66062; (913) 829-2727. Owner: Mike Elrod, Gary West. Studio Manager: Crayge Lindsay.

[24+] **SOUND IMPRESSIONS**; also **REMOTE RECORDING**; 110 River Rd.; Des Plaines, IL 60016; (312) 297-4360. Owner: Bill Holiiane.

[24+] **SOUND RECORDERS, INC.**; also **REMOTE RECORDING**; 206 S. 44th St.; Omaha, NE 68131; (402) 553-1164. Owner: John Boyd. Studio Manager: Marty Boyd

[24+] **SOUND RECORDERS, INC.**; also **REMOTE RECORDING**; 3947 State Line; Kansas City, MO 64111; (816) 931-8642. Owner: John Boyd, Ron Dabbs. Studio Manager: Ron Dabbs

[24+] **SOUNDSPACE INC.**; also **REMOTE RECORDING**; 126 Dayton St.; Yellow Springs, OH 45387; (513) 767-7353. Owner: Chris Hertzler. Studio Manager: Michael Brun.

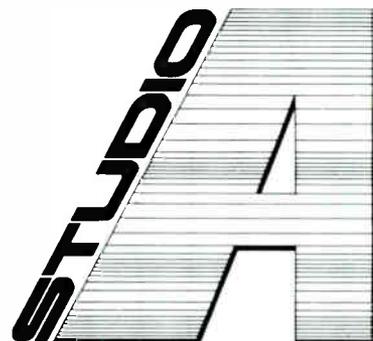


STREETERVILLE STUDIOS  
Chicago, IL

[24+] **STREETERVILLE STUDIOS**; 161 E. Grand Ave.; Chicago, IL 60611; (312) 644-1666. Owner: James C. Dolan. Studio Manager: Bob Dolan. Engineers: Steve Kusciel, Justin Niebank, Tim Hale, Fred Breitberg, David Axelbaum, Jay Shilliday, Steve Frisk, Stan Oda, Bob Kruger, Jeff Van Sleen, Todd Van Ohlen, Bob Miller, Bill Beyer. Dimensions: Studios: (1) 47

x 27 x 14, (2) 37 x 27 x 12, (The Suite) 14 x 15 x 12, (5) 14 x 13 x 8.75, (6) 14 x 10 x 8.75, (7) 10 x 10 x 8.75; Control rooms: (1) 25 x 16.5 x 11.5, (2) 24 x 18 x 10, (Suite) 21 x 22 x 10, (5) 20 x 16 x 8.75, (6) 17 x 14 x 8.75, (7) 18 x 13.5 x 8.22. Mixing Consoles: SSL 6048E 48 x 48 w/Total Recall and programming EQ, SSL 4040E 40 x 32 w/Total Recall, Neve 8128 48 x 32 x 48 mainframe w/Necam II, (2) Harrison 4032 32 x 32 x 40 w/Autoset I, Neve 2118 6 x 4 x 2 w/custom discrete circuitry. Audio Recorders: (3) Otari MTR-90 24-track, (5) MCI JH-24 24-track, (2) Studer A80 4-track, (2) Otari MTR-10 4-track, Otari MTR-12 4-track, (4) Otari MTR-10 2-track center-channel time code, (17) Studer B67 2-track, (2) Studer B77 2-track Cassette Recorders/Duplicators: (4) Studer B710, (6) Nakamichi MR-2. Echo, Reverb, & Delay Systems: (3) Lexicon 480L w/LARC, (3) Lexicon 224X w/LARC, (5) Lexicon PCM60, (2) Lexicon Prime Time digital delay, Lexicon 92, (3) EMT 140 plate reverb, (2) EMT 240 Gold Foil reverb, (2) MXR digital delay, Eventide 1745 digital delay, (2) Korg SDD-2000 MIDI sampling digital delay unit, (3) Yamaha REV7, (3) Yamaha SPX90, TC Electronic 2290 delay, (4) AMSSDMX delay/sampler, (2) Yamaha 1500, AMS RMX 16. Other Outboard Equipment: UREI 962 digital metronome, (4) UREI LA-4 comp/limiter, UREI LA-2A tube-type limiter, (6) UREI 1176LN leveling amp, Allison Gain Brain, Kexex, Orban/Parasound 516C dynamic sibilance controller, Orban 622B parametric EQ, Pultec EQP-15 EQ, Lang PEO-1 program EQ, White 1/3-octave EQ, EXR exciters, Aphex Aural Exciter, MXR Pitch Transposer, Eventide Harmonizer, Dolby SR 52-ch noise reduction, (8) Focusrite EQ/mic pre, Hardy M-1 mic pre, (2) Wendel Jr., (3) Drawmer gate, (4) Aphex Studio Dominator, (12) dbx 463X gate, (9) dbx 263X de-esser, (3) CDP 510 CD player, (4) Technics SLP-1200 CD Player. Microphones: All studios draw upon a microphone collection surpassing 100 in total that encompasses brand-new as well as vintage models, Neumann, AKG, B&K, Crown, Beyer, E-V, Sony, Sennheiser, Pearl and Shure among many others. Monitor Amplifiers: UREI, Haffer, BGW, Crown. Monitor Speakers: All rooms UREI Time Align 813, UREI Time Align 811, UREI Time Align 809, Yamaha NS-10, Auratone, Rogers, JBL, Tannoy, MDM-4, E-V 100, others also available. Musical Instruments: Synclavier digital music system (see extras), Steinway 64" grand piano, Yamaha 7'4" grand piano, Weber tack piano, Hammond B-3 organ w/Leslie, Hohner Clavinet, Moog 2034 poly synthesizer, Musser piano, Musser xylophone, Musser "One-Niter" vibes, Ludwig 25"/27"/29" tympanis, Fender Rhodes 88 MkI, Fender Rhodes 73 MkI, Ampeg B15N bass amplifier, Ampeg SB12 bass amplifier, (2) Roland Cube 60 guitar amplifier, (2) Sonor Signature drum set, E-mu Emulator II, (3) Yamaha DX7, (2) Roland S-50, Roland Super Jupiter, Roland Jupiter-6, Korg Poly-61 M, Chroma, Ensoniq Mirage sampling keyboard, Ensoniq ESQ-1, Roland MSQ-100, Roland MSQ-700, Roland TR-707, Roland TR-909, Yamaha RX11, Linn 9000, Casio CZ-101, Kawai K-3, R100. Video Equipment: Complete audio-for-video services available, (7) Lynx TimeLine time code module, Synclavier, Adams-Smith 2600 5-machine, Adams-Smith 2600 3-machine synchronizer, Audio Kinetics "O Lock" 3.10 synchronizing system, BTX 4600 synchronizer, BTX 4500 controller, Sony/MCI Type C 1" layback machine, Sony BVU-800 ¾" VCR, JVC CR850 ¾" VCR, (6) Sony 5800 VCR, (2) Sony 5000 VCR, (2) SVT RGB 26" video monitor, Sony PVM-1900 TV monitor, (2) Panasonic CT-1910M TV monitor, Conrac 19" monitor. Rates: Negotiable. Extras & Direction: Streeterville offers AMS Audiofile II systems in all of their studios for pre-production use, in session manipulation and processing as well as for mixdown and mastering. Synclavier digital music system with 100K sampling and optical hard disk creating a digital "Foley Stage" for SFX creation. Stereo digital satellite recording services for both domestic and international sessions. Custom audio duplication with guaranteed traceable overnight nationwide distribution. Credits: Records—Robert Cray/Albert Collins/Johnny Copeland (Grammy) Steve Goodman (Grammy) Dave Mason, Dennis De Young, Robert Plant, Ramsey Lewis, Lonnie Mack, Richie Havens, KoKo Taylor, Johnny Winter, Roy Buchanan, Lonnie Brooks, Michael Martin Murphy, Butch Stewart, Jonathon Brandmeier. Commercials (national)—Michelob, Old Style, Bud Light, Budweiser, McDonald's, 7-Up, United Airlines, Cherry 7-Up, Michelob Light, Molson, Twix. Direction: Streeterville celebrates its 20th year this Dec. 88/Jan. 89. Streeterville continues to grow with the addition of five new studios for music and post-production. These new facilities, added to the already effective blend of people and technical processes, places Streeterville in the forefront for entertainment and media needs of the '90s.

[24+] **STUDIO A RECORDING, INC.**; 5619 N. Beech Daly, Dearborn Heights, MI 48127; (313) 561-7489. Owner: Studio A Recording, Inc. Studio Manager: Marilyn Morgeson. Engineers: John Jaszcz, Randy Poole, Eric Morgeson. Dimensions: Room 1, studio 40 x 30, control room 25 x 22 (a John Stork design). Room 2, MIDI room. Mixing Consoles: MCI JH-528 28 x 28 w/JH-50 automation, Soundcraft 200B 32 x 4. Audio Recorders: (2) MCI JH-114 24-track, Studer B67 2-track ¼", Sony APR-5000 2-track ½" and ¼", Mitsubishi X80 2-track ¼", Sony PCM-F1 2-track digital. Cassette Recorders/Duplicators: Sony PCM-2500A R-DAT, (5) Sony TC-K555. Noise Reduction Equipment: (24) dbx. Synchronization Systems: Audio Kinetics Pacer, Roland SBX-80. Echo, Reverb, & Delay Systems: Klark-Teknik DN70, AMS RMX 16, Lexicon 200, Ursula Major 8 x 32, Yamaha REV7, DeltaLab CompuEffectron, Lexicon PCM42, (5) Yamaha SPX90. Other Outboard Equipment: (4) dbx 160X, (2) Valley People Dyna-Mite, (7) Valley People Kexex gate, (2) Focusrite 110 module,



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## NORTH CENTRAL

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Aphex Compellor, Eventide Harmonizer, (3) dbx 263X, (2) Valley People Maxi-Q, (2) dbx 160, Aphex Exciter Microphones: AKG The Tube, (2) Neumann U87, (4) AKG 414EB, Neumann U47, (4) Sennheiser 421, (2) Crown PZM, (5) Shure SM57, Shure SM58, (2) Neumann KM84, AKG C-451E Monitor Amplifiers: (2) Haller P-225, Crown SPSA-2, (2) Crown D-150A Monitor Speakers; (2) UREI 813, (4) Tannoy NFM-8, (4) Yamaha NS-10M, (2) Auratone. Musical Instruments: Synclavier system w/32 poly voices, 16 FM voices, 160 MB Winchester sample-to-disk option, SMPTE and MIDI options, Steinway 1898 7' grand piano, Roland D-550, Sequential Studio 440, Yamaha DX7HFD, Sequential Circuits Prophet-2002, Korg EX-8000, Yamaha TX802, Oberheim Matrix-1000 Roland Octapad, Roland JX-8P w/programmer, Ludwig 5-pc drum set, Fender amps, Yamaha amps. Other MIDI Equipment: Roland GM-70 guitar interface. Video Equipment: JVC CR8250U 3/4" deck w/remote, Mitsubishi 19" monitor. Other: Sound Ideas sound effects library on CD (Vol 1 & 2), Sound Ideas sampler library on CD Rates: Call



STUDIO M/WORLD THEATER  
Saint Paul, MN



STUDIO M/WORLD THEATER  
Saint Paul, MN

[24+] **STUDIO M/WORLD THEATER**; 45 E. 7th St., 10 E. Exchange, Saint Paul, MN 55101; (612) 290-1500; (612) 290-1453. Owner: Minnesota Public Radio. Studio Manager: Tom Mudge. Engineers: Tom Mudge, Tom Voegel, John Scherf, Scott Rivard, Preston Smith, Craig Thorson. Dimensions: Room 1: studio 45 x 35 x 30, control room 23 x 17. Room 2: studio 15 x 18, control room 12 x 14. World stage 36 x 35, World control room 14 x 10. Mixing Consoles: Neve V Series 36 x 36 x 36, MCI JH-636 36 x 24 x 36 w/automation, Neve 51 Series 36 x 12 x 2. Audio Recorders: 3M 32-track digital mastering system, Otari MTR-90II, Otari MTR-12 w/SMPTE center stripe, MCI 110B 4-track 1/2", (4) Otari MTR-10, (3) Studer A810. Cassette Recorders/Duplicators: (4) Nakamichi MR-1, (2) Revox B215 Noise Reduction Equipment: Dolby A 34-ch., Dolby SR 4-ch. Synchronization Systems: BTX Cipher Digital Softtouch Shadow interlock w/JVC CR8250 3/4" video

recorder Echo, Reverb, & Delay Systems: Lexicon 480L w/LARC, Lexicon 224X w/LARC, Lexicon 200, EMT 140, Ecoplate I, Ecoplate II, (2) Lexicon PCM42 digital delay, (2) Eventide 969 Harmonizer. Other Outboard Equipment: (4) Trident parametric EQ, (4) UREI LA-4 limiter, ADR Scamp major rack w/17 mods, (2) Marshall Time Modulator. Microphones: (6) Neumann U87, (6) Neumann KM84, (4) Neumann KM88, Neumann SM69, (4) Bruel & Kjaer 4006, (2) Bruel & Kjaer 4011, (2) Schoeps CMT56, (6) AKG C-452EB, (4) AKG 414, (4) Sennheiser 421, Shure SM57, Shure SM58, Shure SM81. Monitor Amplifiers: S80/SR200 programmable, JBL 6290 Monitor Speakers: Genelec 1022A tri-amped, Spondor Sp-1, Yamaha NS-10, Auratone. Musical Instruments: Steinway 9' grand w/Alpha Acoustic, Fender Rhodes 88 elec piano, Pearl drums w/Paiste cymbals, Fender Twin Reverb guitar amp, Kustom bass amp. Video Equipment: BTX Cipher Digital Softtouch interlock, JVC 8250 3/4" video recorder, audio sweetening w/sync-to-video-recording, audio recording w/sync-to-video, audio mixing and editing. Rates: Analog \$125/hr., digital \$140/hr., video/audio interlock and World Theater rates upon request. Extras & Direction: As host location for the Disney Channel's *A Prairie Home Companion* cable series, Studio M/World Theater has earned a reputation as a state-of-the-art facility for live performance video, simultaneous multi-track recording, synchronized audio post-production and live national satellite distribution of radio and television in a uniquely inspiring facility. The World Theater, opened in 1910 as a "two balcony dramatic house," was completely renovated in 1986 to its original elegance. The interior offers a sense of intimacy with no seat further than 87 feet from the stage. The fully staffed theater is complemented by an exceptional sound reinforcement system and a dedicated audio recording/broadcast control room having direct hardware multi-track interconnect to Studio M. In addition to six dressing rooms, a green room and rehearsal room, the theater includes a sufficient lighting system to accomplish demanding video lighting designs.

[24+] **STUDIOMEDIA RECORDING COMPANY**; 1030 Davis St.; Evanston, IL 60201; (312) 864-4460. Owner: Consortium, Ltd. Studio Manager: Benj Kanfers, Scott Steinman. Engineers: Benj Kanfers, Scott Steinman, David Appelt, Sam Fishkin, Mark Harder, Andy Herman. Dimensions: Room A: studio 600 sq.ft., control room 450 sq.ft., Room B: studio 325 sq.ft., control room 275 sq.ft., Room C: live room 375 sq.ft. Mixing Consoles: (A) Trident Series 80B 32 x 24 x 24, (B) Trident Series 65 24 x 8 x 16. Audio Recorders: (A) MCI JH-110B 24-track, MCI JH-110B 2-track, MCI JH-110B mono; (B) Tascam MS-16 16-track, Otari M-5050 2-track, MCI JH-110B mono; others: Tascam Series 70 8-track, Otari M-5050 4-track. Cassette Recorders/Duplicators: Technics RSM85 MkII, Nakamichi BX-125. Noise Reduction Equipment: Dolby A 24-track, Dolby A 2-track, dbx 2-track, dbx 16-track. Echo, Reverb, & Delay Systems: Ecoplate I, (2) Ecoplate III, Lexicon Model 200, (2) Lexicon PCM60, (2) Lexicon Prime Time, (3) Korg SDD-3000, Marshall Time Modulator, Eventide 910 Harmonizer, AKG BX-10, MXR digital delay, MXR pitch transposer, Ibanez flanger/delay, Studio Technologies reverb processor, Studio Technologies AN-1 stereo simulator, Studio Technologies AN-2 stereo simulator, Roland SRV-2000, (2) Lexicon Prime Time. Other Outboard Equipment: UREI LA-4, UREI 1176, UREI 1178, dbx 160, Allison Gain Brain comp/limiters, Kepex and Omni Craft noise gates, Orban de-esser, Furman parametric, White graphic EQs, (2) EXR exciter, UREI digital metronome, Audicarts parametric EQ, Drawmer noise gates, dbx 166, Studio Technologies mic preamps. Microphones: Neumann tube, Neumann, AKG, Sennheiser, Beyer, Shure, E-V, Coles, Wright, Crown. Monitor Amplifiers: (A) Threshold S1000, BGW, Crown; (B) Crown, BGW. Monitor Speakers: (A) UREI 813, (B) UREI 811B; others: Yamaha NS-10, E-V Sentry 100, JBL 4311, JBL 4313, Auratone. Musical Instruments: Baldwin SF10 7' grand piano, Fender Rhodes 88, Fender, Marshall and Hi Watt amps, Ashly/Crown, Eastern Acoustic Works bass system, Gretsch 5-piece drum kit w/Zildjian cymbals, hand percussion, drum machine, Simmons SDS-7 available. Video Equipment: VHS playback and audio dub, 3/4" lockup in both control rooms. Rates: Available upon request.

[24+] **3001 STUDIOS**; also REMOTE RECORDING; 850 South St., PO Box 327; Etna, OH 43018; (614) 927-9375. Owner: Jeff Gastineau. Studio Manager: Tim Boyles. Extras & Direction: Located 15 minutes from downtown Columbus, 3001 features the largest synthesizer/MIDI system in the area, with the latest in sampling, sequencing, analog, FM and digital gear all located in our new MIDI studio. Our main room features a Soundcraft console, digital mixdown, SMPTE-based automation and synchronization, MCI 24-track machine, dual machine lockup to 40 tracks and 60 spaces of processing gear, all at no extra charge. Our live recording area is perfect for powerful sounding live drums and guitars. In addition, all customers have experienced programmer/engineers along with computerized patch libraries at their disposal to custom design their own sound. If you are an artist looking for a creative atmosphere in quiet surroundings for that new album project, or a video/film producer in need of a professional soundcraft, 3001 is the place for you. 3001, a studio for musicians and music.

[24+] **TONE ZONE RECORDING**; 1316 N. Clybourn; Chicago, IL 60610; (312) 664-5353. Owner: JPUSA. Studio Manager: Roger Heiss. Engineers: Roger Heiss, Roy Monroy, Ed Bialach, Joe Tortorici, independents welcome. Dimensions:

Studio 40 x 20, control room 18 x 16. Mixing Consoles: Harrison MR-4 36 x 24. Audio Recorders: Otari MTR-90II 24-track, Otari MTR-12 2-track 1/2" and 1/4", Otari MX-5050BII 2-track. Cassette Recorders/Duplicators: (3) Tascam 122B. Echo, Reverb, & Delay Systems: Quantec room simulator, Lexicon 200 digital reverb, Lexicon PCM60 digital reverb, Studio Technologies Ecoplate, TC Electronic 2290 Dynamic digital delay, Lexicon 92 digital delay, Lexicon Prime Time, Eventide 949 Harmonizer, DeltaLab DL-4, Roland SDE-3000 digital delay, Yamaha SPX90. Other Outboard Equipment: (2) dbx 160X, (2) dbx 165A, (2) UREI 1176 compressor, TubeTech CL-1A compressor, Drawmer DS-201 noise gate, Symetrix 522 noise gate, (2) Omni Craft GT-4 noise gate, TubeTech PE-1B program equalizer, Ashly SC-66AEO, Orban 622BEO. Microphones: Neumann KM84, Neumann KM54, Neumann KM53, Neumann U47, Neumann U87, Neumann SM2, Neumann M49, AKG 451, AKG 460, AKG 414, AKG C-12A, AKG C-24, AKG C-535, (4) Sennheiser MD-421, (4) Shure SM57, Crown PZM, E-V RE20. Monitor Amplifiers: (2) UREI 6500, Haller 500, (2) Haller 220. Monitor Speakers: (2) UREI 813B, (2) UREI 813 (studio playback), (4) Yamaha NS-10, (2) Auratone cube. Musical Instruments: Yamaha CF7 grand piano, (2) Yamaha DX7 synthesizer, Roland JX-10/Super JX, LinnDrum machine, Simmons SDS-7 electronic drums, Wendel Jr., Sonor Rosewood drum kit, a variety of guitars and additional synths are available upon request, Marshall amps, Fender amps. Other MIDI Equipment: Akai S900 sampler. Other: Roland DEP-5 digital effects processor, Studio Technologies AN-2 stereo simulator, UREI 964 metronome, UREI 1122 preamp. Rates: Call for quotation, very flexible for block time.

[24+] **TRC STUDIOS**; also REMOTE RECORDING; 5761 Park Plaza Ct., Indianapolis, IN 46220; (317) 845-1980. Owner: TRC Corp. Studio Manager: George Schatzlein. Engineers: Andrew Symons, Alan Johnson, Eric Worrell, Steve McQueary, Kevin Van Wyk. Dimensions: Room 1: studio 34 x 43, control room 19 x 22. Room 2: studio 30 x 33, control room 17 x 17. Mixing Consoles: Trident 80B 30 x 24 w/Digital Creations Diskmix w/moving faders. Sound Workshop 34B 31 x 24 w/Digital Creations Diskmix. Audio Recorders: (2) Sony JH-24 24-track w/ALLII, (2) MCI JH-110B 2-track (1/4" and 1/2" heads avail.), MCI JH-110B 3-track w/center-track time code head, MCI JH-110B 3-track 1/2" video playback machine, (2) Otari MX-5050B 2-track. Cassette Recorders/Duplicators: (2) Akai GX-9 3-head w/Henry Eng. Matchbox, Awa F990 3-head w/Henry Eng. Matchbox Noise Reduction Equipment: (6) Dolby 361 w/Dolby SR, (2) Dolby A cards for 361s, (2) Dolby SR XP5R 24. Synchronization Systems: Audio Kinetics Pacer, Adams-Smith 2600 Echo, Reverb, & Delay Systems: (2) Klark-Teknik DN780, (2) Yamaha REV7, EMT 140TS plate, (4) Yamaha SPX90, Lexicon PCM60, Alesis MIDVerb II, Alesis Microverb, Lexicon Super Prime Time, TC Electronic 2290 sampler/DDI, Audio Digital TC-2, DeltaLab DL-2, DeltaLab DL-4, DeltaLab 1040. Other Outboard Equipment: (6) UREI 1176 limiter, (2) UREI LA-4 limiter, BBE 202 Exciter, (2) Eventide 910 Harmonizer, Eventide Instant Phaser, Eventide Instant Flanger, Aphex II Aural Exciter, TC Electronic 2240 stereo parametric EQ, UREI metronome, Garfield metronome, ADR Scamp rack w/8 gates, (2) lim/comp, autopanner, (2) de-esser, (2) parametric EQ, Valley Arts rack w/4 Kepex II, (2) Maxi Q, (2) de-esser, (2) Allison Gain Brain II. Microphones: (6) Neumann U87, (3) Neumann U47, (4) Neumann KM84, (2) Neumann KM85, Neumann KM86, Neumann KM88, Neumann TLM170, (2) Schoeps CMT-55, (2) AKG 414EB, (2) AKG 452EB, (2) AKG D-1000E, (2) E-V RE20, (2) E-V RE16, E-V RE55, Beyer M 101, Beyer M 500, (6) Sennheiser MD-421, (2) Sennheiser MD-441, (4) Crown PZM. Monitor Amplifiers: Crown PSA-2, Crown DC-300A, Acoustal Twin 200 MSFET, (6) Crown D-150, (2) Crown D-60, Crown D-40. Monitor Speakers: (4) JBL 4435, (4) Yamaha NS-10M studio, (4) Yamaha NS-10M, (2) JBL 4311, (2) JBL 4310, (2) MDM-4, (6) Auratone 5C. Musical Instruments: Roland D-50, Roland D-550, Roland S-50, Casio FZ-1, (2) Akai S900 (w/drum triggers), Yamaha DX7HDI, Yamaha TX7, Korg DW-8000, E-mu SP-12 turbo, (2) Alesis HR-16, MIDI kazoo. Other MIDI Equipment: Macintosh system w/Personal Composer and Personal Performer w/SMPTE, IBM system w/Dr. T Copyist and Sequencer Plus MkII, Yamaha YMM2 MIDImerge, J.L. Cooper MSB + MIDI switcher. Rates: Studio A \$140/hr., studio B \$130/hr. studio B film mix \$200/hr.

[24+] **TRIAD STUDIOS**; also REMOTE RECORDING; 1910 Ingersoll Ave.; Des Moines, IA 50309; (515) 243-2125. Owner: Richard Trump, Bill Synhorst, Joe Borg. Studio Manager: Richard Trump. Engineers: Rick Condon, Tony Schmitt, Greg Tracy. Dimensions: Room A: studio 38 x 24, control room 22 x 21. Room B: studio 18 x 21, control room 18 x 13. Room C: studio 5 x 10, control room 10 x 10. Mixing Consoles: MCI JH-528B 24 x 24 w/auto, Tascam 520 20 x 8, Tascam 512 12 x 8. Audio Recorders: Otari MTR-90II 24-track, Tascam ATR-60B 8-track, Tascam ATR-60 2-track, Fostex E-2, MCI JH-110B 2-track, Nakamichi DMP-100 digital, Revox PR99, Tascam 52, Otari MX-5050B, Tascam 44-OB. Cassette Recorders/Duplicators: Tascam 122 MkII, Tascam 122B, Eumig FL1000. Echo, Reverb, & Delay Systems: EMT 240, Lexicon 224XL, UREI 927, Yamaha SPX90, Ursa Major SST282, Lexicon PCM60. Other Outboard Equipment: UREI 1176, UREI LA-3A, UREI LA-4, UREI 546, Eventide H949, Symetrix Phone Patch. Microphones: Neumann U47 FET, Neumann U48, Neumann U67, Neumann U87, Neumann KM83, Shure SM57, Shure SM81, Shure SM58, AKG D-12E, AKG C-414, AKG C-452, Crown PZM, E-V RE16, Beyer M 500. Monitor Amplifiers: UREI, Tech-

nics, Crown Monitor Speakers: UREI #13, MDM-TA3, Auratone, Fostex Musical Instruments: Yamaha 7' grand piano, Fender Rhodes, Rogers drums. Video Equipment: U-matic, Beta, VHS, Proton monitor, Adams-Smith synchronizer, Fostex synchronizer. Rates: Available upon request.



**UNITED RECORDING STUDIO**  
Kansas City, KS

[24+] **UNITED RECORDING STUDIO**; 4024 State Line; Kansas City, KS 66103; (913) 262-3555. Owner: David H. McCutty. Studio Manager: Joel Hornbostel. Engineers: Dann E. Hawthorn, Dan Billings, Mike Green. Dimensions: Studio 24 x 20, control room 20 x 16. Mixing Consoles: Harrison MR-4 36 x 24. Audio Recorders: MCI JH-24 24-track, MCI JH-11U 2-track, Tascam 70H8 8-track. Echo, Reverb, & Delay Systems: Ecoplate I, Lexicon 224XL, Lexicon Super Prime Time, Yamaha REV7. Other Outboard Equipment: (2) Eventide Harmonizer, dbx 900 Series signal processing, UREI 1176 comp/limiter, Omni Craft gates. Microphones: Neumann, AKG, Sennheiser, E-V, Shure. Monitor Amplifiers: Haller, Phase Linear. Monitor Speakers: UREI 813B, Yamaha NS-10M, Auratone. Musical Instruments: Steinway grand, drum kit, Hammond B-3 w/ Leslie, piano, anything available w/notice for small fee. Rates: Best studio at the best rates in the area.

[24+] **UNITED SOUND SYSTEMS**; 5440 Second Blvd.; Detroit, MI 48202; (313) 832-3313. Owner: Don Davis. Studio Manager: Michael Iacopelli. Engineers: Michael Iacopelli, Rufus Harris, Steve King, Michael Moore, Tony Ray. Dimensions: Room A studio 35 x 28 x 25, control room 15 x 12 x 10. Room B studio 21 x 11 x 7, control room 16 x 14. Mixing Consoles: Neve 8084 32 x 16 x 24, Neve 8108 32 x 24 w/Neacam Audio Recorders: Studer A800 24-track, Ampex MM-120U 24-track, (2) Ampex ATR-102 2-track, Studer A8DVU 2-track. Noise Reduction Equipment: dbx, Dolby Echo, Reverb, & Delay Systems: Yamaha PCM70, Yamaha SPX90II, Lexicon 224, AKG BX-20, EMT 140, AMS, Lexicon PCM42, Ibanez SDR-1000, Roland SRV-2000. Other Outboard Equipment: Scamp noise gates, dbx, UREI, Teletronix limiters, Lang, Pultec, Fickinger EQs. Microphones: Neumann U87, Neumann J47, Neumann U67, Neumann KM84, AKG 451, AKG 414, Shure SM56, Shure SM7, Sennheiser MD-421, Crown PZM, E-V RE20. Monitor Amplifiers: Haller, McIntosh, Crown. Monitor Speakers: UREI 813, Auratone, Yamaha NS-10M, Tannoy. Musical Instruments: Baldwin SD-10 grand, Fender Rhodes, Pearl drums, Ludwig drums and Remo toms, vdr; glucken-spiel, clavinet, Hammond B-3 w/Leslie, Fender 300 bass amps, Fender Vibrolux guitar amp, LinnDrums, Yamaha DX7, Oberheim Matrix-12, E-mu Emulator, Yamaha RX5, Roland Super JX. Other MIDI Equipment: Yamaha SBX60 SMPTE-to-MIDI sync, MIDI Studio C MIDI exclusive. Video Equipment: On request. Rates: On request.

[24+] **UNIVERSAL RECORDING CORPORATION**; 46 E. Walton; Chicago, IL 60611; (312) 642-6465. Owner: Murray R. Allen. Studio Manager: Foote Kirkpatrick. Engineers: Bill Bradley, Danny Leake, Bob Bennett, Mike Mason, Tom Miller, Bill Reis, Ed Golya, Jeff Palmer, Diane Haglund, Dave Lewis, Steve Wilke, Richard Choj. Dimensions: Room A: studio 45 x 60, control room 30 x 25. Room B: studio 20 x 40, control room 30 x 25. Room C: 15 x 20, control room 20 x 8. "Backroom" studio 9 x 12, control room 20 x 12. Mixing Consoles: Neve 807B 32 x 32, SSL 6000 32 x 32, MCI 628 28 x 24, (2) ADM film 16 x 8, Harrison Raven 32 x 24. Audio Recorders: (2) Mitsubishi X850 32-track, Otari DTR-900, (2) Mitsubishi X80 2-track digital, (2) Mitsubishi X46 2-track, 3M 32-track digital, 3M 4-track digital, (4) MCI 24-track analog, (8) Ampex ATR 2-aud 4-track analog, (16) Ampex 440 1-, 2- and 4-track analog, (4) Scully 1- and 24-track analog, Ampex 1200 16- and 24-track analog, Otari MTR-99 24-track, (2) Mitsubishi X86, (2) Synclavier, (3) direct-to-disk, (5) DAT recorder. Echo, Reverb, & Delay Systems: Quantec, Lexicon 200, (6) EMT plate (four rooms), (3) Lexicon 224X, Eventide 2016, (3) 949 Harmonizer, Lexicon, Eventide, Lexicon 480X, AMS RMX 16, (3) AMS DMX 15-80S. Other Outboard Equipment: dbx, Dolby, UREI 1173-octave, Orban parametrics, UREI LA-2A, -3A, 1176, AMS, Roland, Yamaha microphones: Neumann U47, Neumann U67, Neumann U87, Neumann KM83,



**UNIVERSAL RECORDING CORPORATION**  
Chicago, IL

Neumann KM84, AKG 414, AKG 451, AKG 421, AKG 441, AKG C-12, AKG C-24, over 200 mics to choose from. Musical Instruments: Bosendorfer 9'5" Imperial grand piano, (3) Steinway grand, (3) Fender Rhodes, celeste, tympani, (2) Sonor drum kit, Ludwig, Slingerland, tack piano, synthesizers, Hammond B-3, Synclavier 32-out. Video Equipment: (2) C Format, BTX Softouch, BTX multi-machine sync, controllers, Shadow T, Jam sync generators, house sync 1", 3/4", 2" audio, BVH-2000 digital C format. Rates: A: \$250/hr., B: \$235/hr.; backroom: \$150/hr. Softouch and digital: \$50/hr. Extras & Direction: Universal, located in the heart of the hotel, restaurant, nightclub area of Chicago, has an "in-house" Cantonese restaurant delivering to all studios. We arrange hotels and limousine service. Universal is one of the largest, full-service audio facilities in the world. With two film mixing theaters, a video-sweetening facility, a cassette duplicating factory, and a location film crew. Universal offers the most complete audio service in the country. Among our most recent recording projects are albums by Tom Waits, Manowar and Luther Vandross.

[24+] **WHEELER AUDIO ASSOCIATES**; also **REMOTE RECORDING**; 4024 State Line; Kansas City, KS 66208; (913) 362-2500. Owner: Jim Wheeler, Mark Weddle, Rose Eills. Studio Manager: Jim Wheeler. Engineers: Tom Nicholas, Mike Elwood, Barry Spillman, Mark Weddle, Jim Wheeler. Dimensions: Room 1: control room 30 x 25. Room 2: studio 10 x 6, control room 20 x 15. Mixing Consoles: Sony MXP-3000 36 x 24 w/ADS-3000 hard-disk automation, Ramsa WRT-820 20 x 16. Audio Recorders: Sony JH-24 24-track, Fostex E-16 16-track, Sony APR-5002 2-track, (2) Tascam 42B 2-track, (2) Scully 280B 1-track. Cassette Recorders/Duplicators: (2) Tascam 122, (2) TEAC V-770. Noise Reduction Equipment: dbx 155, Dolby A available. Synchronization Systems: Soundmaster Audio Editing systems, Fostex 4030. Echo, Reverb, & Delay Systems: Roland SRV-2000, (2) Yamaha SPX90, Ecoplate, Lexicon 224X, Yamaha REV7 available. Other Outboard Equipment: (2) UREI 1176 limiter, UREI 1178 limiter, Eventide 949 Harmonizer, DeltaLab CompuEffectron, dbx 900 Series rack. Microphones: Neumann U87, Neumann U64, (2) Sony C-48, (3) Sennheiser 421, (3) AKG 451, (2) RCA 77DX, (4) Shure SM57, (2) E-V 666, other mics available. Monitor Amplifiers: (2) Haller P-500, Haller P-250, (5) Haller P-125. Monitor Speakers: (2) Tannoy FSM, (2) Tannoy, (2) JBL 4412, (2) Yamaha NS-10M, (4) Auratone. Video Equipment: Studer A80 1" video layback, JVC 8250 3/4" VCR, NEC 25" color monitor, JVC TM-13U color monitor. Other: (2) Technics SL-P1200 CD player w/Sound FX and music libraries, Nagra 4 2L, Shure FP-31, Shotgun and LAV mic for remote film audio. Rates: Call for rates.

[24+] **ZENITH/db STUDIOS**; 676 N. LaSalle St.; Chicago, IL 60610; (312) 944-3600. Owner: Coken & Coken, Inc. Studio Manager: Richard A. Coken. Engineers: Cliff Beneventi, Ric Coken, Bob Coverston, Chris Field, Pete Gale, Brett Johnson, Tom Labus, Phil Lentini, Michael Moats, Jim Moore, Luiz Quiroz, Chuck Rapp, Joel Sears, Shawn Snowden, Steve Wilburn, Hans Wurman and Joel Zajac. Dimensions: Studios: A 26 x 40, C 15 x 11, D 12 x 9, T 8 x 10, V 10 x 8, X 21 x 11, Z 14 x 12. Control rooms: A 20 x 16, C 15 x 11, D 12 x 12, V 16 x 18, Z 14 x 15. Theater 1: studio 8 x 4, control room 22 x 32. Theater 2: studio 10 x 5, control room 21 x 31. Editorial: 8 rooms all 16 x 16. Mixing Consoles: AMR DDA 28 x 48, NEOTEK Series III 28 x 24, Amek TAC Scorpion 16 x 16, NEOTEK Series I 32 x 8 film post, ADM 16 x 3 film post, Audionics 10 x 4, Electrodyne 16 x 8, Quantum 8 x 4 film transfer. Audio Recorders: Ampex MM-1200 24-track, Tascam ATR-800 24-track, Otari MX-70 16-track, Otari MX-70 8-track, (2) Sony 5003 3-track center-track SMPTE, MCI JH-110 4-track, Ampex ATR-104 4-track, Ampex ATR-102 2-track, (2) Ampex 440B 4-track, (5) Ampex 440B 2-track, (7) Ampex 440B 1-track full-track, Scully 280B 8-track, Scully 280 4-track, Scully 280 2-track, (2) Scully 280 full-track, MCI JH-10 16-track, (3) Nagra 1-track 4.2 Neopilot. Cassette Recorders/Duplicators: Tascam 122B, Tascam 133, Technics, Wollensak A/V. Noise Reduction Equipment: Dolby A, dbx Type I. Syn-

chronization Systems: Soundmaster Syncros, Lynx TimeLine, Adams-Smith Zeta III, BTX Shadow, Fostex, LOK BOX VITC synchronizer, Fostex, BTX Cypher, BTX 5400 SMPTE generators, Sony 5003 center-track SMPTE recorders w/chase synchronizer Echo, Reverb, & Delay Systems: EMT, Eventide, Lexicon, Audio Digital, Alesis, DeltaLab, UREI, Orban. Other Outboard Equipment: UREI 1176, UREI 1178, UREI 565 DIP Filter, UREI parametric and graphic EQ, UREI digital metro-nome, Orban 516 de-esser, Orban 872 parabolic, Orban 245E stereo synth, Valley People and Allison Gain Brain (I/II), Kepex I, Kepex II, Valley People 440, Pultec filters, Pultec tube EQs, dbx 160X, dbx 165, Studer telephone hybrid, BBE 800, Omni Craft, White, Magna-Tech, Symetrix, Audio + Design Scamp, Primus/Ramko, Alesis, Polyfusion, Teletronix, Burwen, Kudelski, EXR, Audio Precision System One. PMLs: Neumann, AKG, Schoeps, Sennheiser, Sony, PNO, Shure, E-V, Beyer, RCA. Monitor Amplifiers: Crown PSA-2, Crown Micro-Tech 1000, Crown Micro-Tech 1200, Crown D-150, Crown D-75, Crown 3030, UREI, Ramsa, QSC, McIntosh, Symetrix, Tapco, Altec. Monitor Speakers: UREI 811, UREI 809, E-V Sentry III, JBL 4411, Altec 605, Altec A7, Yamaha NS-10, Fostex RM780, Auratone 5C. Video Equipment: Sony VPH-1020Q projection, Sony BVU-800, Sony BVU-5800 U-matics, Ampex VPR-80 1" C format recorder, Studer A80 layback, JVC 6600 U-matic, Panasonic AG6300, NEC NTC 10B, VITC and LOK BOX capabilities. Other: Film Audio: Magna-Tech 35/16mm, 3-, 4- and 6-track and stripe recorders and dubbers, 150 Series automated dialog replacement. Resolvers, distributors and recorders: Otari EC401 resolver, MTM 3-track and mono recorders, Magnasync recorders and dubbers, Westrex 35mm and 35/32 optical recorders, Philips and JAN xenon projection, KEM and Moviola upright and flatbed editors, 16mm edge and center-track capabilities, all post editorial equipment and Foley stage. Rates: \$50 to \$365/hr., rate book upon request.

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STUDIOS

## NORTH CENTRAL

[16] **ACE MOBILE RECORDING**; also *REMOTE RECORDING*; 21 Gage Ave.; Elkhart, IN 46516; (219) 293-3913. Owner: George E. Compton, Jr. Studio Manager: George E. Compton, Jr. Engineers: George E. Compton, Jr. Dimensions: Studio 20 x 30, control room 10 x 30. Mixing Consoles: Tapco Panjo 7416 16 x 16, Tapco 8201 B 8 x 8, Tapco 8201 REB 8 x 8. Audio Recorders: Itam 1610 16-track w/dbx, Otari MX-5050B 2-track w/dbx, Crown CX 822 2-track w/dbx. Cassette Recorders/Duplicators: (2) Nakamichi LX-3, (4) Sanyo RD 520, (2) NAD 6050 C, (2) Sony WM-D6C (Professional "Walkman"). Noise Reduction Equipment: (10) dbx 150, Echo, Reverb, & Delay Systems: Brick plate reverb, Tapco 4400 reverb, Lexicon Super Prime Time digital delay. Other Outboard Equipment: Aphex Type B Aural Exciter, (3) Countryman DI Microphones: (2) Neumann U87, (2) Neumann KM84, (2) Sennheiser 441, (2) Sennheiser 421, (2) PML F92, (2) Shure SM57, (2) Crown PZM 30GPS, (2) Crown PZM 31, (2) Sony ECM-22, (2) E-V 1751, (2) AKG 451. Monitor Amplifiers: Crown PSA-2, Carver M-1 5, Carver M-400. Monitor Speakers: (2) UREI 813, (2) Dahlquist PQM9, (2) Dahlquist PQM5. Musical Instruments: Kawai "Tone Customized" upright piano. Other: dbx computerized 20/20 analyzer/equalizer. Rates: Available upon request.

[16] **ACME AUDIO & RECORDING CO.**; also *REMOTE RECORDING*; 3821 N. Southport; Chicago, IL 60613; (312) 477-7333. Owner: Michael Rasfeld. Studio Manager: Jim Rasfeld. Engineers: Mike Rasfeld, Bob Colton, Paul Smith, Sam Fishkin, Mike Freeman, Todd Colburn, Al Wittek, Blaise Barton, Cheryl Rapp, Mark Harder. Dimensions: Room 1: studio 16 x 21, control room 8 x 15. Room 2: control room 8 x 10. Mixing Consoles: NEOTEK Series One 32 x 8 (studio), Hill 16 x 4 multi-mix (remote), (2) Roland M-160 16 x 4 (composer's room), Biamp 29QPM 8-ch powered mixer. Audio Recorders: Tascam 85-16B 16-track, Otari 5050 8-track, Ampex ATR-102 2-track, Technics 1520 2-track, (2) Technics 1500 2-track, (3) Sony PCM-501 ES 2-track digital processor, Sony PCM-1630/DMR-4000 Cassette Recorders/Duplicators: (35) Nakamichi BX-300, Yamaha KX1020, Sony TC-K930. Noise Reduction Equipment: (26) dbx Type I 150/155, (2) Dolby A 361 frame, (2) Dolby SR 361 frame. Echo, Reverb, & Delay Systems: Lexicon PCM60, Yamaha RECV7, Yamaha SPX90II, AKG BX-20E, Studio Technologies Ecoplate III, PAIA Hot Springs, Korg SDD-3000, MXR DDL, MXR stereo chorus, Alesis Microverb, Yamaha REV5. Other Outboard Equipment: Phase Linear auto correlator, Brooke-Siren DP402 dynamics processor, (2) dbx 118 compressor/expander, Teletronix LA-2A, Biamp quad limiter, Omni Craft 4-ch gate, (4) Melchor program EQ, (3) Technics SH-9010 parametric EQ, Sound & Vision autolocator, Sonus SMPTE/MIDI converter. Microphones: Neumann U47 tube, Neumann U48, (2) AKG C-12A, Sennheiser 415, Sennheiser 435, Sennheiser 441, E-V RE16, (2) Beyer M 160, Beyer M 88, (2) Audio-Technica B11, (2) Audio-Technica B12, (2) Audio-Technica B13, (2) Audio-Technica B36, Audio-Technica 801, (2) Audio-Technica 802, (2) Audio-Technica B31, (2) Sennheiser 421, (2) Shure SM81, (2) Shure SM57, (2) Sony ECM-511, RCA 77-DX, RCA 44-BX, (2) E-V RE20, (2) AKG D-1000, Shure 555. Monitor Amplifiers: Carver M-400T, Adcom GFA-555, NAD 3020, NAD 3020B, NAD 3140. Monitor Speakers: (2) E-V MS-802, (2) E-V Sentry 100A, (2) E-V Sentry 500, (2) E-V S-200, Wharfedale Diamonds. Musical Instruments: Casio SK-1, Casio CZ-101, Yamaha TX81Z, Kawai K-1, Casio AZ-1 controller, Roland Dr. Rhythm, Alesis MMT-8 MIDI sequencer, Alesis HR-16 drum machine, Mac Plus w/20 MB HD and patch librarians. Video Equipment: (2) JVC HRD-470 VHS Hi-Fi, (2) JVC HRD-756 VHS Hi-Fi, NEC Super Beta Hi-Fi, Sony SL-100 Super Beta, Sony HLF-910 Super Beta, Panasonic industrial VHS. Other: Kimball, Bosendorfer 6'7" grand piano, Ampeg B-15 vintage, Fender Champ and Deluxe amps (new and old), Gibson J-45 1951 acoustic guitar, Ludwig drums, Monster Cable everywhere! Rates: \$20 to \$90/hr. Extras & Direction: Acme Audio is a complete one-stop source for independent music production. Our all-musician staff runs an extremely quality-conscious shop. Our experience lets us stay under budget and on time. Our fanatic attention to detail produces real-time cassettes, LPs and CDs that please our fussiest clients. Since 1973, we've produced hundreds of

cassette and LP packages complete with art and printing for major and independent labels. This year, we added Chicago's first complete 1630-based CD prep facility.

[16] **ACTION CITY RECORDS**; PO Box 302; Napoleon, OH 43545; (419) 533-4782. Owner: John L. & Sharon Kuser. Studio Manager: John L. Kuser. Engineers: Mark Seedorf, John E. Church, John L. Kuser. Dimensions: Room 1: studio 32 x 32, control room 13 x 19. Room 2: studio 12 x 10 (Control room designed by Dave Clark). Mixing Consoles: Soundtracs MRX 24 x 16 x 8 x 2. Audio Recorders: MCI JH-10 16-track, Otari 5050 MkII 2-track. Cassette Recorders/Duplicators: Nakamichi MR-1, Hitachi D-W800. Noise Reduction Equipment: dbx 224, Rocktron Hush IIC Echo, Reverb, & Delay Systems: (2) Ibanez SDR-1000, Yamaha SPX90, (2) ADA digitizer, ADA 2FX, Ibanez DM-2000, Ibanez DMD-2000, DeltaLab DL-4. Other Outboard Equipment: dbx 160, dbx 166, Loft 400 gate/limiter, dbx 900 Series filled w/compressors and gates, Scholz Rockman Sustainer, Scholz Bass Rockman, Scholz Rockman stereo chorus/delay, BBE 822 stereo enhancer, ADA Pitch-Track, (2) Ibanez GE-301 1/3-octave, Ibanez MSP-1000, Rane dual 15-band EQ. Microphones: Neumann TLM170, (2) E-V PL20, (8) Shure SM57, (2) Shure SM58, AKG 414EB, (4) AKG 535EB, (2) Neumann KM84, (4) Sennheiser 421, AKG D-112. Monitor Amplifiers: Crown 300A, Crown 150A. Monitor Speakers: JBL 4411, JBL 4406, Auratone. Musical Instruments: Steinway grand piano, Ensoniq Mirage, Casio DZ-1 translator, Tama Techstar drums, Yamaha RX11 drum machine, Tokai and Schecter Teles, P-bass, Alvarez acoustic, Marshall amps, Roland amps, Korg DSP-8 keyboard rates: \$35/hr package deals available.

[16] **ACTV PRODUCTIONS**; also *REMOTE RECORDING*; 11934 Lorain Ave.; Cleveland, OH 44111; (216) 671-1711. Owner: Lawrence A. Grapentine. Studio Manager: Jeffrey J. Mercer.



AXAX RECORDING TEAM  
Fort Wayne, IN

[16] **AJAX RECORDING TEAM**; also *REMOTE RECORDING*; 902 W. Wayne St.; Fort Wayne, IN 46804; (219) 426-0591.

[16] **A.L.B.O. FOUNDATION ENTERPRISES**; 5246 Plainfield N.E.; Grand Rapids, MI 49505; (616) 364-9273. Owner: Keith & Kathy Gill. Studio Manager: Kathy Gill.

[16] **AUTHENTIC AUDIO LAB**; also *REMOTE RECORDING*; 5147 Pine St., PO Box 6063; Omaha, NE 68106; (402) 553-5334; (402) 553-5327. Owner: Joseph D. Slezak. Studio Manager: Joseph D. Slezak.

[16] **AVATAR PRODUCTIONS**; 515 28th St., #106; Des Moines, IA 50312; (515) 282-9746. Owner: Michael Meacham. Studio Manager: Michael Meacham.

[16] **AXSTUDIOS**; 676 Racine Ave.; Columbus, OH 43204; (614) 272-8452; (614) 876-2655. Owner: Steve & Kevin Campbell. Engineers: Steve Campbell, Kevin Campbell, Kevin "Max" Borrowman, Rich Stillion, Brian Dunning, Robert Allen. Dimensions: Room 1: control room 12 x 14. Room 2: studio 12 x 15. Room 3: studio 13 x 15. Room 4: studio 5 x 12. Mixing Consoles: Ramsa WRT820 20 x 16 x 8 x 2 audio reproduction console, Yamaha MV208 8 x 2 effect return mixer, Tascam Model 2 6 x 4 4-track mixer. Audio Recorders: Tascam MS-16 16-track w/AQ65 full autolocator, Tascam Model 38 2-track w/remote (1/2-track), Sanyo 2-track VHS Hi-Fi mastering, Sanyo 2-track Beta Hi-Fi mastering, Sanyo VTC9100 2-track Beta, TEAC 2340 4-track Cassette Recorders/Duplicators: Tascam 122 MkII w/remote, (2) JVC TD-W330 stereo cassette duplicator. Noise Reduction Equipment: dbx 160 comp., (5) dbx 463 noise gate, dbx DX-805 16-ch. Audio Logic MT44 quad noise gate, dbx 166 gate/comp/limiter, Ashly SC-55 comp/limiter, Orban 428A comp/limiter/de-esser/gate. Synchronization Systems: Yamaha YME8 MIDI sync Echo, Reverb, & Delay Systems: Lexicon PCM70 digital effects, (2) Yamaha SPX90 digital effects, Roland SDE-1000 digital effects (delay), Ibanez SDR-2000 digital reverb, Biamp MR-140 spring reverb, Aphex Type C Aural Exciter. Other Outboard Equipment: Phase Linear auto correlator, SA-3050 spectrum analyzer, Rane 1/3-octave EQ. Microphones: Condenser mics (2) Neumann U87, (2) Shure SM98, (2) Shure SM94, (2) Shure SM87, (2) E-V BK1, Dynamic mics: (2) Shure SM556D, (11) Shure SM57, (8) Shure SM58, (3) Shure PE56D, Shure SM85, Shure PE85L, (2) Shure ES615, Altec 687B, E-V ND308, (2) Sennheiser 421U5, (2) Sennheiser 409U3. Monitor Amplifiers: Crown PSA-11 control room, Crown DC-60 headphone amp, SWR-01 control room, Crown DC-300 studio Monitor Speakers: (2) UREI B09A (control room), (2) Yamaha NS-10M (control room), (2) Yamaha S10X (control room), (2) E-V 3-way TL boxes (studio). Musical Instruments: Ensoniq Mirage DSK-1 digital sampling keyboard, Yamaha DX100 keyboard, Korg K-2 mini, Alesis HR-16 sample drum machine, Ludwig 5-pc. drum kit, Marshall mini stack, Peavey Backstage, Bass cabinet w/(2) E-V 15, Leslie, nice selection of guitars. Other MIDI Equipment: Yamaha QX5 sequencer, Yamaha YME8 MIDI expander, Commodore 64 PC, Sonus MIDI interface, Sonus score writer program, Sonus score track program. Other: Stax electrostatic control room, Koss studio, Conquest QPB headphone distribution system, Sennheiser HD-414SL.

[16] **BERNETT PRODUCTIONS—STUDIO "B"**; PO Box 691; Wayzata, MN 55391; (612) 475-2900. Owner: Tom Bennett. Studio Manager: Tom Bennett. Engineers: Tom Bennett. Dimensions: Studio 15 x 23, control room 13 x 15. Mixing Consoles: Audiotronics 110-8 24 x 8 x 16 customized w/24 direct outs, Tascam Model 10 12 x 4 aux. mix for MIDI instr. Audio Recorders: Tascam MS-16 16-track w/autolocator and dbx, Tascam 38 8-track w/dbx, Otari MX-5050 MkIII 2-track, Sony TC-850 2-track aux. (1/2-track) Cassette Recorders/Duplicators: Numark 4100 cassette calibrator/mixer, Technics M-63, Technics RS646. Noise Reduction Equipment: Full dbx I on 8- and 16-track decks. Synchronization Systems: AQ-65 autolocator, Adams-Smith Zeta-3 sync system, MIDI-to-tape. Echo, Reverb, & Delay Systems: Lexicon 200 programmable reverb, Lexicon Prime Time delay, Alesis MIDIVerb II reverb and effects, Biamp SR-240 spring reverb. Other Outboard Equipment: Orban 622B parametric EQ, Orban 424A comp/limiter/de-esser, (2) dbx 160 comp/limiter, Omni Craft GT-4 4-ch noise gate, (2) Mill City passive DI Microphones: (2) Shure SM7, (2) Shure SM81 w/SM80 Omnidirectional cartridges, Sennheiser 421, (3) Shure SM57, Shure SM77, E-V 1772, E-V 664, AKG D-112, (8) others. Monitor Amplifiers: QSC 1400, Peavey M-2600, Technics SA-400. Monitor Speakers: (2) Rogers 3600 control room, (2) Auratone 5C reference, (2) Marantz HD-55 studio room, Rane HC-6 headphone amp, (12) headphones, AKG, Sennheiser and others. Musical Instruments: Yamaha DX7, LinnDrum w/custom chips and MIDI interface, Yamaha 8-voice tone generator, Slingerland 11-pc. drum kit w/(7) Zildjian cymbals, Wurflizer drop-action piano, 100-watt amp w/Peavey 112 speaker, assorted brass, string and percussion instruments. Other MIDI Equipment: IBM PC, 512K RAM w/internal Yamaha tone generator, Voyetra PatchMaster Plus, voice librarian, Voyetra OP-4001 MIDI interface, Voyetra Sequencer Plus MkIII 64-track. Video Equipment: JVC 3 1/4" VCR, Adams-Smith Zeta-3 sync gen/reader. Other: Denon DCD-1500 CD player, Technics SL-220 turntable, Sound Ideas 28 disc sound effects library. Rates: Quoted per project, call for blocks.

[12] **BKS ENTERTAINMENT, INC.**; also *REMOTE RECORDING*; 235 N. Benton St., Woodstock, IL 60098; (815) 337-0133. Owner: "Bubba" Kim Sattler. Studio Manager: Dan "Cheeze" Vargas.

[16] **THE BROOKWOOD STUDIO, INC.**; also *REMOTE RECORDING*; 1155 Rosewood, Ste. A; Ann Arbor, MI 48104; (313) 994-4992. Owner: David Lau. Studio Manager: David Lau.

[16] **CEDARWOOD RECORDING STUDIO AND PRODUCTION**; also *REMOTE RECORDING*; 1628 St. Rt. 511 South; Ashland, OH 44805; (419) 289-1109. Owner: K. Williams, J. Schwan. Studio Manager: Ken Williams.

[16] **D.L. CORBET AUDIO SYSTEMS**; also *REMOTE RECORDING*; 4220 Cleveland Ave.; Dayton, OH 45410; (513) 258-2994. Owner: Donald Corbet Studio Manager: Julie Corbet

[16] **CREATIVE ARTWORKS INC./B&W PRODUCTIONS INTERNATIONAL RECORDING ARTIST AND PRODUCERS**; 705 Taywood Rd.; Englewood, OH 45322; (513) 832-1785. Owner: Mark Herres Studio Manager: Mark Herres, Don Herres Engineers: Mark Herres, Doug Edwards, John Hetrick. Dimensions: Studio 15 x 15, control room 20 x 15. **Mixing Consoles**: Ramsa WRT-820, Fostex Model 450 20 x 8 x 2, Roland MS-160 rack-mount mixer. **Audio Recorders**: Tascam MS-16 w/autolocator AQ-65, RC-65 linked to Roland MC-500 digital MIDI recorder, 16 analog tracks and 16 digital tracks, Fostex M-80 2-track, Fostex M-20 2-track, Mitsubishi Hi-Fi VCR w/digital processor. **Cassette Recorders/Duplicators**: Nakamichi, JVC, Technics Echo, Reverb, & Delay Systems: Yamaha REV7, Yamaha SPX90, Ibanez SDR-1000, Aphex Type C, DeltaLab ADM-256, DeltaLab ADM-1024, Roland DEP-5, Scholz Rockman rack-mount, Roland MKS-100 sampler w/full sound library, dbx 166 noise gate compressor, Yamaha REV5 Microphones: E-V PL20, E-V PL10, E-V PL6, AKG D-1000E, Shure SM58 Monitor Amplifiers: Crown DC-300A, Microtech 1200 Monitor Speakers: JBL Time Align, Yamaha NS-10M Musical Instruments: Keyboards: Roland Juno-106, Yamaha DX7, Oberheim Matrix-6, Korg Poly-6, Korg organ, Kustom 88 elec. piano, guitars: Roland GR-707 MIDI synth, Aria, Vox, Gibson, Chapman Stick; drums: E-mu Drumulator, Roland TR-707, amps: Fender Dual Showman (100W), Marshall stack, Scholz Rockman rack-mount, Roland D-550, Roland S-50 Video Equipment: RCA camcorder, MGA Hi-Fi VCR. **Extras & Direction**: Studio musicians and writers include international recording artist Dan Webster from the group Slave on Atlantic Records, Edward Webster from K.C. and the Sunshine Band, Mark Herres from the group Nothing Definite. **For correspondence**: currently looking for new acts to sign and produce. If interested, please send tapes or letters to A&R Dept., Creative Artworks Records, 705 Taywood Rd., Englewood, OH, 45322 (513) 832-1785

[16] **CREATIVE TECHNOLOGY, INC.**; 853 Copley Rd.; Akron, OH 44320; (216) 535-5778. Owner: Roger G. Berk Jr. Studio Manager: Chris Dieck

[12] **CRYSTAL CLEAR RECORDING**; also *REMOTE RECORDING*; 228 Superior Ave.; Crystal Falls, MI 49920; (906) 875-4215. Owner: Charlie Turvey Studio Manager: Charlie Turvey

[16] **DIAMOND MINE RECORDING STUDIOS**; 3115 Bremen Dr.; Columbus, OH 43224; (614) 268-4792. Owner: Bright Moon Productions. Studio Manager: Chris Nye

[16] **FREEDOM SOUND & LIGHT RECORDING STUDIO**; 1520 9th Ave. NE; Owatonna, MN 55060; (507) 451-1503. Owner: Ron Freiheit

[16] **GOLDEN SOUND STUDIO**; Rt. 5, Box 112; Festus, MO 63028; (314) 937-5873. Owner: David Steinhart Studio Manager: David Steinhart

[16] **HATCHERY STUDIOS**; 2175 Michael; Warren, MI 48091; (313) 754-1646. Owner: David Sell. Studio Manager: David Sell

[16] **HG STUDIO**; 21332 7 Mile Rd.; Franksville, WI 53126; (414) 425-3885. Owner: Don Hunjadi, Gordon Hartmann Studio Manager: Don Hunjadi

[16] **IMAGITRAX RECORDING CO.**; 7420 Manchester Rd.; Saint Louis, MO 63143; (314) 647-9272. Owner: Bob Gleason Studio Manager: Bob Gleason

[16] **INDEPENDENT RECORDING STUDIO**; also *REMOTE RECORDING*; PO Box 6487; Kokomo, IN 46904; (317) 455-0308. Owner: David B. Bentzler Studio Manager: Teresa L. Bentzler

[16] **MIDI MAGIC**; PO Box 4443; Northbrook, IL 60065; (312) 498-1180. Owner: Ron Jacobson Studio Manager: Ron Jacobson

[16] **MIDI PRODUCTIONS**; 3418 Main St., Ste. 208; Skokie, IL 60076; (312) 677-3550. Owner: HRP Enterprises, Inc. Studio Manager: Mike Polakoff Engineers: Michael Polakoff, Dan Pinaut, David Kurasch, Gene Sorzano, Mark Haloubek, Scott Cohen, Robert Tjarks. Dimensions: Studio 20 x 30, control room 15 x 25. **Mixing Consoles**: Soundtracs MRX7 24 x 16, (3) Yamaha DMP7 24 x 6. **Audio Recorders**: Otari MX-70 16-track, Tascam 32 2-track, Sony PCM-501 2-track w/Beta Hi-Fi Cassette Recorders/Duplicators: Akai GX912, Awa AD-15, Aiwa F-660 Synchronization Systems: (2) SMPTE write sources: Echo, Reverb, & Delay Systems: Lexicon 224 version 1.4, Lexicon PCM70, TC Electronic 2290 11-sec. memory, Yamaha REV7, Roland SDE-3000, Roland DEP-5. **Other Outboard Equipment**: (2) dbx 166, dbx 163X, dbx 263X, (2) Tascam M1B line mixer, Aphex Compellor, BBE 402, ADA Pitchraq, Rane HC6 Microphones: Neumann U89, B&K 4007, (2) Shure SM57, Shure SM96, AKG D-125, AKG D-130, AKG D-112. **Monitor Amplifiers**: Canver PM-350 Monitor Speakers: (2) UREI 809, (2) Yamaha NS-10M, (2) JBL 4406 Musical

Instruments: E-mu Emulator II+, Yamaha DX7IIFD, Yamaha DX7, Roland D-50, Roland S-50, Roland RD-1000, Roland MKS-70, Oberheim Matrix-6R, Ensoniq Mirage rack, E-mu SP-1200, Roland Octapad, (4) Roland pad w/Bass Drum pad, Charvel Model 4 bass. **Other**: (2) Macintosh computer, Opcode 2.6 sequencing software. **Rates**: Available upon request

[16] **MILLER M.I.D.I. PRODUCTIONS**; 4662 E. Nine Mile Rd.; Warren, MI 48091; (313) 754-0236. Owner: Chuck Miller. Studio Manager: Chuck Miller

[16] **MONKEY'S UNCLE RECORDING**; also *REMOTE RECORDING*; 434 W. Harrison; Lombard, IL 60148; (312) 620-5338. Owner: Jeff Perry Studio Manager: Penny Marie. Engineers: Jeff Perry, Scot Robnett, Penny Marie. Dimensions: 1,000 sq ft divided. **Mixing Consoles**: Tascam M-520 20 x 16. **Audio Recorders**: Tascam MS-16 16-track w/autolocator AQ65. **Cassette Recorders/Duplicators**: Tascam 122 MkII. **Synchronization Systems**: Roland SBX-80 MIDI/SMPTE Echo, Reverb, & Delay Systems: Roland DEP-5 digital effects, Lexicon PCM70 digital effects. **Other Outboard Equipment**: ART dual-ch. EQ w/monitor, Aphex Type C enhancer, (2) dbx 166 comp/limiter. **Microphones**: (2) Shure SM57, (2) Shure SM85, Toa K-3, AKG 414, Shure 87. **Monitor Speakers**: JBL 4406, JBL Control 1. **Musical Instruments**: Roland HP-6000 digital piano, Roland D-50 synth, Roland S-550 sampler (rack-mount), Kawai R-100 digital drum machine, Washburn G5V electric 6-string, Washburn 8-10 electric bass, Washburn D-25 acoustic electric 12-string, Washburn D-12CE acoustic electric 6-string. **Other MIDI Equipment**: Macintosh Plus computer, Passport software. **Video Equipment**: Available on arrangement. **Other**: Sound Ideas Sound Effects Library Vol 1 and Vol 2 on CD, Yamaha CDX-910U CD player. **Rates**: Call for information

[16] **NEW HORIZONS SINGERS RECORDING**; 7722 W. National Ave.; West Allis (Milwaukee), WI 53214; (414) 774-8000. Owner: Phil Polsey, Rod Lisowski. Studio Manager: Jim Grifith

[16] **PRODUCER'S WORKSHOP**; also *REMOTE RECORDING*; PO Box 24-8568; Detroit, MI 48224; (313) 882-0811. Owner: Kenny Parker, Al Rude. Studio Manager: Kenny Parker

[16] **REEL TIME RECORDING**; 5822 W. Giddings; Chicago, IL 60630; (312) 286-5677. Owner: Mark Ignoffo. Studio Manager: Mark Ignoffo. Engineers: Mark Ignoffo, "Bubba" Kim Sattler. Dimensions: Studio 19 x 17, control room 13 x 10. **Mixing Consoles**: TAC Scorpion. **Audio Recorders**: Otari MX-70 16-track 1", Akai 1212 12-track, Tascam 38 8-track 1/2", Otari MX-5050 MkIII 2-track 1/2", Tascam 32-2B 2-track 1/4". **Cassette Recorders/Duplicators**: Technics RS8-85, Technics RST-55R dual, Yamaha MT44 4-track. **Noise Reduction Equipment**: (2) dbx DX-4D 4-ch. units. **Echo, Reverb, & Delay Systems**: Lexicon PCM70, Lexicon PCM60, Lexicon PCM42 w/extended memory, MXR digital delay, Yamaha E1010 delay, RSD 10 sampler/delay. **Other Outboard Equipment**: (2) dbx 163X compressor/limiter, dbx 263X de-esser, dbx 463X noise gate, dbx 166 compressor/limiter/gate, Furman ON-4 4-ch. noise gate, (2) Valley People Dyna-Mite limiter/de-esser/gate, Yamaha SPX90 digital multi-effects unit, BBE 802 audio enhancer, RPS-10 pitch shifter, Tascam PE 40 4-ch. parametric EQ. **Microphones**: Beyer MC 740, E-V RE20, (2) AKG D-12E, (2) Beyer M 69, Shure SM81, (3) Shure SM57, Audio-Technica 2500D, E-V PL91. **Monitor Amplifiers**: (2) Yamaha P2201, Soundcraft LA 2502. **Monitor Speakers**: (2) UREI 809, (2) Yamaha 5115, (2) Auratone Musical Instruments: Young Chang piano, Hammond B-3, Yamaha CP30 elec. piano, Moog Opus synth, ARP Odyssey synth, Korg Poly-800 synth, Yamaha DX5 synth, Roland TR-707 drum machine, Roland TR-727 percussion machine, Slingerland 7-pc. drum kit, Gibson L6S guitar. **Video Equipment**: Sony 3/4" video, Panasonic 1/2" video. **Other**: Shure CD player, Sharp CD player. **Rates**: Simply the best!

[16] **SONG SKETCHES RECORDING PRODUCTIONS**; also *REMOTE RECORDING*; PO Box 36483; Detroit, MI 48236; (313) 886-3757. Owner: Robert Payne. Studio Manager: Robert Payne

[16] **SPARROW SOUND DESIGN**; also *REMOTE RECORDING*; 3501 N. Southport; Chicago, IL 60657; (312) 281-8510. Studio Manager: Char Kirchoff. Engineers: Joanne Pallatto, Bradley Parker, Annette Schwarz, Chris J. Parker. Dimensions: Studio 50 x 35, control room 15 x 30, isolation 10 x 11. **Mixing Consoles**: Custom-designed mixer 36 x 16, (6) aux sends, (2) stereo headphone mixes, (3) mono headphone mixes. **Audio Recorders**: Tascam 85-16 16-track 1" (rebuilt/modified) w/remote and autolocator, Ampex ATR-102 2-track 1/2" (remote and varispeed) 30 ips, Sony 501-ES 2-track digital, Technics 1520 2-track 1/4" (modified), TEAC 3440 4-track 1/4" (modified). **Cassette Recorders/Duplicators**: TEAC V-7, TEAC V-750, TEAC 133 3-channel cassette/slide. **Echo, Reverb, & Delay Systems**: EMT 140-S plate reverb w/remote, Yamaha REV7, Lexicon PCM60 digital reverb, Lexicon Prime Time, (2) Lexicon PCM41 digital delays, Technics 1506 tape delay, Furman RV-1. **Other Outboard Equipment**: (2) UREI LA-2A tube limiter, (4) UREI 1176LN limiter, Ashley SL-50 limiter, Ashley SC55 stereo limiter, Pyle stereo compressor/limiter, UREI 964 click generator, Pultec EQP-5 mid-range tube EQ, Pultec EQP-1 high/low tube EQ, Pultec EQH-2 high/low tube EQ, Ashley SC-50 4-band stereo parametric, Ashley SC-63 3-band mono

parametric, Ashley SC 33 noise gate, 200 point TTY patch bay, Onkyo and AR turntables. **Microphones**: (2) AKG C-12, (5) AKG C-12A, (2) AKG C-28A, AKG C-24 (stereo) AKG C-61, Neumann U47, Neumann M49, (2) Neumann KM53, (2) Neumann KM54, Neumann SM69 (stereo), Neumann SM2 (stereo), Schoeps MK221, (2) AKG CK-4 capsules (for modifying AKG C-28A or AKG C-60 mics to emulate AKG C-12 system),



**SPARROW SOUND DESIGN**  
Chicago, IL

Sony C-500, (2) Beyer M 168, (2) Sennheiser MD-441, Sennheiser D-421, Sony C-22, Beyer 300, E-V 576, E-V 666, (5) Shure SM58, (2) Shure 545. **Monitor Amplifiers**: (2) Yamaha P2200, Yamaha P2050, McIntosh SD, Synetrix HA-10B, B-amp TC-120. **Monitor Speakers**: UREI 814B, Auratone, E-V 12-2A, E-V S15-3 (keys or bass). **Musical Instruments**: Baldwin SD-10 9' concert grand piano, Fender Rhodes (rebuilt), Sonor drums (complete kit), Fender Twin guitar amp. **Video Equipment**: Panasonic 16 track color/multi-track sync-lock, Sony SLHF-70 1/2" Super-Beta, Sony SLHF-900 1/2" Super-Beta Hi-Fi, Sony SLHF-750 1/2" Super-Beta Hi-Fi. **Sony RME-100V editor**. **Rates**: Upon request. **Extras & Direction**: Sparrow Sound Design (SSD) is a musician-owned and operated recording studio with a strong conviction for the need of musical/technical coexistence. Located just minutes from downtown Chicago, SSD offers an environment of quiet ambience and complete comfort. With an emphasis on album/CD/cassette production, SSD has worked within the rock, jazz, classical, blues, country and various new music genres. Likewise, complete production of industrial/film narration and music, voice-over tapes, jingle demos and on-air commercial recording are available. **Clients include**: George Dagherty of Filmusik, The Museum of Science and Industry, Mary Stolper and Steve Hartman, Mark Lynch for Slumberland, Sunny Day Productions, Linda Cliffor, The Center for New Television, Sasha Dalton, Digitrax, Neal Kristie, Lara Filip, Wanda Christine, Paul Henry, Don Moye, Maggie Brown, Jeff Deutch, Lani Meeker, Charles Richardson and La Nuestra, Sharla, Maria Lagos, Diane Saal, Ann Pringle

[16] **STUDIO BB**; also *REMOTE RECORDING*; 1608 S. Mosley; Wichita, KS 67211; (316) 262-5741. Owner: Kingcraft Audio Video. Studio Manager: Sammie L. King

[16] **STUDIO VII**; also *REMOTE RECORDING*; PO Box 605, 101 NW Walnut St.; Atlanta, IL 61723; (217) 648-2325. Owner: Eddie Cunningham. Steve McClyea. Studio Manager: Steve McClyea

[12] **SYNDICATE SOUND**, 165 Poland Ave.; Struthers, OH 44471; (216) 755-1331. Owner: Jeffrey T. Wormley. Studio Manager: Jeffrey T. Wormley

[16] **TOBY'S TUNES, INC.**; 2325 Girard Ave. S.; Minneapolis, MN 55405; (612) 977-0690. Owner: Harley "Toby" Toberman. Studio Manager: Ms. Piggy. **Extras & Direction**: Twenty-one music libraries on stereo tapes and CDs. Eight sound effects libraries on records and CDs. Plus, The James & Aster Supraphon Classical Music Library on stereo tapes. Toby's Tunes has the most extensive music and effects libraries for all your post-scoring needs. Video sweetening with the G Lock Eclipse system locked up to our JVC 854 3/4" video player, Otari MX-70 16-track and Otari MTR-10 2-track with center-track time code. Best video sweetening in town. **New MIDI composing studio** with Macintosh and Performer software. Roland S-50 sampling keyboard, SP-12 drum machine and stuff.

[16] **TOMISCK BROTHERS RECORDING**; 21271 Chardon Rd.; Euclid, OH 44117; (216) 481-8380. Owner: Ken Tomisck. Studio Manager: Ken Tomisck

[16] **VIDEO ARTS STUDIOS**; 1440 4th Ave. N.; Fargo, ND 58102; (701) 232-3393. Owner: Art Phillips. Studio Manager: Steve Germaine

# NORTH CENTRAL

[8] **A & F MUSIC SERVICES**; 2834 Otsego, Pontiac, MI 48054; (313) 682-9025. Owner: Frank C. Merwin.

[8] **ACCUTRACK RECORDING & SOUND CO.**; *only REMOTE RECORDING*; 7012 N. Ridge Blvd.; Chicago, IL 60645; (312) 743-8526. Owner: David Levit. Studio Manager: David Levit.

[8] **ALPHA MUSIC PRODUCTIONS**; PO Box 14701; Lenexa, KS 66215; (913) 441-8618. Owner: Glenn Major, Rich Hanson. Studio Manager: Brian Jennett. Engineers: Glenn Major, Rich Hanson, Brian Jennett, Tom Hartnett. Dimensions: Studio 24 x 15, control room 16 x 14. Mixing Consoles: TEAC Model 5 8 x 4, TEAC Model 30 8 x 4. Audio Recorders: Tascam 38 8-track, Pioneer 2022 2-track 1/4" (1/2-track), Akai DS-4000 2-track 1/4" (1/4-track). Cassette Recorders/Duplicators: Akai GX-M50, Yamaha MT44 4-track. Noise Reduction Equipment: (2) dbx 124 Type I, Echo, Reverb, & Delay Systems: MXR digital delay, Yamaha SPX90, AKG BX-5 stereo reverb, Alesis Microverb, Alesis Microgate, Alesis Microlimiter. Other Outboard Equipment: MXR 31-band EQ, MXR dual 15-band EQ, Sony CDP-310 CD player, Ashly SC-55 stereo comp/limiter. Microphones: (2) Shure SM57, (2) Shure SM58, E-V PL30, (2) AKG D-201, (2) AKG C-35EB, (2) Audio-Technica 814, (2) Audio-Technica 801 condenser, Audio-Technica 813. Monitor Amplifiers: (2) Halfer 200 w/Musical Concepts modification 140-watt/ch., Adcom 555 250-watt/ch. Monitor Speakers: (2) Yamaha NS-10M studio (CR monitor), (2) UREI 809 (main) CR monitor, (2) Wharfedale E-50 (studio playback), (4) 8T Kimber cable speaker wire on CR mon. Musical Instruments: Roland Jazz Chorus 120 guitar amp, Charvel 6-st. guitar, Ibanez Musician guitar, Korg DDD-5 drum machine, Korg DW-8000 synth, Korg EX-800 synth, Korg KMT-60 thru box, Korg Poly-800 synth, Korg SQD-1 sequencer w/10 disks, Roland D-50 Linear synth, Yamaha DX21 synth. Other MIDI Equipment: Commodore 64 computer w/disk drive and monitor. Rates: \$20/hr. Block rates as low as \$10.60/hr. MIDI setup extra.

[8] **ASYNCHRONOUS SOUND CORP. MOBILE**; *only REMOTE RECORDING*; 80 Nottoway Ct., Akron, OH 44313; (216) 762-4179. Owner: Asynchronous Sound Corp. Studio Manager: Michael Fries.

[8] **AUDIO SERVICES**; *also REMOTE RECORDING*; Oberlin College, Conservatory of Music; Oberlin, OH 44074; (216) 775-8272. Owner: Oberlin College. Studio Manager: Thomas W. Bethel.

[8] **AUDIOWORKS RECORDING STUDIO**; 9930 Garvette; Livonia, MI 48150; (313) 525-2969. Owner: Donald Pushief. Studio Manager: Donald Pushief.

[8] **BATS NEST RECORDING STUDIO**; 814 S. 3rd St.; Albion, NE 68620; (402) 395-6727. Owner: Paul Hostford. Studio Manager: Paul Hostford.

[2] **BUGGTUSSEL**; *also REMOTE RECORDING*; 1659 Seven Trails Ct.; Okemos, MI 48864; (517) 349-7701. Owner: Kevin L. Blair. Studio Manager: Kevin L. Blair. Engineers: Kevin Blair. Dimensions: Studio 20 x 14, control room 14 x 8. Mixing Consoles: Buggtussel custom 4 x 2. Audio Recorders: TEAC 7030 GSL 2-track 15 ips, Sony 501-ES 2-track Beta. Cassette Recorders/Duplicators: Nakamichi ZX-7. Noise Reduction Equipment: dbx 150. Microphones: (2) Schoeps CMT-341P, (2) Beyer M CE5, Bruel & Kjaer 2614/4133, Blair Binaural head. Monitor Amplifiers: (2) Buggtussel AIMP 10 (headphone) Monitor Speakers: (2) Blair QSAL control monitor, (2) Blair KQ-4 mini monitor. Musical Instruments: Violin, flute. Video Equipment: Sony SL-HF300 Betamax, Mitsubishi CS-20 monitor. Rates: \$35/hr. plus mileage and materials.

[8] **CABOOSE PRODUCTIONS, INC.**; *also REMOTE RECORDING*; 2204 Duke St.; Indianapolis, IN 46205; (317) 545-5165. Owner: Duke Luchman. Studio Manager: Ellen Posson.

[8] **CLOUD 10 RECORDING**; 1450 Coler, Ann Arbor, MI 48104; (313) 663-0222. Owner: Mike Gould. Studio Manager: Mike Gould.

[8] **dBm PRODUCTIONS**; *also REMOTE RECORDING*; 4532 S. 62nd Ave.; Omaha, NE 68117; (402) 733-7860. Owner: Michael J. Wolfe, David L. Schellenberg. Studio Manager: Mike Wolfe.

[4] **DIGITAL AUDIO RECORDING/DANIEL GOMEZ-IBANEZ**; *only REMOTE RECORDING*; W9643 Rucks Rd., Cambridge, WI 53523; (608) 764-8082. Owner: Daniel Gomez-Ibanez. Studio Manager: Daniel Gomez-Ibanez.

[8] **11-14 PRODUCTIONS**; *also REMOTE RECORDING*; 1114 S. Busse; Mount Prospect, IL 60056; (312) 981-9415. Owner: Phil Mueller, Dennis Henkelman. Studio Manager: Phil Mueller, Dennis Henkelman.

[8] **EUROPA RECORDING STUDIO**; *also REMOTE RECORDING*; 100 1st St.; Noble, IL 62868; (618) 723-2518. Owner: Jeff D. Gordon. Studio Manager: Jeff D. Gordon.

[8] **FIDDLESTRING PRODUCTIONS**; *also REMOTE RECORDING*; Rt. 1, Box 19; Hermosa, SD 57744; (605) 255-4235. Owner: Stringbean Svenson. Studio Manager: Stringbean Svenson.

[8] **HIDDEN CITY RECORDERS**; 26769 West Hills Dr., Inokster, MI 48141; (313) 563-9350. Owner: Jim Pashkot. Studio Manager: Rae Pashkot.

[8] **JUNGLE STUDIOS**; *also REMOTE RECORDING*; 1719 S. 25th; Lincoln, NE 68502; (402) 477-8623. Owner: George Robert. Studio Manager: G. Roberts.

[8] **KNIEPKAMP PRODUCTIONS**; 2 Bruce Circle N.; Hawthorn Woods, IL 60047; Owner: A. Kniepkamp. Studio Manager: A. Kniepkamp.

[8] **LAND RECORDING STUDIO**; *also REMOTE RECORDING*; 1912 Heriford Rd.; Columbia, MO 65202; (314) 474-8141. Owner: Bob Pruitt. Studio Manager: Bob Pruitt.

[8] **LOST NATION SOUND**; 6 Storer St. (SR 329); Guysville, OH 45735; (614) 662-5701. Owner: Dave Aiken. Studio Manager: Nancy Aiken.

[8] **MIDWEST RECORDING STUDIO**; 11 S. Second St., Ste. C; Lafayette, IN 47905; (317) 742-6199. Owner: J.D. Jackson. Studio Manager: David Stoike.

[8] **MUSICO TECHNLAB**; *also REMOTE RECORDING*; 160 N. Park Ave.; Warren, OH 44481; (216) 394-5605. Owner: Heavy Mental Productions. Studio Manager: Gary Boggess.

[8] **NEW DIMENSIONS**; 265 Florawood; Pontiac, MI 48054; (313) 682-9626. Owner: Victor Borowec. Studio Manager: Victor Borowec.

[2] **ON TRAK PRODUCTIONS/MAGIC MOONLIGHT RECORDS**; *also REMOTE RECORDING*; 314 Sumner St., Ste. 2; Elyria, OH 44035; (800) 322-3984; (216) 322-3984. Owner: On Trak Enterprises. Studio Manager: David W. Holt Sr., Philip J. Costello Jr.

[8] **PANTHER RECORDING**; 2350 N. 81st St.; Wauwatosa, WI 53213; (414) 259-3975. Owner: David R. Barwick. Studio Manager: David R. Barwick.

[8] **PRIME TIME STUDIOS**; PO Box 11449; Saint Paul, MN 55111; (612) 454-7673. Owner: James M. Barker. Studio Manager: James M. Barker.

[8] **PRODIGY PRODUCTIONS, DIV. OF TECH-1 SOUND INDUSTRIES**; *also REMOTE RECORDING*; PO Box 4656; Youngstown, OH 44515; (216) 799-8951. Owner: Tech-1 Sound Industries. Studio Manager: Paul J. Pompura.

[8] **R/J RECORDING & SOUND**; *also REMOTE RECORDING*; PO Box 302, 530-C Lark St.; Geneva, IL 60134; (312) 232-1932. Owner: Richard J. Peck. Studio Manager: Richard J. Peck.

[8] **SATURN PRODUCTIONS**; *also REMOTE RECORDING*; 3941 W. Wrightwood Ave.; Chicago, IL 60647; (312) 252-5552. Owner: Dave Gordon. Studio Manager: Marcia Waller.

[4] **SECOND ESTATE PRODUCTIONS**; *also REMOTE RECORDING*; 9133 Barth Dr.; Big Lake, MN 55309; (612) 263-6134. Owner: Michael J. Langford. Studio Manager: Michael J. Langford. Engineers: Michael J. Langford. Dimensions: Studio 10 x 12, control room 10 x 12. Mixing Consoles: Akai 6 x 2, Tascam 8 x 2, Tascam 4 x 2, Fostex 8 x 1, (2) DOD 4 x 1. Audio Recorders: Akai MG614 4-track plus SMPTE, Tascam 244 4-track, Fostex 20 2-track plus sync. Cassette Recorders/Duplicators: Yamaha C300, Tascam 122, Akai 101. Noise Reduction Equipment: dbx Integral, Dolby B, Dolby C, Dolby NR Synchronization Systems: Fostex 4050 Echo, Reverb, & Delay Systems: Alesis XTic and MIDverb. Other Outboard Equipment: Yamaha GC2020B comp/limiter, Yamaha CD2000 Studio CD player. Microphones: Sennheiser MD-441U, Sennheiser MD-431U, E-V 644, E-V DS35, Shure 5655SD. Monitor Amplifiers: QSC 1400, Roland SRA-1200, (2) Kawai KM-60. Monitor Speakers: (2) JBL Cabaret (and house), Yamaha NS-10M, (2) custom. Musical Instruments: (2) Casio CZ-1, (2) Casio CZ-101, Akai VX-90 rack, E-mu Emox rack, Kawai R-100. Other MIDI Equipment: (2) Macintosh Plus w/iw II, (2) Opcode Studio Plus Two interface, 360 Systems MIDImerge+, (2) J.L. Cooper MSB+, Iola MIDI fader. Other: Opcode sequencer 2.5 and CZ editor/librarian, Mark of the Unicorn Performer and Composer, Electronic Arts DMCS, Digidesign Sound Designer for Emox, Upbeat drum sequencer, Dimension SFX library Rates: MIDI studio \$45/hr.

[8] **SONG SKETCHES RECORDING PRODUCTIONS**; *also REMOTE RECORDING*; PO Box 36483; Detroit, MI 48236; (313) 886-3757. Owner: Robert Payne. Studio Manager: Robert Payne.

[8] **SOUND SHOP RECORDING STUDIO**; 9250 N. Sleepy Hollow Ln.; Bayside, WI 53217; (414) 352-7766. Owner: Roger A. Roth. Studio Manager: Roger A. Roth.

[8] **STARSOUND AND RECORDING**; 618 Georgia; Bethalto, IL 62010; (618) 377-5569. Owner: Fred Church. Studio Manager: Mark Church.

[8] **THE TECHNOLOGY ROOM**; 2424 Highview Ave. SW; Rochester, MN 55902; (507) 285-1375. Owner: Randy Schnier. Studio Manager: Randy Schnier. Engineers: Randy Schnier. Dimensions: Studio 25 x 20. Mixing Consoles: Custom-built 18 x 4. Audio Recorders: Tascam 48 8-track, Otari 5050BII 2-track. Cassette Recorders/Duplicators: TEAC V700. Noise Reduction Equipment: (5) dbx 150X (10 channels total). Synchronization Systems: Custom-built SMPTE-to-MIDI converter, Echo, Reverb, & Delay Systems: Lexicon PCM70, MIDverb II, MIDverb. Other Outboard Equipment: dbx 166 comp/limiter, Aphex Type C Aural Exciter, Sentrek 10-band stereo graphic EQ. Microphones: E-V PL20, Shure SM58. Monitor Amplifiers: Halfer DH-100. Monitor Speakers: (2) E-V Sentry 100, (2) Polk Audio 7A. Musical Instruments: E-mu Emox sampling keyboard, Korg DW-8000 synth, Oberheim Matrix-6 synth, E-mu SP-12 Turbo sampling percussion, Yamaha RX15 drum machine. Other MIDI Equipment: 10 x 8 electronically switched MIDI patch bay, Roland MPU-401 MIDI interface. Other: IBM PC w/640K, EGA display, 20MB hard drive, Voyetra Sequencer Plus MkIII software, Club MIDI Prohib patch librarian software. Rates: \$15 to \$45/hr., depending on equipment used.

[2] **TRACK 1 RECORDING STUDIO**; *also REMOTE RECORDING*; 127 Huron St.; Elyria, OH 44035; (216) 322-3984; (800) 322-3984. Owner: On Trak Enterprises Inc. Studio Manager: Edward R. Minnich, Vvian Terry-Minnich.

[8] **TWO-FER'S RECORDING**; *also REMOTE RECORDING*; 813 W. A St.; Lincoln, NE 68522; (402) 475-4088. Owner: George H. Amen. Studio Manager: George H. Amen.

[8] **VICTORY SOUND**; 1815 N. Seventh St.; Terre Haute, IN 47804; (812) 238-9731. Owner: Dave Myers. Studio Manager: Dave Myers.

[8] **VIKING SOUND AND RECORDING**; *only REMOTE RECORDING*; 624 N. Delaware, PO Box 398; Edna, KS 67342; (316) 922-3880. Owner: Richard Erickson. Studio Manager: Richard Erickson.

[8] **WAJA RECORDING CO.**; *also REMOTE RECORDING*; 114 W. North College St.; Yellow Springs, OH 45387; (513) 767-5421. Owner: Warren James. Studio Manager: Michael J. Brun.

[2] **WBC DIGITAL RECORDING CO.**; *only REMOTE RECORDING*; 13552 McDougall; Detroit, MI 48212; (313) 366-4281. Owner: Walt Carnecki.

[8] **W.J.L. RECORDING CENTER**; *also REMOTE RECORDING*; 8460 Riverview; Dearborn Heights, MI 48127; (313) 563-2623. Owner: Walter Lipiec. Studio Manager: Walter Lipiec.

## INTERNATIONAL · UPDATE

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wood. In '82 and '83 he began making the transition to audio post, and now it's almost exclusively a post house.

Films typically come to Pinewood for production, and it's more convenient for them to finish at their home base. TV is a different story, in that it tends to be more like an ongoing factory. The studio has worked on *McGyver* for Paramount, *21 Jump Street* and *Wiseguy* for Stephen J. Cannel Productions, and all of the audio post work for a Canadian TV series that's been going on for 17 years called *The Beachcombers*.

• • •

In other news out of Vancouver, rock manager Bruce Allen recently joined forces with four other Canadians to form Penta Entertainment Company, a record label with music publishing, management, booking agency and merchandising expertise. What is remarkable about this effort is that Penta Records has recently become the first Canadian record label with international distribution through Elektra/Asylum/Nonesuch.

In addition to Allen, the company is headed up by John Ford, director of the label; Lou Blair, who is partner and co-manager with Allen for Loverboy; Sam Feldman, who is a business

partner in the parent company, A & F Music (one of Canada's largest booking agencies); and Penta's newest member, Bruce Fairbairn, a well-known producer who has worked on Loverboy, Bon Jovi and Aerosmith.

The company's first release is by a new artist named Raymond May, called *Unadulterated Addiction*. The first single is "A Romantic Guy," which came out around the beginning of June.

The label is currently looking at other acts. According to spokesperson Kimberley Blake, "We've been fielding zillions of demo tapes. We're really looking at just about everything, although we're steering clear of country and classical."

• • •

Still another new Vancouver-based record label is being spearheaded by Brian Wadsworth, who was former manager of the Vancouver-based band, The Headpins. He currently manages Darby Mills (former lead singer for The Headpins) and the country-rock act One Horse Blue. The company will combine management, two record labels (specializing in country rock and roots rock), an associated music publishing company and a merchandising company. Distribution for one of the record labels will be through a major. The other is a developmental label, which will

be self-distributed. The latter is described as a cabaret label and is geared toward bands working on the cabaret circuit. They'll put out singles only. It will be the responsibility of each band, with the help of the company, to promote and sell records off the stage and work the radio stations in each town they play. According to Geoff Halton, who has been hired as a consultant to put together the label, "We're looking to the Western Economic Diversification Program [which has been created by the Canadian Government to initiate new businesses in the western provinces] to help with funding."

### Alberta

Calgary, Alberta, is settling back to business as usual after hosting last winter's Olympic Games. And as one of Calgary's most fully equipped 24-track studios, Smooth Rock saw their share of business from those events. Owner Steve Graupe recalls, "We did all the music for the opening and closing ceremonies for the Winter Olympic Games, as well as all the national anthems. That, as well as the additional archiving that had to be done after the fact, kept us very busy."

The bulk of their work consists of album-oriented projects, but they are also set up for video post-production. "We recently did a commercial release film for Pioneer Pictures," says Graupe. "The working title was *Paradise Bungalow*, but when Crown International picked it up they changed the name to *The Virgin Queen of St. Francis High*."

"Beyond that, the hottest thing that we've done up here recently is a new artist named George Foss, who's a rancher from a small town near here. He just got signed to WEA, a pretty major deal for a Canadian artist.

"We've been here eight years now, and I've learned to not try to predict things in this business. Calgary is still a pretty small town; we're talking just over 600,000 people, and the market is so volatile it puts us in a position of trying to be all things to all people. We're kind of expected to handle whatever comes along, from music to post-production. To be perfectly honest, we just take it as it comes." ■

*Paul Potyén is associate editor of Mix, and is also a veteran keyboardist, composer and music producer.*



**Montreal's Cinar Studios, designed and built by Tom Hidley.**

# CANADIAN

[24+] **AIRWAVES AUDIO INC.**; 15 Toronto St.; Toronto, Ontario, Canada; (416) 863-6881. Owner: A Staruch Studio Manager: C. Onyskiw Engineers: Dan Kuntz, Gary Haynes, John Smithbower, Al Staruch, Steve Vaughan. Dimensions: Room 1: studio 26 x 22, control room 24 x 22. Room 2: studio 10 x 12, control room 22 x 18. Room 3: control room 14 x 12. Mixing Consoles: NEOTEK Series II 32 x 24. NEOTEK Series I 16 x 16. Audio Recorders: Sony JH-24 24-track, Otari MX-70 16-track, Studer A812 2-track w/center-track time code, MCI JH-110B 2-track, (4) Otari MX-5050 2-track, Otari MX-70 layback. Cassette Recorders/Duplicators: (3) Tascam 133, Panasonic RSM45, Sony TC-K35. Synchronization Systems: Soundmaster 3-machine lockup. Echo, Reverb, & Delay Systems: Lexicon 200. (2) Yamaha REV7. (2) Yamaha SPX90, Eventide Ultra-Harmonizer. Other Outboard Equipment: Valley People 610, dbx 162, dbx 163. UREI 1176. Symetrix 525, various gates, etc. Microphones: (5) AKG 414/P48, Sennheiser 421, (2) Neumann U87, (2) Audio-Technica, (2) Sony, (2) Shure SM57. Monitor Amplifiers: Crown Micro-Tech, BGW 250, KEF K300. Monitor Speakers: (2) UREI 812, (2) KEF P60, (6) Yamaha NS-10M, (2) Yamaha subwoofer. Video Equipment: JVC 6650 3/4", Sony 19" Trinitron monitor, NEC 14" monitor. Other: (2) Yamaha CDX500U CD player.

[24+] **A.R.P. TRACK PRODUCTIONS**, also **REMOTE RECORDING**; 28 Valrose Dr.; Stoney Creek, Ontario, L8E 3T4 Canada; (416) 662-2666. Owner: Nick Keca. Studio Manager: John Keca. Engineers: Ted Willey, Don Nicklin, Nick Keca. Dimensions: Room 1: studio 20 x 12, control room 12 x 11. Room 2: control room 20 x 18. Mixing Consoles: Soundcraft MR 24 x 8, TAC Scorpion 16 x 8. Audio Recorders: Sony/MCI 24-track, Tascam MS-16 16-track, Revox B-77 2-track, Sony PCM-601. Cassette Recorders/Duplicators: (6) TEAC, (2) Alpage. Noise Reduction Equipment: dbx 16-ch for MS-16. Synchronization Systems: Softouch PC w/IBM, (2) Shadow II synchs, Cipher reader/writer. Echo, Reverb, & Delay Systems: Lexicon 224, Lexicon PCM41, Yamaha REV7. Other Outboard Equipment: Klark-Teknik graphic EQ, (2) UREI comp/limiter. Microphones: Neumann U87, (2) Neumann KM84, (5) Sennheiser 421, Sennheiser 441, (6) Shure SM57, (2) Shure SM58. Monitor Amplifiers: (2) Crown D300, Crown D60. Monitor Speakers: JBL 4411, (2) ToA NFM, Micron Elite, Auratone. Musical Instruments: E-mu Emulator II, E-mu SP-12. Yamaha TX416, Roland Super Jupiter synth, Mesa/Boogie amp, Furlanetto guitar, Furlanetto bass guitar, Gretsch and Milestone drums, assorted Latin percussion. Other MIDI Equipment: (2) Macintosh computer, IBM PC. Video Equipment: JVC 6650 3/4" VTR, Cipher Softouch PC w/IBM, (2) Shadow II synchronizer. Other: Various SFX libraries (CD). Rates: Tapelock \$125/hr, 24-track \$95/hr, 16-track \$60/hr.

[24+] **BLUE WAVE PRODUCTIONS LTD.**, also **REMOTE RECORDING**; 34 W. 8th Ave.; Vancouver, B.C., Canada; (604) 873-3388. Owner: Tom Lavin. Studio Manager: Gary Wood.

[24+] **BROCK SOUND PRODUCTIONS**; 576 Manning Ave.; Toronto, Ontario, M6G 2V9 Canada; (416) 534-7464. Owner: Brock Fricker. Studio Manager: Brock Fricker.

[24+] **CHERRY BEACH SOUND LTD.**, 16 Munition St.; Toronto, Ontario, Canada; (416) 461-4224. Owner: Carman Guerrieri, Robert Natale. Studio Manager: Richard G. Benoit. Engineers: Richard G. Benoit. Dimensions: Studio 35 x 20, control room 20 x 19. Mixing Consoles: Sony MXP-3000 automated 32 x 24. Audio Recorders: Studer A80 MkII 24-track, (2) Studer A810 2-track w/center-track time code. Cassette Recorders/Duplicators: Nakamichi MR-1, Sony TC-K6. Noise Reduction Equipment: (2) Dolby B1. Echo, Reverb, & Delay Systems: AMS RMX 16, EMT 140 plate, Yamaha REV7, Lexicon PCM60. Other Outboard Equipment: (6) Kepex noise gate, (2) Kepex Gain Brain comp/limiter, UREI LA-4 comp/limiter, (2) Kepex Maxi-Q, (2) Orban comp/limiter, Eventide H910 Harmonizer, Klark-Teknik 11-band graphic EQ, Korg SDD-3000 DDL. Microphones: (2) Neumann U89, (2) Neumann KM84, (2) AKG C-414EB, (2) AKG C-460E, (2) AKG 330BT, AKG D-12E, (5) Sennheiser MD-409, (2) Sennheiser MD-421, (2) Crown PZM-31S, (3) Shure SM57. Monitor Amplifiers: (2) Perreaux 3000B, Bryston 4B, Yamaha CA510. Monitor Speak-

ers: JBL 4435, JBL 4411, Yamaha NS-10M, Auratone Reference. Musical Instruments: Yamaha 5'7" grand piano, Yamaha DX7, Gretsch drum kit, Roland TR-505. Other: Acoustically adjustable live/dead panel wall, Sony PCM-701, Mitsubishi VCR. Rates: \$90/hr.

[24+] **CINEMATRX**, also **REMOTE RECORDING**; 3454 Addington; Montreal, Quebec, H4A 3G6 Canada; (514) 481-2048. Owner: Pierre-Daniel Rheault. Studio Manager: Richard Pelletier. Engineers: Pierre-DeCarie, Dale Robinson, Richard Pelletier. Dimensions: Room 1: studio 15 x 20, control room 15 x 20. Room 2: control room 10 x 15. Mixing Consoles: Tascam M600 32 x 16. Soundcraft Series II 24 x 8. Audio Recorders: Tascam ATR-80-24 24-track, Tascam MS-16 16-track, Otari MTR-10 3-track, Tascam 52 2-track, Tascam 42 2-track, (3) Tascam ATR-60 2-/3-/4-track. Noise Reduction Equipment: (16) dbx. Synchronization Systems: Audio Kinetics Eclipse. Echo, Reverb, & Delay Systems: Lexicon PCM70, (2) Yamaha REV7, Ursa Major Space Station, Roland SDE-3000, Yamaha DL1500. Other Outboard Equipment: (4) dbx 160 compressor, (2) Valley People Dyna-Mite, misc. Microphones: (6) AKG 414. Monitor Amplifiers: Crown DC-300, Yamaha 2020. Monitor Speakers: (2) Tannoy 15". (2) E-V 100A center, (2) Auratone. Musical Instruments: E-mu Emulator III, E-mu Emulator II, E-mu SP-12, Roland S-50, Akai S900, Roland D-50, (2) Yamaha DX7, Korg DW-6000. Other MIDI Equipment: Macintosh and Q-sheet, MIDI Paint, Atari and Hybrid Arts EZ Track Video Equipment: JVC 6650, Mitsubishi 20", Sony 14". Rates: From \$80 CAD to \$165 CAD plus keyboards.

[24+] **COMFORT SOUND RECORDING STUDIO**, also **REMOTE RECORDING**; 26 Soho St., Ste. 390; Toronto, Ontario, Canada; (416) 593-7992; Fax: 591-6958. Owner: Doug McClement. Studio Manager: Doug McClement. Engineers: Stephen Traub, Gabe Lee, Corby Luke, Rhonda Bruce, Andrew St. George. Dimensions: Studio 30 x 20, control room 20 x 20. Mixing Consoles: MCI 636 automated 36 x 24. Audio Recorders: Otari MTR-900U 24-track, Otari MTR-12II 4-/2-track, (2) Technics RS1500US 2-track, Sony F1 2-track w/VHS and Beta. Cassette Recorders/Duplicators: Sony TC-K444-ES2, (10) Sony TC-K81. Noise Reduction Equipment: dbx 154. Synchronization Systems: BTX "The System" Echo, Reverb, & Delay Systems: Lexicon PCM70, Lexicon PCM60, Lexicon 200, Yamaha REV7, AKG BX-20, Lexicon PCM41, Lexicon 92, DeltaLab ADM-1024 Effectron, DeltaLab ADM-4096 Effectron. Other Outboard Equipment: (2) dbx 160 compressor, (2) Ashly SC-50 compressor, UREI 1178 dual-ch compressor, Valley People 610 dual-ch compressor, Aphex Compeller, ADR F760X-RS dual-ch, (4) Omni Craft GT-4 noise gate, (2) Ashly SC-33 dual-ch gate, Marshall Time Modulator, Ursa Major SST282 Space Station, Eventide X3000 Super Harmonizer, Ashly SC-65 para EQ, Yamaha SPX90 digital processor, Orban de-esser, Eventide H910 Harmonizer. Microphones: (5) Sennheiser 421, (4) Sennheiser 441, Sennheiser, Sony ECM-22P, AKG D-12, (3) AKG 451, AKG 414, E-V RE20, Telefunken U47 tube, (2) Neumann U87, Neumann KM86, (3) Crown PZM, (4) Countryman Isomax. Monitor Amplifiers: Amrcn, QSC. Monitor Speakers: Tannoy SGM-3000, Tannoy NFM-8, Yamaha NS-10, Auratone. Musical Instruments: Knabe grand piano, Gretsch drums. Video Equipment: Sony color camera, Proton monitor, JVC 8250 3/4" VCR. Rates: Not as much as you'd think! Extras & Direction: Comfort Sound's recording Mobile features a 50-input NEOTEK Elite console, an Ampex MM1200 24-track recorder and a great assortment of mics, monitoring and outboard gear. The equipment is set up in a spacious, soundproof 22' box on a five-ton truck. We use a 54-channel, 500', 3-way transformer-isolated mic snake with ground lifts on each input. Dual 24-track or digital multi-track available on request. Our crew is very experienced, with over 600 remotes in the past decade, including live radio broadcasts, television concert specials, telethons, live albums, game shows, feature films and satellite link-ups. We have even air-packed a 32-track system to Nigeria for a concert film. Clients include MTV, PBS, CBC, MuchMusic, CBS Records, RCA, Capitol, Disney Films and Alfred Hitchcock Productions. Many of these clients complete their automated mix to picture at our fully equipped audio post studio.

[24+] **DISTORTION STUDIOS**; Ottawa, Ontario, Canada; (613) 737-9478. Owner: Leslie Howe. Studio Manager: Leslie Howe. Engineers: Mr. Distortion. Lotsa Distortion. Dimensions: Studio 15 x 20, control room 15 x 25. Mixing Consoles: Mitsubishi Westar 36 x 24 w/4-way parametric EQ, PC automation. Audio Recorders: MCI JH-24 24-track, MCI JH-24 16-track, MCI JH-110A 8-track, Revox PR-99 2-track, Sony PCM-501 2-track digital, Technics SVP-100 2-track digital. Cassette Recorders/Duplicators: Awa F770, JVC ADF110 computer alignment. Synchronization Systems: Audio Kinetics Pacer w/pad, Roland SBX-80 sync box. Echo, Reverb, & Delay Systems: Lexicon 480L, Lexicon PCM70, TC Electronic 2290 delay/11-sec sample memory, Yamaha REV7, MIDVerb II, Korg DRV-2000 reverb, MICMIX Master-Room C. Other Outboard Equipment: (2) dbx 165A, Aphex Compeller, Aphex Exciter, (4) Valley People 4-ch gate, Drawmer stereo gate, (2) White 4400 room EQ, Ashly stereo gate, Valley People DSP stereo de-esser. Microphones: Neumann U89, Neumann KM84, Neumann TLM170, AKG D-12E, (2) Shure SM57, (2) Sennheiser 421, AKG 414. Monitor Amplifiers: Bryston 4B, Bryston 2B. Monitor Speakers: (2) Westlake BBSM-12, (2) Yamaha NS-10M, (2) Auratone T6, (2) Realistic Minimus 7. Musical Instruments: E-mu SP-12, E-mu Emulator II, Yamaha DX7IIDF, Yamaha DX7, Yamaha TX216, Roland JX-8P, Oberheim Xpander, Roland D-50, Yamaha QX1, Roland SBX-80 sync box, Sycologic M16 16 x 16 MIDI Matrix, Steinberger GL-2 guitar, Les Paul Deluxe, Fender Precision bass, Marshall 4 x 12 cabinet, Hi-Watt 50-watt amp, (2) Scholz Rockman X100, Ovaton acoustic. Other: Intravenous alcohol dispenser (portable) w/MIDI. Rates: Well I don't know, how much you got?

[24+] **EASTERN SOUND**; 48 Yorkville Ave.; Toronto, Ontario, M4W 1L4 Canada; (416) 968-1855. Owner: Standard Broadcasting. Studio Manager: Kevin Evans. Engineers: Kevin Evans, Don Dickson, Tom Henderson. Dimensions: Studio 1 50 x 35; studio 2 35 x 21; studio 3 15 x 12. Mixing Consoles: Neve 8068 32 x 16 w/Necam I, Neve 8050 24 x 16, Neve 5305 12 x 4. Audio Recorders: (2) Studer A80 MkIV 24-track, Ampex MM1200 24-track, Studer A80 MkII 8-track, Ampex MM1200 8-track, (4) Studer A80 2-track 1/4", (2) Studer A810 2-track 1/4" w/center-track time code, Studer A80 2-track 1/2". Cassette Recorders/Duplicators: Nakamichi, JVC. Sony Noise Reduction Equipment: Dolby A on both Studer 24-tracks, Dolby A 2-track in Studio 1 and 2. Synchronization Systems: (2) ECCO, Soundmaster/Syncro Ver 5. Echo, Reverb, & Delay Systems: (2) Yamaha REV7, (2) Lexicon PCM42, Lexicon PCM60, AMS RMX 16, (3) EMT stereo plate. Other Outboard Equipment: Fairchild compressor, (2) UREI LA-2A, (2) UREI 1176 limiter/compressor, (6) Drawmer DS-201 noise gate. Microphones: Neumann, AKG, Sennheiser, Shure, E-V, RCA. Monitor Amplifiers: Bryston. Monitor Speakers: JBL 4350, JBL 4311, Yamaha NS-10, Auratone, B&W 801. Musical Instruments: (2) Yamaha grand piano, Fender Rhodes, Hammond B-3 organ, Fairlight Series III, (3) JVC 850 3/4" address track, Ampex VPR-80 1". Other: Full video post-production/editing facilities available at VTR Productions.

[24+] **GOEDE STUDIOS**, also **REMOTE RECORDING**; 9336 49 St.; Edmonton, Alberta, T6B 2L7 Canada; (403) 468-1747. Owner: Darryl Goede. Studio Manager: Leo Liersch. Engineers: Dan Cherwonak, Jamie Kidd, Jerry Woolsey. Dimensions: Room 1: studio 31 x 36, control room 15 x 18.5. Room 2: studio 13 x 10, control room 10 x 10. Room 3: synth room 13 x 10. Mixing Consoles: Neve 8036 24 x 8, Soundcraft 400B 16 x 4. Audio Recorders: Lyrec TRS 532 24-track, Otari MX-5050 MkII 8-track, (2) Ampex ATR-100 2-track, Otari MTR-10 2 audio/1 SMPTE (center track), (2) Otari MTR-10 2-track, Tascam 40-4 4-track, TEAC 40-4. Cassette Recorders/Duplicators: Nakamichi, Technics. Synchronization Systems: Audio Kinetics Q.Lock w/Eclipse editor and 4-machine interface. Echo, Reverb, & Delay Systems: AMS RMX 16, Klark-Teknik DN780, EMT 240, AMS DMX 15-80S w/11.5 sec sampling, Eventide 949 Harmonizer, Yamaha DDL, Marshall Time Modulator. Other Outboard Equipment: Neve compressors, A+D Vocal Stressers, Kepex II gates, Aphex B, dbx compressors. Microphones: Neumann U87, Neumann U47, Neumann KM84, AKG 414, AKG C-34, Sennheiser 421, Sennheiser 211, E-V RE20, Shure SM57, Shure SM81, Sony ECM-50. Monitor Amplifiers: Bryston 4B, Crown D150. Monitor Speakers: UREI 813, E-V Sentry 500, E-V Sentry 100, JBL Control 1, Auratone. Musical Instruments: E-mu Emulator II, Young Chang grand piano, Ludwig drums, Fender Rhodes suitcase, synths by Yamaha, Roland, Oberheim, Yamaha RX5 drums, E-mu SP-12, Roland S-50. Other MIDI Equipment: OXI, Atari computer w/Hybrid Arts. Video Equipment: JVC 6650 3/4" video, NEC monitors, JVC monitors, RCA camera. Rates: On request.

[24+] **GRANT AVENUE STUDIO**; 38 Grant Ave.; Hamilton, Ontario, L8N 2X5 Canada; (416) 522-5227. Owner: Bob Doidge. Studio Manager: Maureen Doidge.

[24+] **INCEPTION SOUND STUDIO**, also **REMOTE RECORDING**; 3876 Chesswood Dr.; Toronto, Ontario, M3J 2W6 Canada; (416) 630-7150. Owner: Chad Irshick, Jeff Wolpert. Studio Manager: David A. Stinson. Engineers: Chad Irshick, Jeff Wolpert. Dimensions: Room 1: studio 20 x 30, control room 19 x 22, plus drum room. Room 2: studio 18 x 26, control room 19 x 17, plus piano iso booth and drum room. Mixing Consoles: MCI 536 36 x 32 w/Diskmix automation, Quad Eight Ventura 32 x 24. Audio Recorders: (2) MCI JH-24 24-track, MCI JH-

110 2-track, Ampex ATR-102 2-track, Otari MTR-12 4-/2-track, Sony PCM-701 2-track digital. Cassette Recorders/Duplicators: (3) Sony TC-K777. Synchronization Systems: Adams-Smith 2600 (3-machine lock). Echo, Reverb, & Delay Systems: (2) AMS RMX 16, Publison America IM90, Klark-Teknik DN780, EMT 240, (2) Roland DEP-5, live chamber, (2) Lexicon Prime Time, Yamaha REV7, (2) Efectron 1024, Echo-tron 4096. Other Outboard Equipment: GML compressor, GML EQ, GML mic preamps, Tubetech Lyd Kraft EQ, Eventide 949 Harmonizer, Aphex Compellor, Publison America stereo compressor, Valley People 610, Orange County compressor/expander, (2) dbx 160, UREI 1176, UREI LA-4, (4) Kepex II, Trident para EQ, (2) UREI para EQ, (4) Ashly para EQ, BBE 202E, EXR Exciter. Microphones: Neumann U87, Neumann U47, Telefunken U47 tube, Neumann KM84, Neumann KM86, AKG 414, AKG 452, AKG D-12, AKG The Tube, Sony C-37 tube, B&K 4007, Sanken CU41, Shure SM57, Beyer M 500, Beyer M 360, Beyer M 130, Crown PZM 30-5, Crown PZM 31-5, E-V RE20 Monitor Amplifiers: Bryston, BGW, Crown, AB Systems, QSC. Monitor Speakers: Fostex modified w/JBL drivers, Tannoy NFM-8, Auratone 5C, Auratone T5, Auratone T6, JBL 4430, Yamaha NS-10, ESS. Musical Instruments: Steinway 1929 9' concert grand piano, Fender 1964 Jazz bass, Roland PM-16+ drum kit, Alesis HR16 drum machine, Gretsch snare, Slingerland snare. Video Equipment: JVC ¾" VTR, (3) color monitor. Other: Sony CD player, Sound Ideas CD sound effects library. Rates: On request.

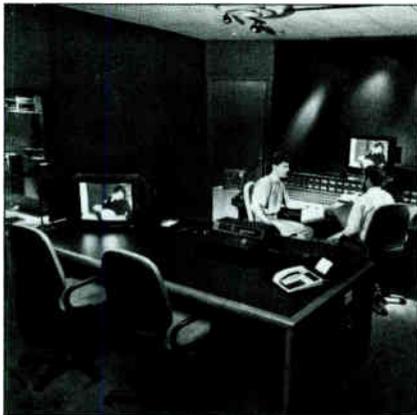
[24+] **INSIDE TRAK STUDIOS LTD.**; also **REMOTE RECORDING**; 7490 Edmonds St., Burnaby, B.C., V3N 1B4 Canada; (604) 525-3422. Owner: Rick Picard, Gordon Ross. Studio Manager: Lisa Barton.



**LE STUDIO**  
Morin Heights, Quebec

[24+] **LE STUDIO**; 201 Perry, Morin Heights, Quebec, J0R 1H0 Canada; (514) 226-2419. Studio Manager: Francine Mercue

[24+] **THE LITTLE MOUNTAIN SOUND STUDIOS LTD.**; 201 W. 7th Ave.; Vancouver, B.C., Canada; (604) 873-4711. Owner: Bob Brooks. Studio Manager: Alison Glass



**MAGNETIC FAX CORP.**  
Toronto, Ontario

[24+] **MAGNETIC FAX CORP.**; 550 Queen St. E., #205; Toronto, Ontario, M5A 1V2 Canada; (416) 367-8477. Studio Manager: Bill Mather. Engineers: Bill Mather, Willard Bond, Brian McGuire. Dimensions: Studio 10 x 14, control room 22 x 33. Mixing Consoles: MCI 636 automated 28 x 28. Audio Recorders: MCI JH-24 24-track, Otari MTR-12 4-track, Studer

A820 2-track w/center-track time code, Ampex ATR-102 2-track, PCM-601 2-track digital. Noise Reduction Equipment: (24) dbx 150X Synchronization Systems: Adams-Smith 2600 w/compact controller, 4-machine tape lock. Echo, Reverb, & Delay Systems: Lexicon 224X w/LARC digital reverb, Roland DEP-5 digital reverb, Lexicon PCM41 digital delay, DeltaLab Effectron II digital delay. Other Outboard Equipment: (8) Scamp 100 noise gate, (2) UREI LA-4A compressor, dbx 162 stereo compressor, Valley People Leveller, Orban 536A stereo sibilance controller, (2) Klark-Teknik DN27 1/3-band graphic EQ, (2) Aphex Aural Exciter. Microphones: (3) Neumann U87, (2) Neumann KM84, (2) AKG 414, (2) AKG 452, Sennheiser 421, Beyer 500, (5) Shure SM57, E-V RE20, (2) Crown PZM. Monitor Amplifiers: Bryston 4B, Bryston 2B, Quad Eight 303 Monitor Speakers: (2) JBL 4430, (2) Yamaha NS-10M, (2) Auratone 5B, (2) E-V 100A. Musical Instruments: Casio FZ-1 16-bit sampler. Other MIDI Equipment: Apple Mac II w/Opcode MIDI interface, PPS MIDI time code, Q-sheet Video Equipment: JVC CR850-U editing recorder, Sony KV-25XBR2, (2) Sony KV-20XBR2, (3) video edit suites plus computer graphics

[24+] **MANTA SOUND COMPANY**; 311 Adelaide St., E.; Toronto, Ontario, M5A 1N2 Canada; (416) 863-9316. Studio Manager: Lu Ann Leonard. Engineers: Gary Gray, John Naslen, Ron Searles, Rick Starks, Andrew Hermant. Dimensions: Room 1 studio 20 x 13, control room 20 x 17. Room 2 studio 60 x 44, control room 20 x 19. Room 3 studio 24 x 20, control room 15 x 20. Room 4 studio 12 x 10, control room 13 x 20. Mixing Consoles: MCI 538D 50 x 32 w/Diskmix II, Neve 8068 32 x 32, Westar 36 x 32 w/Compumix PC, MCI 528C 28 x 24 w/Diskmix II, TAC Matchless 26 x 24. Audio Recorders: (3) Mitsubishi X850 32-track digital, (3) Studer A80 24-track analog, (2) Mitsubishi X86 2-track digital, Studer A80 2-track and mono, (3) Studer A810/TC 2-track, AMS Audiophile 8-track hard disk recorder (digital). Cassette Recorders/Duplicators: Nakamichi BX-1, Nakamichi BX-2, Kenneth A. Bacon Associates RTDS x12. Noise Reduction Equipment: Dolby "A". Synchronization Systems: (5) Soundmaster 4 system, (2) Lynx TimeLine. Studer TLS 4000 Echo, Reverb, & Delay Systems: EMT 140S, AMS RMX 16, AMS DMX 15-80S, Yamaha REV7, Yamaha SPX90, Lexicon PCM70, Marshall AR-300. Other Outboard Equipment: Pultec EQ, Neve EQ, Teletronix, UREI, Fairchild, dbx, Drawmer, Aphex Compellor. Microphones: AKG, Altec, E-V, Neumann, Sennheiser, Sony, Schoeps. Monitor Amplifiers: Bryston, Studer, McIntosh. Monitor Speakers: (3) Manta Electronics MS 2 10 tri-amped, (2) Manta Electronics MS 1 10. Musical Instruments: (3) Yamaha C7 grand piano, Hammond A-100 organ. Video Equipment: (3) Sony 5850 ¾" VCR, (3) JVC CR850U ¾" VCR, Studer A80 layback to 1" video. Rates: Contact studio manager



**MASTER'S WORKSHOP CORP.**  
Toronto, Ontario

[24+] **MASTER'S WORKSHOP CORP.**; 306 Rexdale, Toronto, Ontario, Canada; (416) 741-1312. Owner: Doug J. McKenzie. Studio Manager: Jim Frank. Extras & Direction: Master's Workshop Corporation is a unique sound post-production company that specializes in complete sound packages for series television, movies and mini series for television as well as feature films and special format (IMAX, Omnimax, Showscan) exposition films. All our sound production is done on multi-track digital or analog audio tape utilizing the Master's Workshop-designed Soundmaster/Syncro electronic sound editing system (manufactured by our sister company Soundmaster International, with worldwide distribution). Our 14-studio complex consists of a 72-track digital feature film theater, 48-track TV/music theater, scoring stage, multi-track editing suites, ADR stages, Foley stage and a long list of gear. Our most remarkable asset is our award-winning staff of over 35 mixers, editors and support people dedicated to creative and technical excellence. An impressive list of clients and credits has made Master's Workshop Corporation one of North America's leading post audio companies.

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**24**  
TRACK  
STUDIOS

# CANADIAN

—CONTINUED FROM PREVIOUS PAGE

[24+] **MASTERTRACK LTD.**; 35A Hazelton Ave.; Toronto, Ontario, M5R2E3 Canada; (416) 922-4004. Owner: Ian Jacobson Studio Manager: Andy Condon.

[24+] **MCCLEAR PLACE RECORDING AND MASTERING STUDIOS**; 225 Mutual St.; Toronto, Ontario, M4M 1T4 Canada; (416) 977-9740; Fax: 977-7147. Owner: Bob Richards.

[24+] **MONTREAL SOUND STUDIO**; 5000 Buchan, Ste. 601; Montreal, Quebec, H4P 1T2 Canada; (514) 738-1300. Owner: GCH Productions, Ltd. Studio Manager: Janet Norman.

[24+] **MUSHROOM STUDIOS**; 1234 W. 6th Ave.; Vancouver, B.C. V6H 1A5 Canada; (604) 734-1217. Owner: Charlie Richmond Studio Manager: Linda Nicol Engineers: Dave Ogilvie, Dale Penner, Rob Porter, Rolf Hennemann, Keith Stein. Dimensions: Room 1 studio 50 x 30, control room 15 x 20 Room 2: studio 14 x 20 Room 3: studio 15 x 11 Mixing Consoles: Richmond Sound Design 48 x 22 x 8 VCA sub-groups w/30 Universal Audio preamps Audio Recorders: Studer A80 III 24-track, Studer A80 II 16-track, Studer B67 2-track, Ampex ATR-100 2-track (1/4" or 1/2" heads), Revox A77 1/2-track, Revox A77 1/4-track, (2) Sony PCM 2-track digital, Nagra III mono film sync Cassette Recorders/Duplicators: (6) JVC KD-A11 recorder/player, JVC DD-9 recorder/player. Noise Reduction Equipment: (2) Dolby 361 noise reduction, (10) RSD VCF noise gate/filter, (5) Allison Kepex noise gate, (10) RSD VCA noise gate, (3) Roger Mayer RM80X noise gate, Burwen DNF-1200A dynamic noise filter. Synchronization Systems: Q Lock Echo, Reverb, & Delay Systems: EMT 240 Gold Foil plate reverb w/remote, Eventide H910 Harmonizer digital effects unit, Lexicon 224 4.4 digital reverb w/30 programs, Lexicon Prime Time 93 digital effects, Lexicon 480L digital reverb, Yamaha SPX90, Lexicon 224XL w/LARC, MICMIX Master-Room reverb, Yamaha REV7, RSD APA-120 echo chamber amps, Sound Barrier, Concord Iwe echo chamber loudspeakers, UREI Time Cube analog delay unit, (2) stereo acoustic echo chamber, Korg SDD-2000 programmable MIDI sampling delay Other Outboard Equipment: (2) Allison Gain Brain, (3) Furman PQ-3 parametric EQ, (3) Langevin graphic EQ, (6) Langevin hi- and low-pass filter, LT Sound CLX-2 dual comp/limiter/expander/de-esser, (2) MXR auto flanger, NEI 341 4-band parametric EQ, Orban Parasound 516EC de-esser (3 channels), (6) RSD graphic EQ, Technics SH9010 10-band parametric EQ, Universal Audio 175B tube limiter, Universal Audio 176 tube limiter, (2) Universal Audio 550A, hi- and low-pass filters, (3) UREI 1176LN compressor/limiter, JVC L-A31 direct-drive turntable, IITL CDH-100 "Memory Pack" lighting control, dbx DS 120X sub-harmonic synthesizer. Microphones: AKG C-12, AKG C-61, AKG D-12E, (2) AKG D-24E, AKG D-202E, (2) AKG D-224E, AKG D-900E, (2) Beyer MC 713, (2) B&K 4007, (4) E-V RE15, E-V RE20, (4) E-V 635A, E-V 671B, (4) Neumann KM84, Neumann KM85, (3) Neumann U47, (7) Neumann U87, Milab CL-4, Milab DC-63, Milab DC-73, Milab F-69, Milab VM-41, Crown PZM, RCA 77BX, (2) RCA 10001, (8) Sennheiser MD-421 U, Sennheiser MD-441 U, (3) Shure SM57, (3) Shure SM58, Sony C-17B, Sony C-37A, Sony C-38B, Sony C-57, Sony C-220A, Sony ECM-22P, Sony ECM-377, (2) Synchron/Fairchild AU-7A, Sanken CU41 Monitor Amplifiers: (2) RSD APA-368 180-watt amplifier, (8) RSD APA-128 60-watt amplifier. Monitor Speakers: (2) Altec 604E w/Time Aligned horns, (4) Mastering Lab crossovers for all 604Es, (2) Altec 604E studio playback loudspeaker, (2) Auratone 5C Super Sound Cube, (2) Yamaha NS-10 monitor speaker, (2) BIC Venturi Formula 5 loudspeaker, (2) Realistic Minimus-7 loudspeaker, (2) Visonic Ambassador 100 (Big David) loudspeaker. Musical Instruments: Yamaha C7 7" grand piano, Fuehr & Stemmer upright piano, Marshall 4 x 12" loudspeaker cabinet, Polytone bass amplifier, Tama drum kit including Tama 14 x 22 kick w/Ludwig 201 pedal, Tama 18/14/13 toms w/Remo heads, Ludwig 402 snare, Pearl cymbal stands, Paiste 2002 hat, Traynor Mate bass amplifier, (2) keyboard stand, Emulator II w/Apple Macintosh. Video Equipment: Audio Kinetics 210 Q Lock video synchronizer, Electrohome ECD-2504 25" color video monitor, high-intensity rear projection, screen, Sony 3/4" video player, Sony Beta VCR, Sharp VHS, Sanyo Beta VCR. Other: (50) pairs headphones, (2) compact disc player.

[24+] **PHOENIX RECORDERS INC.**; 1295 W. Broadway, Vancouver, B.C., V6H 3X8 Canada; (604) 273-0770. Owner: George McNeill Studio Manager: Marty Hasselbach Engineers: Marty Hasselbach, David Raine, independents. Dimensions: Room 1: studio 28 x 38, control room 18 x 23 Room 2: studio 24 x 30, control room 18 x 23, Room 3: studio 10 x 8, control room 16 x 22. Separate machine rooms in 1 and 2. Mixing Consoles: Neve 8088 MkII 52 x 16 w/Necam, Neve 8068 MkII 32 x 16 w/Necam, Soundtracs 4400 28 x 24. Audio Recorders: (2) Sony 3324 24-track digital, Otari MX-80 32-/24-track, (2) Sony 3402 2-track digital mastering deck, (4) Ampex ATR-102 2-track analog Cassette Recorders/Duplicators: (5) Technics high speed, (5) Technics real time, (5) Tascam Model 32, (5) Ampex ATR-700 for dubbing. Synchronization Systems: Soundmaster 4.0 w/edit controller, (all machines interlaced) Echo, Reverb, & Delay Systems: Lexicon 480L digital w/sampling option, Ursa Major Space Station, Cunningham Ecoplate, EMT 140 plate, (2) Yamaha REV7, (2) Yamaha SPX90, TC Electronic 2290 delay, (4) Korg SDE-3000, (3) Roland SDE-3000, (2) Lexicon PCM41, Lexicon Prime Time, Other Outboard Equipment: (4) UREI 1176 lim/comp, (4) Neve lim/comp, (2) LA-4 lim, (2) dbx 166 stereo lim/comp, (2) Kepex gate, (2) Kepex Maxi-Q, Helios sweep, (2) UREI graphic, Systech flanger Microphones: (2) AKG 414, (2) AKG 452, (2) Neumann U64 tube, (2) Neumann U67 tube, (3) Neumann U87, Neumann U47, (4) Crown PZM, (10) Sennheiser 441, (2) Sennheiser 421, (2) Beyer M 500, Shure SM81, Milab DC-63, (2) Sony C-38, Shure SM57, (6) Shure SM57, Shure SM58, E-V PL20, (6) E-V RE15, AKG 224 Monitor Amplifiers: (4) Crown Delta Omega, (10) JBL 6290, Monitor Speakers: UREI 809, (2) UREI 813C, (3) Yamaha NS-10, (2) Auratone, Axiom near-field. Musical Instruments: Yamaha C7 grand piano, wide variety of synths, sound modules, samplers and sequencing software, custom drum kit, Other MIDI Equipment: (2) Macintosh 512, Commodore 128, (2) IBM PC, Atari 1040. Video Equipment: Sony 5600 3/4", Sony 5850 3/4", Sony/MCI JH-110 1" layback machine, (6) Sony 19" monitor. Other: Complete digital patch bay for digital multi-track editing, time code generator house sync, video wiper for ADR Rates: Call for more information.

[24+] **PERCEPTIONS RECORDING STUDIO**; 11 Canvaro Rd.; Toronto, Ontario, M4G 1L4 Canada; (416) 423-9990. Owner: 450564 Ontario Unlimited Studio Manager: Peter Akerboom

[24+] **PHASE ONE RECORDING STUDIOS LTD.**; 3015 Kennedy Rd., #10, Scarborough, Ontario, Canada; (416) 291-9553. Owner: Doug Hill, Paul Gross. Studio Manager: Michele Thon Engineers: Lenny De Rose, Joe Primeau, Bill Kennedy, Earl Torno Dimensions: Room 1: studio 50 x 30, control room 20 x 20. Room B: studio 30 x 30, control room 20 x 20. Mixing

Consoles: Neve 8028 24 x 8, SSL 4048 48 x 32 Audio Recorders: (3) Studer A80 24-track, Studer A80 2-track 1/2", Studer A810 2-track 1/4" w/center-track time code, (2) Studer A80 2-track 1/4" Cassette Recorders/Duplicators: (3) Tascam 122B (modified) Noise Reduction Equipment: (2) Dolby SR, (4) Dolby A Synchronization Systems: (2) Lynx TimeLine Echo, Reverb, & Delay Systems: Lexicon 224, Lexicon 224XL, (2) Yamaha REV7, Lexicon PCM41, Lexicon PCM42, (3) Roland SDE-3000, Lexicon Prime Time, Yamaha SPX90, PCM70, AMS reverb, TC Electronic 2290, (2) EMT 240 plate reverb, EMT 140 plate reverb Other Outboard Equipment: (2) LA-2, Symetrix stereo gate, Eventide 910 Harmonizer, LA-3, Spanner, dbx de-esser, Type C Aural Exciter, (4) LA-4, AMS phaser, AMS harmonizer 4.8, AMS harmonizer 1 6 w/chorus unit, dbx 906 rack (2 de-essers and flanger), Dolby SR, (2) Pultec EQP-1A3, (2) Pultec EQH-2, Pultec EQP-1, Pultec EQP-1A, Pultec MEQ-5, Drawmer limiter/compressor, (2) Compex limiter, (2) Lang program EQ, (2) Klink-Teknik graphic EQ, Orban parametric EQ, (4) Neve EQ, ADR Vocal Stresser, (2) MXI Trigger interface, Massenburg stereo EQ, (2) dbx 160X, Eventide flanger, Marshall Time Modulator, (3) Drawmer stereo gate, (8) Kepex I w/Gain Brain, (3) UREI 1176, UREI 1178 Microphones: (6) Neumann U87, (3) Neumann KM84, (2) Neumann KM88, (2) Telefunken U47, (2) AKG 451, (4) AKG 452, AKG D-160, (3) AKG 414, (2) AKG D-12, (2) E-V RE20, E-V RE15, E-V C515, (2) Crown PZM 315, (2) Crown PZM 30PGP, (8) Sennheiser 421, Schoeps SK-5 501V stereo mic, Sony C-37P Monitor Amplifiers: Phase Linear, AB Systems, Crown, Bryston Monitor Speakers: (2) JBL 4350 modified (Studio II), (2) MEG modified (Studio 2), Yamaha NS-10, Yamaha NS-10M, Tannoy NF8, Auratone. Video Equipment: JVC CR6650V 3/4" VTR, video sync generator, video distribution amp Other: Guitar switching box, input switching box, (2) MTM, Conn strobe tuner

[24+] **PROFILE SOUND STUDIO LTD.**; 3448 Commercial St., Vancouver, B.C., V5N 4E8 Canada; (604) 875-6821. Owner: Profile Sound Studio Ltd. Studio Manager: Don Ramos. Engineers: Don Ramos, Steve Waines, Cec English, Dan Dudra Dimensions: Studio 33 x 25, control room 18 x 25 Mixing Consoles: Harrison 3232C 28 x 28 w/automated muting Audio Recorders: MCI JH-24 24-track, MCI JH-45, Scully 280-4 2-track, Otari 5050B 2-track, Sony PCM-601 2-track, Sony 3202 2-track DASH digital. Cassette Recorders/Duplicators: Nakamichi Echo, Reverb, & Delay Systems: Lexicon 224, Yamaha REV7, Yamaha SPX90, Yamaha D1500, Delta-Lab DL-4 Other Outboard Equipment: (4) dbx 160, (2) dbx 161, Altec 438C, Kepex II, SAE stereo parametric EQ, (2) NEI stereo parametric EQ, Microphones: Neumann U87, Neumann U89, Neumann U64, Neumann U47, AKG D-12, AKG D-202E, AKG C-451, Sennheiser MD-421, Sennheiser K-3U, Sony ECM-33P, Sony C-37, Shure SM81, Shure SM57, Shure SM58, RCA DX77 Monitor Amplifiers: BGW Phase Linear Monitor Speakers: Altec 604 w/UREI woofer, Yamaha NS-10M, Tannoy NFM-8, Auratone. Musical Instruments: Singersland set, Young Chang 1969 6'2" grand, Fender Precision bass

[24+] **QUEST RECORDING STUDIO**; 215 Toronto Ave.; Oshawa, Ontario, L1H 3C2 Canada; (416) 576-1279. Owner: Paul LaChapelle Studio Manager: Paul LaChapelle Engineers: Paul LaChapelle Dimensions: Room 1: studio 30 x 35,

control room 27 x 24 Room 2 studio 27 x 14 Mixing Consoles: Westlar 42 x 24 automated hard disk, 8 aux sends Audio Recorders: Studer A80 MkIV 24-track, (2) Studer B67 2-track, Mitsubishi X86 2-track. Cassette Recorders/Duplicators: (2) Sony 3-head Echo, Reverb, & Delay Systems: Lexicon 200 digital reverb, (2) Yamaha REV7 digital reverb, Yamaha SPX90 digital reverb, AKG BX-20 reverb, AMS DDL harmonizer, Lexicon Prime Time, Digitech 7.6 sec delay/sampler, Marshall Time Modulator Other Outboard Equipment: (2) Symetrix 501 compressor, (2) Symetrix 561 gate, ADR Complex stereo, (2) Drawmer dual gate, Ashly dual gate, (2) Ashly SC50 compressor, Ashly parametric EQ, ADR dual de-esser, Rocktron Exciter/Hush II, Aphex Type C Exciter Microphones: (2) Neumann U87, Neumann U47, Neumann U89, E-V RE20, (6) Sennheiser 421, (2) AKG C-61 (tube), (2) Crown PZM, AKG D-224, (3) Sony ECM-22, Shure SM57, other assorted AKG, E-V, Philips condensers, (2) AKG 414ULS Monitor Amplifiers: Crown DC300, Crown D150, Crown D10, Dynaco Monitor Speakers: UREI 813, Yamaha NS-10, Realistic Minimus-7 Musical Instruments: Yamaha C3 grand piano, Fender Precision bass, Fender Super Reverb amp, various speakers, Moog Minimoog, upright piano, E-mu SP-12 drum machine Rates: \$70/hr Canadian

[24+] **THE ROOM**; 3615 Weston Rd., Unit 10; Weston, Ontario, Canada; (416) 746-8375. Owner: Angelo Cwero. David Platt Studio Manager: David Platt

[24+] **ROUND SOUND STUDIOS INC.**; 357 Ormont Dr.; Weston, Ontario, M9L 1N8 Canada; (416) 743-9979. Owner: Gina Troiano Studio Manager: Bob Federer, Gina Troiano Extras & Direction: Soundtracks for film and TV Shows completed *Night Heat* 83 one-hour episodes CBS, *Diamonds* 22 one-hour episodes CBS, *Hot Shots* 13 one-hour episodes CBS, *Airwaves* 13 half-hour episodes CBC-Atlantis Films, *Gunfighters* two-hour movie Tribune Network, *Cop Talk* two one-hour episodes Tribune Network, *The Playgroup* one half-hour episode HBO-Atlantis Films, *LifeTime* theme music CTV, *1987 Gemini Awards* music director CBC All the above-mentioned shows were composed by Domenic Troiano Album work records produced by Black Market Records, label owned by Domenic Troiano Currently in production David Gibson A&M Records, Johnny R A&M Records, Shawne Jackson A&M Records

[24+] **RPM PRODUCTIONS**; 2196 Dunwin Dr.; Mississauga, Ontario, L5J 2J9 Canada; (416) 828-6406. Owner: RPM Productions Inc Studio Manager: David Crouse

[24+] **SCORE RECORDING STUDIO**; 409 King St. W., 3rd Floor, Toronto, Ontario, M5V 1K1 Canada; (416) 598-4512. Owner: John Forbes Studio Manager: Carolynne Saxton

[24+] **SERAPHIM SOUND STUDIO**; 266 E. 1st St.; North Vancouver, B.C., Canada; (604) 985-0177. Owner: Soren Lonquist Studio Manager: Soren Lonquist

[24+] **SOUND IDEAS**; 86 McGill St.; Toronto, Ontario, M5B 1H2 Canada; (416) 977-0512. Owner: Brian Nimens Engineers: Bill Ford, Dave Lukevic, Paul Hanatanka Mixing Consoles: TAC Scorpion 28 x 24, Soundcraft 16 x 16 Audio Recorders: Studer A80 24-track, (3) Studer A820 2-track, Mitsubishi X86 2-track, (10) Otari MX-5050 2-track, Nagra III, Sony R-DAT (portable) Cassette Recorders/Duplicators: (3) Tascam 122 Noise Reduction Equipment: Dolby dbx Synchronization Systems: Lynx TimeLine Echo, Reverb, & Delay Systems: AKG Echo, Yamaha RX7, UREI filters Other Outboard Equipment: BBE, Eventide H910 Harmonizer, (2) Symetrix 522, Kepex gates Microphones: Neumann U87, (2) Sony, (2) Sennheiser ME-40 Monitor Amplifiers: (4) Bryston 4B Monitor Speakers: JBL 4350, Auratone Musical Instruments: Synclavier 200 tracks, 32 RAM, 24 voices and optical disk Video Equipment: JVC 8250 Other: Sound Ideas sound effects library, Sound Ideas sampler library, Sound Ideas production music library

[24+] **SOUNDS INTERCHANGE LTD.**; also *REMOTE RECORDING*; 506 Adelaide St. E.; Toronto, Ontario, M5A 1N6 Canada; (416) 364-8512. Owner: Super Corp Entertainment Studio Manager: Peter Mann Engineers: Kevin Doyle, Paul Daley, Vic Pyle, Scott Boyling, Cory Mangel, Dan Baker Dimensions: Room 1 studio 30 x 60, control room 26 x 22 Room 2 studio 34 x 30, control room 26 x 20 Room 3 studio 18 x 18, control room 18 x 18 Room 4 studio 18 x 18, control room 18 x 18 Mixing Consoles: Neve V Series 72 x 48, Mitsubishi Super Star 44 x 32, (2) Mitsubishi Westar 32 x 32, Sound Workshop 24 x 24 Audio Recorders: (2) Studer A820 24-track Dolby SR, (2) Studer A820 8-track Dolby SR, (4) Studer A80 24-track Dolby SR, (6) Studer A810 2-track Dolby SR, Studer A820 2-track Dolby SR, (6) Studer A80 2-track Cassette Recorders/Duplicators: (5) Ampex hi-speed reel-to-reel, (10) Nakamichi Noise Reduction Equipment: Full Dolby SR on all monitors, (48) Dolby A Synchronization Systems: (5) Syncrosoft custom Echo, Reverb, & Delay Systems: (3) Lexicon 480L, (2) AMS reverb, (2) AMS delay/harmonizer, (6) EMT plate stereo, (2) Lexicon PCM42 Other Outboard Equipment: (10) Pultec mid-range EQ, various tube limiters, (4) Brooke-Siren de-esser/compressor Microphones: (15) various Neumann U89, Neumann U87, Neumann U47, Neumann U67, AKG 414, AKG Tube, etc Monitor Amplifiers: (10) MOS-FET stereo Monitor Speakers: (5) S.O.T.A., (5) Yamaha NS-10, (5) Auratone Musical Instruments: Yamaha grand piano, Pe-

triff grand piano, (2) Hammond B-3 organ, (2) Synclavier, various synths available on request Other MIDI Equipment: (2) Synclavier Video Equipment: Sony VPR-80 1", MCI 1" layback, (2) JVC 3/4", (6) Sony 601 Beta/VHS Hi-Fi Other: (4) Magna-Tech dubber 16mm/35mm Rates: Upon request

[24+] **SPOT SHOP STUDIO INC.**; also *REMOTE RECORDING*; 1720 W. 2nd Ave.; Vancouver, B.C., V6J 1H6 Canada; (604) 736-7474. Owner: David Hoole Studio Manager: Mark Scott

[24+] **S.R.S. SOUND RECORDING STUDIOS**; also *REMOTE RECORDING*; 500 Newbold St.; London, Ontario, Canada; (519) 686-5060. Owner: Paul Steen Huis Studio Manager: Geoff Keymer

[24+] **STUDIO MULTISONS**; 1208 Beaubien E., #107, Montreal, Quebec, Canada; (514) 272-7641; (514) 272-8794. Owner: J. Bigras, R. Duberier, P. Usmatte Studio Manager: Raymond Du Berger, Suzanne Methot

[24+] **STUDIO PLACE ROYALE INC.**; 640 St. Paul W. (6th Floor); Montreal, Quebec, Canada; (514) 866-6074. Owner: S. Brown, N. Rodrigue Studio Manager: S. Brown Engineers: Normand Rodrigue, John Smith, Bernie Landry, Stanley Brown Dimensions: Room 1 studio 25 x 15, control room 15 x 20 Room 2 studio 25 x 15, control room 14 x 14 Room 3 control room 10 x 12 Mixing Consoles: Amek 28 x 24, Syncon 24 x 16, Allen & Heath 12 x 2 Audio Recorders: Otari MTR-10 2-track, Otari 5050 4-track, Otari MTR-90 24-track, Scully 284 8-track, Otari MTR-12SC 2-track, (2) Scully 280B 1-track, Sony/MCI 3-track 1" layback Cassette Recorders/Duplicators: (2) Akai Synchronization Systems: (4) BTX Echo, Reverb, & Delay Systems: Space Station, Powertran delay, (2) Lexicon PCM70 Other Outboard Equipment: (4) Kepex gate, (2) Neve comp/lim, UREI filter set, (2) dbx comp/lim, Orban de-esser Microphones: (2) AKG 414EB, Neumann U87, (2) Neumann U67, Shure SM81, Sennheiser 415, various Dynamics Monitor Amplifiers: (2) Bryston 4B, (2) Bryston 2B, OSC Quad Monitor Speakers: (2) Tannoy HPD, (2) Studer 2706, (2) Tannoy NFM-8, (2) Mission Musical Instruments: Roland S-50, Roland Juno-106 Video Equipment: JVC 3/4" VCR, JVC 1/2" VCR, JVC monitor, Sony monitor, Hitachi monitor Other: Foley room, turntables and CD players, complete SFX on CD and tape, stock music (20,000 cuts), IBM PC-XT computer Rates: \$150—\$125 sync lock \$75 V O and A/V

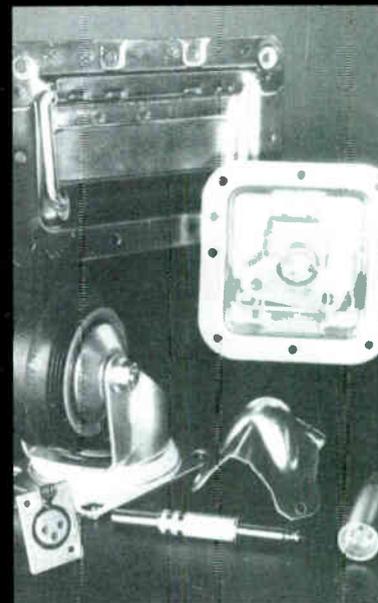
[24+] **STUDIO SAINT-CHARLES**; 85 Grant; Longueuil, Quebec, J4H 3H4 Canada; (514) 674-4927. Studio Manager: Jean Cantin Engineers: Peter Tessier, Pierre Chicoine, Normand Corbeil Mixing Consoles: Trident TSM 32 x 24, Chilton QM3 12 x 8, Soundtracs PC 16 x 16 Audio Recorders: Studer A80 MkIII 24-track transformerless, Studer A80-8 MkIII 8-track transformerless, Studer A80RC 2-track 1/2", Studer A80-2 2-track, Studer A810 2-track w/center-track time code, Studer A820 2-track w/center-track time code Cassette Recorders/Duplicators: (4) Nakamichi MR-1 Noise Reduction Equipment: Dolby M-16, (10) Dolby A-361 Synchronization Systems: (2) CMX S-600 Triconcept Scimitar (Cass 1) audio editors, (6) Lynx TimeLine Echo, Reverb, & Delay Systems: Lexicon 480L (two LARCS), Lexicon PCM70 Version 3 01, Lexicon 224, Lexicon PCM42, (2) Lexicon Prime Time 93, AKG ADR 6BK, TC Electronic 2290 (32-sec sampling), Alessi MIDIVerb II, Roland DEP-5, Yamaha SPX90II, Yamaha R1000 plus more Other Outboard Equipment: Rebs RA701 gate, (2) Valley People Dyna-Mite comp/limiter/expander/gate, Orban 516EC de-esser, Orban 622B stereo parametric EQ, (2) dbx 160 comp/limiter, (2) dbx 165 comp/limiter, (4) Scamp F400 expander gate, (4) Scamp S05/S06 Dynamic noise filter, (2) Scamp S23 automatic pan, Eventide H910 Harmonizer, Eventide FL201 Instant Flanger and much more Microphones: (4) Neumann U87, Neumann U47, Neumann KM88, (5) AKG C-452, (2) AKG C-414, AKG C-422, (2) Crown PZM, (2) Shure SM53, (5) Shure SM56, (5) Sennheiser MD-421, (3) E-V RE20 and much more Monitor Amplifiers: UREI 6500, Crown DC-300, (16) Quad Eight 303, Quad Eight 405 and much more Monitor Speakers: (2) UREI 815, (2) JBL 4310, (2) JBL 4408, (2) Tannoy Lockwood, (2) Yamaha NS-10M, (2) Mission Mk70II and more Musical Instruments: Baldwin SD-10 9' concert grand, Yamaha KX-88 MIDI master keyboard Other MIDI Equipment: Macintosh SE computer w/Performer, MIDI Paint and Professional Composer software, Southworth Jam Box/4+, Garfield Master Beat synchronizer, (2) Digital Creations MX-8 MIDI processor Video Equipment: (2) JVC CR600 3/4" VCR, JVC BR6400 1/2" VHS videocassette recorder, Skotel TCR-80V TC reader/generator, Leitch SPG-120N sync pulse generator Other: (2) Technics SL-1200 CD player, (6) JVC video monitor 8", 12" and (4) 21", (2) Orange County VS-1 vocal stresser, (2) SCV MD8 DI (8 inputs each), dbx 900 Series rack, (2) dbx 902, (2) dbx 903, (2) dbx 904, (2) dbx 905 Rates: Studio 1 (8-track) \$90/\$145 interlock Studio 2 (24-track) \$155/\$195 interlock

[24+] **STUDIO SECRET**; 1180 St. Antoine W., Ste. 407; Montreal, Quebec, H3C 1B4 Canada; (514) 866-6091. Owner: Canada Inc Studio Manager: Andre Boileau Engineers: Luciano Arcarese, Costa Koskoletos, Mike Brown Dimensions: Studio 20 x 25, control room 15 x 19 Mixing Consoles: Soundcraft 1600 24 x 8 Audio Recorders: Studer A80 MkIV 24-track, Tascam 85-16 16-track, Tascam 80-8 8-track, Stu-

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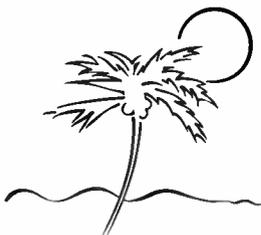
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# CANADIAN

—CONTINUED FROM PREVIOUS PAGE

der A810 2-track, Otari MX-5050B 2-track. Echo, Reverb, & Delay Systems: Klark-Teknik DN780, Lexicon PCM70, Yamaha SPX90, MICMIX Master-Room X210, DeltaLab Compu-Effector CE1700 Other Outboard Equipment: Ashly (compressors/limiters), Symetrix (gates/compressors/limiters), Valley People (gates), Orban stereo synthesizer, Aphex Aural Exciter, ADA 1280 digital delay Microphones: Neumann, AKG, Shure, Sennheiser, Audio-Technica. Monitor Amplifiers: Bryston 4B Monitor Speakers: Tannoy SRM-12B Super Red Musical Instruments: Samick grand piano, Yamaha DX7, Drumulator, Ludwig drum kit, various guitar and bass amps, various guitars and basses. Other MIDI Equipment: MIDI computer Other: Drum booth, guitar booth. Rates: 24-track \$60/hr. 16-track \$40/hr. 8-track \$25/hr

[24+] **STUDIO TEMPO INC.**; 0707 Charlevoix; Montreal, Quebec, H3K 2Y1 Canada; (514) 937-9571. Owner: Yves Lapierre Studio Manager: Dawn Corbett Engineers: Ian Terry, Denis Barsalo, Francois Deschamps. Dimensions: Room 1: studio 40 x 30, control room 25 x 21. Room 2: studio 32 x 20, control room 32 x 22. Mixing Consoles: Anek G2520 28 x 24, Helios custom 32 x 24. Audio Recorders: Studer A800 MkIII 24-track, Otari MX-70 8-track, Otari MTR-12II 4-track, (2) Otari MTR-12II-TC 2-1-track, Studer A810-1-P-VUK-HS 1-track Cassette Recorders/Duplicators: (2) Nikko NC1000C, (2) Awa AD-3700, Technics RSM-85 MkII Noise Reduction Equipment: Dolby A M16, (2) Dolby 361 A and SR, Dolby 301 A stereo Synchronization Systems: CMX Cass I 3 mach, and console automation, 32 input, CMX Cass I 3 mach. Echo, Reverb, & Delay Systems: EMT 140S, (3) MICMIX Master-Room, Lexicon 224, Lexicon Prime Time, (2) Lexicon PCM70, (2) Lexicon PCM42, Roland 3000, Roland 2000, Yamaha REV7, Yamaha SPX90 Other Outboard Equipment: Aphex Compeller, (2) dbx 166, (2) A+D F760X, (2) dbx 160, (2) UREI 1176, (10) Allison Gain Brain and Kepex, (4) parametric EQ, Eventide Phase-Shifter, Eventide Instant Phaser, Eventide Omnipressor Microphones: Neumann TLM170, (2) AKG 414ULS, (4) AKG 451, (2) Crown PZM, (2) E-V CS15, (3) Neumann U47 FET, (4) Neumann U87 FET, (2) Studer SKMSU, Schoeps SKS-501U stereo, (28) Shure, Sennheiser, E-V, Beyer, AKG 412 Monitor Amplifiers: QSC, Sma, Studer, Quad, Caz-Tech. Monitor Speakers: (2) Studer 2706, custom house monitors, JBL 4401, JBL 4311, JBL 4310, EPI. Musical Instruments: Yamaha grand piano. Video Equipment: (2) JVC CR8250U, (5) video monitor, BTX Cypher w/character inserter, SMPTE generator. Other: (2) digital metronome, Amber spectrum analyzer Rates: \$90 to \$210/hr (Canadian) depending on studio and format



STUDIO 306  
Toronto, Ontario

[24+] **STUDIO 306**; 306 Seaton St.; Toronto, Ontario, M5A 2T7 Canada; (416) 968-2306. Owner: Brian Mitchell. Studio Manager: Brian Mitchell Engineers: Mike Rowland, Bob Cobban, Dan Kuntz, John Smithbower, Mark Stafford. Dimensions: Studio 45 x 22, control room 24 x 19. Mixing Consoles: Neve 8016 24 x 24. Audio Recorders: Studer A80 MkIV 24-track, MCI JH-110 4-track, Studer A820 2-track w/center-track time code, Ampex 440 2-track. Cassette Recorders/Duplicators: (4) Tascam 122 Noise Reduction Equipment: (2) Dolby A 361 Synchronization Systems: Adams-Smith 2600 3-machine

lock w/compact controller, Adams-Smith time code generator, Telcom Research T5010 SMPTE time code generator/reader w/character inserter, UREI 964 digital metronome. Echo, Reverb, & Delay Systems: EMT 140 stereo plate, AKG BX-20 stereo reverb, Yamaha REV7 digital reverb, Eventide 1745M 4-ch digital delay, DeltaLab Super TimeLine, Yamaha SPX90II, Roland DEP-5. Other Outboard Equipment: (3) Pultec MEQ-5 mid-range EQ, (5) Pultec EQP-1A3 program EQ, (4) UREI LA-3A leveling amp, (4) UREI 1176LN limiting amp, (2) API 525 compressor/limiter, Valley People 610 stereo compander/noise gate, ADR F769X-R Vocal Stresser, (2) Allison Kepex noise gate, EXR stereo Exciter, Eventide H910 Harmonizer Microphones: (5) Neumann U87, (3) Neumann U67, (4) Neumann U47, (2) Neumann KM84, (2) AKG 414, (2) Sony C-37, (3) Sennheiser 441, (4) Sennheiser 421, E-V RE20, (2) Schoeps SM5, (3) AKG D-20, (2) E-V 668, (2) Sony C-37A Monitor Amplifiers: Bryston 4B, Bryston 3B, (2) Crown DC-300A Monitor Speakers: (2) Altec Lansing Super Red (modified), (2) JBL 4333, (2) Yamaha NS-10M, (2) Auratone 5C Super Sound Cubes. Musical Instruments: Steinway 7' grand piano, Hammond B-3 organ w/Leslie, Heintzman tack piano. Video Equipment: JVC 6650 (modified for independent recording on either audio track), Sony 27" color monitor. Other: Technics SL-P1200 CD player, Sound Ideas 1000, Sound Ideas 2000 sound effects libraries. Rates: \$110/hr. or \$145/hr. with video lock Extras & Direction: Extensive stock music and sound effects library on CD for fast, efficient access and excellent sound reproduction. We provide recording services for record and jingle production, and post-production services for TV, film and video production.

[24+] **STUDIO VICTOR INC.**; 1050 Rue Lacasse; Montreal, Quebec, H4C 2Z3 Canada; (514) 932-9340.

[24+] **STUDIO WEST CANADA LTD.**; 502 45th St. W.; Saskatoon, Saskatchewan, S7L 6H2 Canada; (306) 244-2815. Owner: Wayne Wilkins. Engineers: Don Warkentin, Brian Orsted, Les Cantin. Dimensions: Room 1: studio 25 x 50 x 16, control room 20 x 30 x 14. Room 2: studio 8 x 10, control room 22 x 30. Mixing Consoles: MCI JH-636 28 x 24 automated, Allen & Heath System 8 16 x 16. Audio Recorders: MCI JH-114 24-track w/all remote autolocator, 16-track headstack, MCI JH-110 2-track (15/30 ips), Sony SL-2700 Beta Hi-Fi VCR, Sony PCM-F1 digital auto processor, Studer Revox PR-99 2-track, MCI JH-114 8-track Cassette Recorders/Duplicators: (3) Nakamichi MR-1 Pro. Echo, Reverb, & Delay Systems: AMS RMX 16, AMS DMX 15-80S w/dual harmonizer sampler and full MIDI control, Klark-Teknik DN780, Audicon The Plate, Lexicon PCM60, (2) Yamaha REV7, (2) Master-Room 13, (4) DeltaLab, (2) Yamaha SPX90. Other Outboard Equipment: (4) Valley People 610 dual comp/expander (8-ch.), Roland Dimension D, Eventide Instant Flanger, UREI 4-band graphic EQ, Klark-Teknik DN60 Real Time, spectrum analyzer, Aphex Aural Exciter, BBE. Microphones: Neumann, AKG, E-V, Beyer dynamic, Shure, Crown PZM. Monitor Amplifiers: Amcron Microtech 1000, JBL/UREI 200W, HH Electronic U800 MOS-FET, (2) HH Electronic 100D, Bryston 2B. Monitor Speakers: UREI 813 Time Aligns, Tannoy DC-1000, Yamaha NS-10, Auratone. Musical Instruments: Yamaha C7 grand piano, Yamaha Recording Custom Series drum kit. Rates: 8-track \$40/hr, 24-track \$125/hr (may vary according to volume)

[24+] **WELLESLEY SOUND STUDIO INC.**; 106 Ontario St.; Toronto, Ontario, M5A 2V4 Canada; (416) 364-9533. Owner: Roger Slemin, Jeff McCulloch. Studio Manager: Gerry Mark. Engineers: Jeff McCulloch, Roger Slemin, Tod Cutler, Walter Sobczak. Dimensions: Room 1: studio 23 x 20, control room 21 x 19. Room 2: control room 17 x 14. Mixing Consoles: Neve 8014-1073 16 x 4 EQ, Soundtracs CM4400 28 x 24 x 2 w/CMS2 automation, Tascam M16 24 x 16 x 2. Audio Recorders: Sony/MCI JH-110 24-track, Studer A80 2-track, Tascam 85-16B 16-track, Tascam 52 2-track, Sony 701-E 2-track digital Cassette Recorders/Duplicators: (10) Sony TC-FX25, (3) Sony TC-FX310, Sony TC-FX220. Noise Reduction Equipment: Tascam DX-16B dbx, dbx 155 4-ch. Synchronization Systems: Roland SBX-80 Echo, Reverb, & Delay Systems: Lexicon 200, Sony DRE-2000, Lexicon PCM70, Lexicon PCM-60, Yamaha 1500 DDL, Yamaha REV7, Lexicon Super Prime Time, Lexicon PCM42, Lexicon PCM41, AMS 15-80S dual sampler, Roland DEP-5, Yamaha SPX90, Loft Series 440, Lexicon PTII. Other Outboard Equipment: (2) Neve 22541A compressor, dbx 166, Orban 622B para EQ, Orban de-esser, Orange County comp/lm/gate, Symetrix 522, BBE 202, Kepex II, Valley People 610, dbx 160. Microphones: AKG, Sony, Sennheiser, Crown. Monitor Amplifiers: Crown, AB Systems, Studer. Monitor Speakers: Yamaha NS-10M, UREI 813, Auratone, Rogers LS35A. Musical Instruments: Ludwig full drum set, full line of guitars and basses, assorted percussion, Yamaha DX7, Sequential Circuits Prophet-2002 Plus w/1 MB memory expansion, Oberheim Matrix-6R, Akai 612 sampler module, Sequential Circuits Prophet-5 w/MIDI retrofit, Roland Octapad, Yamaha TX816 rack, Sequential Circuits Drumtraks drum machine. Other MIDI Equipment: Yamaha MJC8 MIDI patch bay, (2) Apple Macintosh Plus computer MIDI system w/Performer V 2.3 software, Southworth Jam Box/4+. Video Equipment: Sony VO-5600 3/4" stereo VCR, Sony VO-2600 3/4" stereo video recorder reproducer, Beta video recorder reproducer, Panasonic AG6800 4-ch. VHS Hi-Fi, Sony EV-S1 8mm PCM audio, 21" color monitor, 14" color monitor, (5) b/w monitor. Rates: On request. Contact Gerry Mark.

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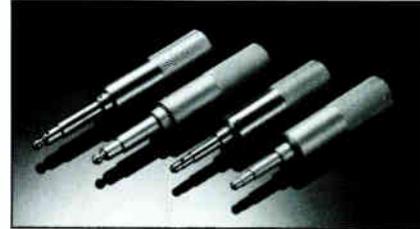
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## 16 TRACK STUDIOS

[16] **BULLFROG RECORDING STUDIOS;** also *REMOTE RECORDING*; 2475 Dunbar St.; Vancouver, B.C., V6R 3N2 Canada; (604) 734-4617. Owner: Bullfrog Recording Company Ltd. Studio Manager: Maggie Scherf. Engineers: Alan Rempel, Bart Gurr, Gerry Gagnon. Dimensions: Main studio 17 x 20, isolation booth 10 x 12, MIDI studio 12 x 20, control room 13 x 16. Mixing Consoles: Soundcraft 1624 16 x 16 x 2. Audio Recorders: Ampex MM-1100 16-track 2". (2) Otari MX-5050 8-track 1/2". Otari MX-5050 2-track, TEAC 25-2 2-track, Studer Revox A700 2-track, (2) Sony PCM-F1 2-track Echo, Reverb, & Delay Systems: (2) Roland SRV-2000 digital reverb, AKG BX10 (modified), Lexicon Prime Time, Roland SDE-2500 digital delay, (2) Yamaha SPX90. Other Outboard Equipment: Roland Compu-Editor w/30 channels of automated level control, Audio + Design Recording Scamp system, UREI 1176 limiters, dbx 160 compressors, Orange County EQs, comp/limiters, Vocal Stresser/de-esser, Aphex Nova Systems Aural Exciter, Omni-Q TL2 tape lock system for time code synchronization, Roland SBX-80 MIDI/SMPTE sync box. Microphones: Neumann U87, AKG C-34 stereo, Sennheiser 421, Sennheiser 441, AKG 414, Sony C-37, Shure, Fostex, E-V. Monitor Amplifiers: Phase Linear/Quad tri-amplification w/Crown crossovers. Monitor Speakers: JBL custom-designed 4-way, Tannoy NFM-8, Yamaha NS-10, E-V Sentry 100, Auratone Musical Instruments: Yamaha grand piano, Roland HP-400 electric piano, Fender Rhodes, Hammond M-3, Pearl drums, Roland JX-3P, Roland JX-8P and other MIDI equipment. Rates: From \$35 to \$50/hr. Discounts available for block bookings.

[16] **LIFEGUARD PRODUCTIONS;** 17301 Antoine Faucon; Pierrefonds, Quebec, H9J 3G4 Canada; (514) 620-5634. Owner: Niels Arthur. Studio Manager: Niels Arthur.

[16] **LOWE-KEY PRODUCTIONS;** 2550 E. Pender St.; Vancouver, BC, V5K 2B5 Canada; (604) 253-2096. Owner: Edward A. Lowe. Studio Manager: Jon Stanko.

[16] **REACTION STUDIOS;** 72 Stafford St., Toronto, Ontario, M6J 2R9 Canada; (416) 865-9468. Studio Manager: Ormond Jobin, Darrell Gasparini, Robi Banerji. Engineers: Robi Banerji, Darrell Gasparini, Ormond Jobin. Dimensions: Studio 36 x 20, control room 15 x 20. Mixing Consoles: Soundcraft 1600 Series 32 x 24. Audio Recorders: Ampex MM-1200 16-track 2", MCI JH-110B 2-track 1/4", Sony PCM-601 ESD 2-track digital, Sony SLHF-900 2-track Beta Hi-Fi. Cassette Recorders/Duplicators: (2) Sony TCFX-210, Nikko ND-750 Echo, Reverb, & Delay Systems: (2) AMS RMX 16, AMS DMX 15-80S, Lexicon PCM70, Lexicon PCM60, Lexicon PCM42, Yamaha REV7, DeltaLab 1024 Effectron DDL. Other Outboard Equipment: AMS DMZ 20 tape phase simulator, (2) dbx 160X comp/limiter, Valley People Gate 4 in 1, (2) API 550 EQ, (2) Neve 1073 EQ. Microphones: Neumann U89, (2) Neumann KM84, Sony 37-P, AKG 414, AKG D-12, (2) Sennheiser MD-421, Sennheiser MD-409, Sennheiser 441, (3) Shure SM57, Shure SM58. Monitor Amplifiers: (2) Bryston, AB Systems. Monitor Speakers: Fostex RWOLS-3, Auratone QC-60, Yamaha NS-10M. Musical Instruments: Roland D-50, Yamaha RX5, Yamaha TX81Z, Roland D-110, Ensoniq Mirage, Roland TR-727, Tama 10-pc. drum kit w/Paiste, Zildjian and Sabian cymbals, (2) Roland JC amp, Gallien-Krueger amp, Peavey amp, Hi-Watt amp. Other MIDI Equipment: Mac Plus 800K int./ext. drive, Roland SBX-80 SMPTE/MIDI box, Akai ME30P MIDI patch bay 4 in-8 out. Rates: \$50/hr. Block rates available.

[16] **REEL TIME RECORDERS LTD.;** also *REMOTE RECORDING*; Site 84, Comp 2, RR #1; Bedford, Nova Scotia, Canada; (902) 422-8567. Owner: Chuck & Mary O'Hara. Studio Manager: Chuck O'Hara.

[16] **'SCAPE STUDIO;** 470 Granville St., #210; Vancouver, B.C., B6C 1V5 Canada; (604) 433-6887. Owner: Juli Steenberg. Studio Manager: Corinne Kuryluk.

[16] **SEQUENCE STUDIO;** 433 cote de la Casoterie; Quebec, G1K 3X5 Canada; (418) 523-3548. Owner: Simon Carpentier. Studio Manager: Marie-Pierre LaPointe.

[16] **STUDIO 270;** 270 Outremont Ave.; Montreal, Quebec, Canada; (514) 270-4918. Owner: Robert Langlois. Studio Manager: Robert Langlois. Engineers: Robert Langlois, Stephane Martin, Francois Hamel, Maurice Beausejour. Dimensions: Room 1: studio 12 x 20, control room 12 x 12. Room 2: studio 10 x 10. Mixing Consoles: Soundcraft 6000 52 x 16. Audio Recorders: Tascam MS-16 16-track, Ampex ATR-800 2-track, Otari MX-5050BII 2-track, Sony PCM-601 2-track Cassette Recorders/Duplicators: (2) Nakamichi MR-1. Noise Reduction Equipment: (16) dbx Type I, (2) Dolby A. Synchronization Systems: Adams-Smith Zeta-3. Echo, Reverb, & Delay Systems: Klark-Teknik DN780, Lexicon PCM70, Lexicon PCM60, Eventide H3000, Lexicon Prime Time, Roland DEP-5, (2) Yamaha REV7, Yamaha SPX90, Alessi XTC, Alessi MIDI-verb II. Other Outboard Equipment: (3) Drawmer DS-201 noise gate, Aphex Type B, BBE 802, (4) dbx 160X compressor, (2) Rane GE30 EQ, (2) Loft 401, Loft 400B, Symetrix 522, (2) UREI 1176LN, Orban 536A de-esser. Microphones: (3) AKG 414EB, Neumann U87, (2) AKG 451CK1, AKG D-12, AKG D-12E, E-V PL20, Crown GLM, (2) AKG C-535EB, (6) Sennheiser MD-421, (4) Shure SM57, (3) Audio-Technica ATM-11.

Monitor Amplifiers: Bryston 4B, Bryston 2B, Crown DC-300A. Monitor Speakers: (2) UREI 809 Time Aligned, (2) Yamaha NS-10, (2) Auratone. Musical Instruments: Kurzweil 1000PX piano brain, Yamaha KX88 controller, Yamaha DX7, Ensoniq Mirage, Roland MKS-80. Other MIDI Equipment: IBM computer w/sequencer software. Video Equipment: Sony 20" monitor. Other: Scholz Rockman guitar preamp, (2) Ampeg V4B amp, (8) Beyer DT 100, AKG D-141 headsets, Laser table. Rates: \$20/hr with engineer.



TURTLE RECORDING  
Vancouver, B.C.

[16] **TURTLE RECORDING;** also *REMOTE RECORDING*; 82 E. 46th Ave.; Vancouver, B.C., Canada, (604) 325-3882; Seattle, WA (206) 646-5484. Owner: Larry Ansell. Studio Manager: Harald Kohl. Engineers: Larry Ansell, Corey Anthony. Dimensions: Room 1: studio 14 x 18. Room 2: studio 12 x 15. Mixing Consoles: Tascam M15 24 x 16. Audio Recorders: Sony DTC-1000ES 2-track digital. Tascam MS-16 16-track w/autolocator, Tascam A3440 4 track. Cassette Recorders/Duplicators: Aiwa F660, Quadratex Reference: 412D. Synchronization Systems: Tascam ES51 Echo, Reverb, & Delay Systems: Yamaha REV7, Yamaha SPX90, Alessi MIDI-verb II, Alessi XT, Lexicon PCM41, DeltaLab Super TimeLine, DeltaLab Effectron, Roland SDE-1000, Echoplex. Other Outboard Equipment: dbx 164 stereo comp/limiter, Orange County Electronics comp/limiter/expander, A-shi SC-500 compressor, Biamp Quad limiter, (2) Symetrix SG200 dual signal gate, Orban 622B stereo parametric EQ, Symetrix stereo parametric EQ, Biamp stereo graph c EQ, Aphex Type C Aural Exciter, (2) Tascam Model 1 8 x 2 line level mixer. Microphones: Neumann U87, AKG 414 (3) AKG C-E1, AKG D-12E, Sennheiser 441, (2) Sennheiser 421, Beyer M 160, E-V RE20, (2) Crown PZM, Shure SM58, Shure SM57, (3) Peavey EC-11. Monitor Amplifiers: Spectra Sonics 404RS Monitor Speakers: (2) Yamaha NS-10M studio, (2) Auratone 5CV. Musical Instruments: Yamaha DX7 synth, Sequential Circuits Prophet-5 synth, Roland HS-60 synth, Sequential Circuits Drumtraks drum machine, Roland PAD-8 Octapad, Gibson Les Paul, Carvin bass, Takamine class cal 6- and 12-str. acoustic guitars. Other MIDI Equipment: Macintosh-based MIDI sequencing system. Video Equipment: Closed circuit TV camera and monitor system. Other: Jensen 24-ch. splitter box. Rates: Call or write for rates. Extras & Direction: Turtle Recording incorporates a mobile recording van with all the features of a complete 16-track studio. Our facilities in Vancouver, B.C., and Seattle, WA, include rooms for in-house recording. With 16-track, 4-track and digital 2-track recording, the versatility of our mobile service can open up an unlimited number of creative possibilities for album projects, demos, pre-production and audio-for-video. We can supplement the existing facilities of any studio by retrieving unique remote sounds beyond the limitations of a sampled or CD library. On-location tracks can also be synched to the studio master via time code. Capture the energy of your live show, from a concert in the coliseum to a jam session at the local pub, with our live performance recording and radio broadcasting services. For on-location or in-house recording, we believe that we have versatility, quality and affordability that no other mobile recording service can come close to.

## 8 TRACK STUDIOS

[8] **MUSIC GALLERY;** also *REMOTE RECORDING*; 1087 Queen St. W.; Toronto, Ontario, M6J 1H3 Canada; (416) 534-6311. Studio Manager: Pau. Hodge

[8] **RIGHT TRACKS PRODUCTIONS LTD.;** also *REMOTE RECORDING*; 226B Portage Ave.; Saskatoon, Saskatchewan, Canada; (306) 933-4949. Owner: Lyndor Smith, Tim Wachowicz. Studio Manager: Lyndor Smith.

[8] **SHAG SOUND STUDIO;** also *REMOTE RECORDING*; PO Box 518, Postal Station "W"; Toronto, Ontario, M6M 5C2 Canada; (416) 531-5919. Owner: Dennis Brunet. Studio Manager: Dennis Brunet.

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on *Early Works* are sort of a genesis.”

Apart from his early experimentation with tape manipulation and phasing concepts, and his use of tape in the *Counterpoint* series, Reich has relied mostly on human resources and shied away from technology. “The only technology I use in my own ensemble has been microphones and occasionally a synthesizer to just thicken up the texture. Electronics have not played a large role, because basically I don’t care for the sound of oscillators when you get right down to it. Whether they’re electric organs or DX7s doesn’t make a lot of difference to me. Basically, I prefer the sound of live instruments.”

Recently, though, the synthesis-resistant composer discovered a techno enclave well-suited to his purposes: the miracle of sampling. “I’m extremely interested in samplers and Casio has given me a number of them, which I’m using, I would say it would be inconceivable to do this Kronos piece without them. The piece will eventually be dumped onto tape, so that they can play conveniently, so they can travel around by themselves. In the making of it, it would be just about impossible without samplers. What I look forward to in the future is the ability to have the ensemble playing and some people would play sampling keyboards, so they could get John F. Kennedy or Anwar Sadat.”

Still, Reich hasn’t turned his back on the tradition of live performance, nor has he spent inordinate time at the controls, sampling speeches by global leaders. “I’m not of the school of thought that likes composers who sit at home in their studio making tapes and records. I’m in the arena of live music and that’s where I plan to stay, but what I’m interested in doing is expanding the arsenal of instrumentation to include, particularly, sampling keyboards. I think in terms of the theater piece of MIDI keyboard to trigger a video image as well. Musicians onstage can literally control the sounds and images. I must say that working with all of this, the computer has made a tremendous difference.”

Samplers, in Reich’s hands, serve “to make orchestral sketchpads, mock-ups. Instead of using electric organs or their synthesizer equivalents now-

adays, at least you can get a good imitation of a flute, oboe, clarinet, violin, etc. And, possibly, using them onstage in terms of reproducing speech segments in rhythmic ways that are more complex and irregular but that could relate to tape loops in a way that would be directly under the control of the player’s hands.”

Just as he bucks classical modes of thought, Reich never seems content churning out pieces in an existing context. Thus, his orchestral pieces have unusual forms, and other works concoct their own milieu; “Tehillim” (1982) is a sort of Hebrew cantata, “Desert Music” is a modernized ora-

torio, while his “Counterpoint” pieces are scored for soloists (e.g., Metheny, clarinetist Richard Stoltzman) playing against taped layers of themselves. “I think it’s a kind of cross-fertilization that, for me, is necessary.”

Reich’s background is, itself, a long process of cross-fertilization. Studying percussion and piano as a teenager, he earned a philosophy degree at Cornell before pursuing the musical muse at Juilliard and Mills College, where his teachers included Luciano Berio and Darius Milhaud. The Western academic tradition proved limiting to his creative inklings, though;

—CONTINUED ON PAGE 185

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—CONTINUED FROM PAGE 54

roll editing. Broucek says the *Cue List* software is "a massive, SMPTE-based sequencer that lets you set SMPTE start and end times [via a numeric keypad on the controller] for anything you can do within the Fairlight. It was modeled after the CMX system," which most video editors know and love. In addition, Fairlight is working with major synchronizer companies (Adams-Smith, Audio Kinetics and TimeLine) to implement master control of an entire video editing suite via the Fairlight's motion control buttons and jogger wheel.

Fairlight has also launched the Fairlight "Registered Operators Training School" in its L.A. office. The goal: to create a Fairlight talent pool within the post and music industries (training package is included with system purchase). Indeed, Fairlight recently met with the Sound Editors Union in Hollywood to offer training to its membership at large.

### Easy as (Apple) Pie

Two companies chose the high-speed, icon-oriented Macintosh II as the controlling system for their DAWs, lauding its graphic/color capabilities and the intuitive, point-and-click approach it lets people take to sweetening.

CompuSonics' new DSP-1500, a magnetic disk-based audio recording and editing system that can be triggered by remote control, features a modular design that uses removable cartridge disks as its recording medium. The system incorporates a Macintosh, using CompuSonics' *MacSonics* software to graphically display audio in the familiar form of audio tape. The editor uses the Mac mouse to issue tape recorder-like commands, enjoying 7-millisecond resolution (well within a video frame).

John Stautner of CompuSonics explains why they went with the Mac: "A lot of people are familiar with it, and the Macintosh interface is easy to learn, so it doesn't scare them off. And we don't confront the video editor or producer with a whole bank of complex operations, just three basic editing operations: one, remove one or more pieces of audio from a recording; two, insert one or more pieces of audio into a recording; three, assemble various pieces of audio together. They've been doing this all their lives. We don't give them things they didn't

have before, like complex waveform displays, which would complicate their lives."

Last June, New England Digital started shipping its new, Macintosh II-based workstation for the Synclavier and Direct-to-Disk digital multi-track systems. The workstation drives two 19-inch, high-res color monitors and features trackball-controlled, real-time scrubbing and scanning of digital audio material. Mark Terry describes the lure of the Mac: "The Mac II allows us to create screens that people can just look at and work with, and not be distracted from the work being done. In the past, we used DEC and other terminals, and found the Mac II was the best for getting some of the technology out of the way and getting the application right in front of the person. Equally important as fidelity and high sampling rates, et cetera, is that by being very powerful and user-friendly, it allows you to explore a lot of avenues that you normally wouldn't have the time or inclination to explore."

### Reality Check

So, does increased speed translate into "audio quality"? According to DAR's Kevin Dauphinee, "Not so much in fidelity, bandwidth and dynamic range, but the quality of an edit, and the quality and accuracy of a mix, certainly are going to be enhanced. With any disk system, you're using a time code-driven master—most likely, the picture—and you can put the sound effect right on the frame, right on the field for that matter, and whittle it within the field. That's probably the most significant advantage, in editing and production quality, to digital disk recording."

The AudioFile, says Nigel Branwell, "allows proficient video producers to do things with *at least* twice the speed." And that means improved quality? Branwell answers, "Well, they can either bill more hours, or they can come up with a better product" (or, as NED's Mark Terry puts it, "Users' comments about that sound like the beer commercial: 'Tastes great! No, less filling!'").

Mark Terry also emphasizes the versatility factor, which can lead to higher quality. "If you're a recording engineer, you might spend a whole afternoon getting a drum sound right for one song on the album. When you're

doing TV, you might spend two or three minutes, if you're feeling luxurious with your time. A powerful system lets you listen to 20 drum sounds instead of two in that two minutes. When TV producers need to hear a car door slam, they can audition 50 of them in 50 seconds, without sending someone down the hall to find a reel of car door slams."

Rod Revilock of Lexicon points out, "The advantages of the technology are different to different people. If someone looks to this type of technology to drastically reduce the amount of time needed to do a project, depending on how they use it, they can get an advantage. But they have to consciously say 'OK, I'm not going to try anything new, I'm just going to knock this project out as fast as I can.' Then they can save some time. But there's a trap here; the trap is that the technology gives so many new alternatives and such flexibility that there's a large tendency *not* to do things quicker. They end up trying more things. And that translates into a better finished product."

No matter how whiz-bang the technology is, Dauphinee stresses the fact that a digital audio workstation is just another tool. "I think [video producers] are oblivious to the technology. They don't care. If the TV producer is a gadget or PC freak, likes to drive German cars, has electric trains in the basement, they're going to dig SoundStation, or the AudioFile, or whatever. But most of them just want the function. My experience has been that creative people are more interested in getting *around* the understanding of the technology, in favor of a clear understanding of the performance, or appreciation for how the performance will come across. And I don't see that changing."

Video post houses, Dauphinee states, are "moving toward digital audio as a matter of facility, rather than quality. Quality is a by-product. It's a nice benefit, but people who spend two or three times more for a digital disk facility than for a conventional analog facility do not buy for quality, but for *through-put*: they can get more customers through their facility, which makes their billings go up." ■

Mix assistant editor Linda Jacobson likes to listen to TV and watch the radio.

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and had to find a 32-track monitoring console to monitor with. Then we got a Studer mixer, and a lot of it went straight through processing into the back of the tape machine. Then I put some of the guitars through the Studer Revox. We also got a small 10-channel Neve mixer that we used on the bass guitar and kick. A lot of the drums went straight across. I used the Trident on the toms and room stuff. The keyboard players [Shane Keister and Robbie Buchanan] had their own mixers, so we utilized those. For outboard gear we had Focusrite EQs, Massenburg EQs with preamps and limiters, API stuff, Pultec stuff, Teletronix, Fairchild, etc.

"We scoped out the house, walked through the setup and listened to the rooms, how the floors vibrated, everything we could consider," Balding continues. "We emptied all the furniture from downstairs except the dining room table, and put the drums in the parlor, which had a fairly loose floor. We put the acoustic piano in a hallway that had a two-story ceiling. We put the two electric guitars in the room with Paul [Leim, drummer] and ran the amps up the stairs into the two bedrooms. We put [guitarist] Dan Huff's speaker cabinet in the bedroom with the big-screen TV and king-size bed, and put [guitarist] Jerry McPherson's speaker cabinet in the bedroom with the twin beds, and then ran cables down and let them sit downstairs where they could have eye contact. There's a big, open, double-width doorway, and we set the bass player [Mike Brignardello] in the middle of those two rooms so he could have eye contact.

"We put the keyboard players in the living room, which totally packed out the room. Then, as well as a direct, I ran an amp signal off the bass guitar, so we had to run cables down to the cellar and put the bass cabinet down there, in this old basement with rock walls and concrete floor. Then I miked the room and the amps, and took a stereo direct off the guitars, so each guitar had six lines and the bass had three. I took a line off the bass player's rack, my own direct box signal off his guitar, and put two or three mics on the bass amp. Then we spread room mics throughout the house for the drums. There were three rooms in a

row—the parlor, the dining room and the living room—so we put a set of mics in each room to give it a more non-linear type of sound, but by the time we used compression on it, it was a natural reverb.

"We used a Sennheiser 421 on the kick, a Shure 57 and AKG 452 on the snare," Balding details. "A Sanken 41 on the hat and [AKG] 414s on the toms. The overhead room mics were two Neumann M49s, with a Calrec for the close room, 414s for the middle room, and two Neumann 87s for the far room. I used [Shure] 57s on the guitar cabinets, and on Dann's guitar I used AKG 452s and on Jerry's, 414s. On bass guitar I used an RCA 77dx ribbon mic, a B&K and an AKG 452."

Bannister adds, "The drums and guitars were so huge, the bass had room mics on it and it became, 'Where do you put keyboards?' Then, when we got to the overdub part of the album, it was, 'This is great, why do we need a bunch of overdubs?' We didn't have to do much because the tracks were so huge. We didn't have to put on strings or pads everywhere, or all these little sequenced parts. It was already big enough."

That presented a bit of a problem for the group of musicians who had played on Grant's other albums.

"This album was radically different," Bannister emphasizes. "All the other albums were much more keyboard-oriented, while this one is more guitar-oriented. Amy's at a real honest place in her artistry, in her life—a 'roots' kind of place, meaning that the lyric is much more important than it ever has been. And that affects the way you cut the songs, because the lyrics are more honest and vulnerable, so you don't want to hype the music or make it real techno or slick. The music has to be vulnerable, so that meant the guys who were used to cutting a certain way had to readjust. We tried to use everybody on the first cut, which was a hard one, a song called 'Alright' written by Dann Huff, Phil Naish and Amy. The way we approached keyboard sounds in the past wasn't jiving for me in the way I was hearing this album going. It was like, 'Okay Shane, you can take a break here. Robbie, you can take a break here. Let's just cut it with guitars.' So on the first few songs, the keyboard players were getting a little paranoid," Bannister laughs. "Soon we worked it out, and they were flexible and very

professional. But it took a little while to get around to that concept."

One song, Jimmy Webb's "If These Walls," was recorded at Ground Star Studios, Ronnie Milsap's place. "We did that with acoustic piano, viola and Arco bass, and we wanted to use the Direct-to-Disk Synclavier system," Balding says. "We pushed the piano over by the trap door to the live chambers underneath the digital, put mics down in the live chambers and used a fairly equal blend of the chambers and the close mics on the piano. We recorded those four tracks to the Direct-to-Disk system. There was no reverb on the piano; it was just all the live chambers. It really sounds neat."

And the one other place where they recorded was Grant's own home.

"We loved the experience of the Bennett House, so we wanted to be in a house. It seemed like the vibe for the album," Bannister explains. "It seemed like the inherent problems of recording in a house were working out to be pluses, because you can take a problem and turn it into a solution—like the way the floor shakes or the weirdness of parallel walls. Amy had just had the baby, and it was comfortable for her to be at home. It made budgetary sense, too, even though we had to rent the digital machine and the console from New York. And when you look out in the yard and the hill going down to the lake where the wild geese are, and the sun sets over the lake, it isn't exactly a bad place to work. The only complaint was, once we closed the doors, you had no way of getting out of the room, so if she was on a roll and you had to go to the bathroom, tough luck," he laughs.

But that's the only complaint. To Bannister, *Lead Me On* feels like his finest accomplishment. "I really am like a proud dad," he says. "Amy has come a long way since the last album, *Unguarded*. She's grown as an artist, as a person, as a human being. Every project feels like the best, but when I work with Amy, just because of the history or longevity—which is real unusual in this industry—it's real rewarding." ■

*Robyn Flans is a freelance writer who contributes to Mix, Modern Drummer, Pulse, Words & Music and other publications. She's also conducted interviews for radio and TV, and has authored three rock books.*

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Further expanding on DMP7 technology, the DMP11 Digital Mixing Processor (\$2,395) is a rack-mount 8x2 MIDI-controlled mixer. It features 2-band EQ for each channel, 96 memory locations for snapshot mixing, and MIDI control for continuous changes. There are also two internal digital effects systems *a la* SPX90. On a more prosaic (but nonetheless useful) level, the PLS1 MIDI Programmable Line Selector (\$795) is a rack-mount audio signal switcher. Thankfully, relays do the switching instead of semiconductor devices, so there's virtually no noise or distortion added by the switching mechanism. Four different inputs can be routed to eight different channels, as selected by front panel switches or MIDI commands that recall up to 99 memorized patches.

Finally, Yamaha had a new series of stereo power amplifiers, consisting of the PC1602 (\$995, 160 watts/channel

Imagine Music Group (751A S. Kellogg Ave., Santa Barbara, CA 93117; [800] 662-6434) showed the MIDIMic (\$350). This is designed for vocalists who want to drive MIDI instruments, and opens up a whole new world to vocalists who lack instrumental chops. KAT (Box 60607, Longmeadow, MA 01116; [413] 567-1395) had a nifty percussion controller, the DrumKAT (\$995). Think of this as an Octapad-like device, but with ten velocity-sensitive, rubber playing pads that have an extremely good feel and can be electronically grouped together to make bigger pads. Up to 32 kits can be stored in memory. Kawai (Box 9045, Compton, CA 90224-9045; [213] 631-1771) is making a big move into MI with the K1 synthesizer (\$895). Featuring a velocity/aftertouch sensitive keyboard, the K1 includes 256 waveforms, including 52 PCM samples and 204 additive synthesis waveforms. If you don't need a keyboard, the K1m (\$595) is the tone module equivalent of the K1 and is intended to sit on top

quency response variations are often what gives a guitar its characteristic sound—and it sounds good in practice, too.

Even though Roland (7200 Dominion Circle, Los Angeles, CA 90040-3647; [213] 685-5141) chose not to exhibit at the show, this didn't stop their R&D people. Their latest drum machine, the R8 Rhythm Composer (\$950), includes "human feel" algorithms for more realistic drum patterns, 48 16-bit sampled sounds, 1/384th note resolution, velocity-sensitive buttons and eight individual outputs. They also updated their PAD-8 (Octapad) to the PAD-80 (\$795), which adds several useful features to what is already somewhat of an industry standard. Roland also introduced several software update packages for existing instruments, such as the S-MRC software upgrade (\$250) that adds extensive editing (data filtering, cut and paste between different songs, track swap, track merge, etc.), "humanizing" functions and locate points to the MC-500,

The image shows a musical score printout with five staves. The top staff is labeled 'A' and contains a melodic line with dynamics *ff* and *f*. The second staff is labeled 'Brass' and contains a line with dynamics *f* and *mp*. The third staff is labeled 'Harp' and contains a line with a 'gliss' instruction. The fourth staff is labeled 'Bass Drum' and contains a line with dynamics *mp*. The fifth staff is labeled 'Strings' and contains a line with dynamics *p*. A 'Violin Solo' section is indicated by a bracket above the fifth staff. At the bottom right, the instruction 'Baritone: And off 1' is written.

into 8 ohms); PC2602 (\$1,295, 260 W/ch); and PC2602M (\$1,395, 260 W/ch with LCD meters). While it's fan-cooled, the fan cuts in only when necessary; and extensive protection circuitry is designed to make the new units as "bulletproof" as possible. Note that the above wattage figures are for 8 $\Omega$  loads, and power levels increase when driving 4 $\Omega$  loads.

### Musical Instruments and Controllers

How about a MIDI microphone? The

of your keyboard; the K1r (\$629) is similar, but its rack configuration makes it suited to rack-mount synth expander setups.

Guitarists weren't forgotten either, thanks to a genuinely new development from MICO (Box 956, Arleta, CA 91331; [818] 785-2841). Their Ultrasonic Reference Series Pickups feature flat response and are intended to be used in conjunction with a programmable equalizer to emulate a wide variety of stock pickup sounds. It sounds good in theory—after all, fre-

### Sample printout from Passport's NoteWriter program.

MC-500 MkII and MC-300 sequencers. Also, the OM-500 hardware upgrade kit (\$650) converts the MC-500 to an MC-500 MkII. ■

*Besides doing this column, Craig Anderton writes books, produces music, edits our sister magazine Electronic Musician and performs with his band Transmitter.*

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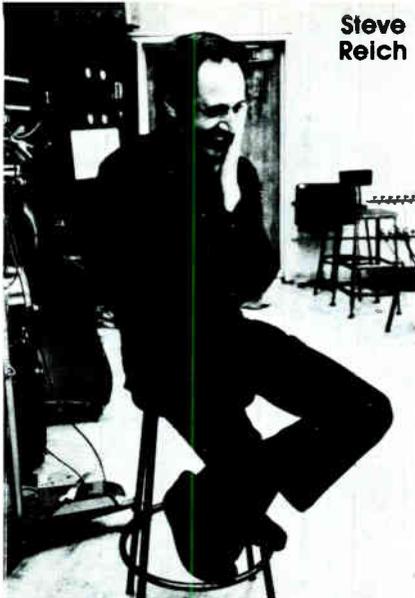
an innately percussive musician, Reich explored various non-Western musics: African music at the University of Ghana, Gamelan in Seattle and Berkeley and Hebrew Cantillation in New York and Jerusalem. All of these idioms would filter into Reich's minimalist style, which he started working on with his own group in 1966.

But one other distinctly Western genre also played its role in his development. "Jazz served as the model for the decision to become a composer/performer. That was unquestionably the model and the thrust, as opposed to this kind of paper music phenomena that was happening in academic circles in the late '50s and early '60s in America.

"The marvel of jazz was the totality of the fact that the performer and the composer were one in the same person. Forget about the improvisation. For music to be real, it had to come out of you if you liked 'Body and Soul.' That again is subject to variation too; later on, I wrote pieces where I've written myself out of the *Sextet*. It's too difficult for me. I could get through those patterns; I arrived at them mostly by improvising on a marimba or vibraphone."

In some sense, Reich extends the tradition of a mobile jazz combo with his ensemble, a group that performs pieces tailored for it or plays other scaled-down Reich compositions. In this way, the composer is on the premises and not a detached third party. "I now am at a position where, if I can't play in a performance, I'll simply say 'good that's for Russ [Hartenberger] and Bob [Becker] and whoever else is playing.' But the basic gesture of being more or less bodily in control of what you're doing is of the essence if the music is really going to be honest. That's not a theory, but something that is ultimately heard as naturalness of music, naturalness of gesture."

A cyclical and evolving tapestry of sound, *Music for 18 Musicians* was a significant turning point in Reich's career. By extension, it was also a crucial juncture in the growing interest in minimalism and new music among crossover segments of the listening public. The record is, by far, Reich's best *selling* album—over 100,000 copies worldwide.



Steve Reich

At 51, Reich still basks in a reputation as a "young" composer, although his maturing process began some 25 years ago as a discontented music student at Mills College. Since then, he has seen his essentially radical ideas become virtually commonplace; he's slid over from the fringe to more comfortable quarters in the music world. He sees his escape from that fringe as a symptom of a general growing awareness of modern mavericks since the ear-opening '60s.

"It's a two-way street, between the everyday popular music of the day and its classical cousins," he concludes. "That, I think, has returned now to music after a sad absence in the '50s and '60s. It is not a revolutionary thing; it is merely a return to normalcy after a very aberrant period." ■

## THE RAVE-UPS DON'T GIVE UP

by Iain Blair

These days, The Rave-Ups are at last living up to their name off stage as well as on stage. And the reason for the band's party mood? The release of *The Book of Your Regrets*, their major-label debut, on Epic Records. Produced and engineered by David Leonard, the album is a polished yet soulful collection of 12 songs that showcase the group's versatile power and give every cause for celebration all 'round.

Despite the album's confident tone, it was a struggle to get even this far, admits founder and singer/songwriter Jimmer Podrasky: "We haven't been heard from in a while, and to be hon-

est, there were times when we began to feel that might become permanent."

The problems began back in '84 when the present lineup—Podrasky, guitarist/keyboardist Terry Wilson, drummer Timothy Jimenez and bassist Tommy Blatnick—were all working at A&M Records. "Me and Terry ran the loading dock, and Tim and Tommy ran the mailroom, and in the evenings we gigged around the local L.A. club scene," explains Podrasky. "We also cut a six-song EP, *Class Tramp*, on a small indie label called Fun Stuff, which later released our first LP, *Town and Country*.

The success of this record (it sold nearly 50,000) and word of mouth of such loyal fans as actress Molly Ringwald helped secure the band a spot in the film *Pretty in Pink*. But the experience was anything but rosy according to the singer. "A&M wouldn't give us any time off work, so we ended up doing 20-hour days, and after shooting for a week, we only appeared on screen for 10 seconds."

Those 10 seconds were enough, however, to interest several major labels in the band. But with the promise of a full-fledged recording career in the offing, The Rave-Ups suddenly found themselves locked in a legal battle with Fun Stuff. "Basically, they didn't want to let us go, and the more interest the majors showed in us, the greedier they got," states Podrasky. "This wrangling went on for the whole of '86, and there were many times when we felt like calling it quits. It was frustrating."

The band didn't give up hope though. "We'd gone too far, and besides, we all really believed in the group," recalls the singer. And the story has a happy ending. "Epic had stuck with us through all the legal battles, and eventually Fun Stuff gave in and we signed to Epic last year—but not before we had to pay off Fun Stuff with a large chunk of our advance," he points out.

"Still, it was well worth it to get our freedom and get on with our careers. Our hands had been tied all that time and I couldn't even write any songs," he adds. "The up side was that once things were resolved, Epic gave us a free hand, and I wrote so much material that we already have enough in the can for our next album. Yeah, it's been a struggle, but I guess the moral is, never give up." ■

# FEEDBACK

## TEC Error

The purpose of this letter is to withdraw my name from this year's TEC Awards, specifically Category II: Outstanding Creative Achievement—Mastering Engineer.

Due to an error by *Mix* magazine, the credits listed after my name on The 1988 TEC Awards Official Voting Ballot were actually all done by [Masterdisk] engineers other than myself. All the rap music credits were mastered by Howie Weinberg and the Philip Glass credit was done by Bill Kipper.

I have been a winner of this category for the past two years. If I were to win for a third time I feel it would be immoral for me to accept an award based on wrong data supplied to the voting public while they cast their ballot.

Among the many recordings I mastered this last year I wish *Mix* could have cited in the Official Ballot Bruce Springsteen's *Tunnel of Love* album, Sting's *Nothing Like the Sun* or the albums from Bryan Ferry, David Bowie or Robbie Robertson. Perhaps you could have mentioned the Tom Rotella Band record on DMP that Tom Jung and I worked on that became practically the "standard" audiophile CD for the CES shows! Again, not a single credit of any recording that I actually mastered appeared on the official ballot.

I requested that *Mix* magazine drop the entire category for this year's awards, but this request was denied. Whoever does accept the Mastering Engineer award this year will do so knowing that the voting data was incorrectly supplied to the voting public.

I support the charitable work the TEC Awards represent. I support distributing monies raised by the award ceremonies to deserving charities and to the winning educational institutions. I would not wish this unfortunate human error to damage the integrity of the awards in any way.

Sincerely,  
Bob Ludwig  
Masterdisk Corporation

## The Publisher Responds:

*We deeply regret the mix-up that resulted in the printing of incorrect credits for Bob Ludwig on the TEC Awards ballot. Consideration was given to dropping the Mastering Engineer category this year, but in the end we felt this would unfairly penalize the other nominees, all of whom are deserving of recognition. We respect the feelings of Bob Ludwig in this matter, and will instruct the public accounting firm in charge of tabulating the ballots to withhold his votes from the final tally. We apologize to Bob, one of our industry's true giants, and to anyone else who may have been inadvertently slighted by this unfortunate mistake.*

Hillel Resner  
Publisher/Mix  
Executive Producer/  
1988 TEC Awards

## Giving Credit Where It's Due

I am writing in response to Bill Morrison's article "A Look at Control Room Design and Geometry" (*Mix*, August 1988). Mr. Morrison describes the importance of controlling reflections into the engineer's position, an idea proposed

by Don Davis in his articles and papers on "live end-dead end" (LEDE™) control room design as early as 1979. Using control room geometry (as an option to absorption) to accomplish this was further developed by Dr. Peter D'Antonio in several excellent papers and articles on creating a "Reflection Free Zone" or RFZ.™ In my opinion Mr. Morrison's diagrams were highly reminiscent of those created by Dr. D'Antonio.

Very few (if any) of us in the design business can claim to have had a truly original idea, and it is quite acceptable to comment on and expand upon the work of others. But it is at the very least polite to give credit where it is due. Since Mr. Morrison didn't feel it necessary to credit any sources, and for your readers interested in this topic, I hope you will print the following:

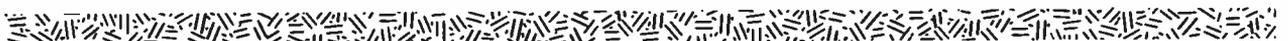
## References:

D. Davis and C. Davis, "The LEDE™ Concept for Control of Acoustic and Psychoacoustic Parameters in Recording Control Rooms," *J. Audio Eng. Soc.*, Vol. 28, No. 9 (September 1980), pgs. 585-595.

D. Davis, "The LEDE™ Concept," *Audio* magazine, August 1987.

P. D'Antonio, "Control Room Design Incorporating RFZ,™ LFD,™ and RPG™ Diffusers," *db* magazine (September/October 1986), pgs. 47-55.

Please note that these articles include extensive bibliographies for those interested in delving still deeper into this fascinating subject. Stephen K. Blake  
Steve Blake Design  
Sharon, MA



# MIX WORDS



## RANDOM NOTES

### ACROSS

1. Morning moistener
2. Old Tokyo
3. An ornamental note
4. Foil
5. Something you do with a licence
6. Act like a boomerang
7. Weight
9. Italian city
9. Note filling a melodic skip
10. Indian province
11. Singer Snow
12. Passionate
16. Opposite of 25A
- 23, 33, 45, or 78
24. Mouths
26. Embellishing tones
28. On \_\_\_ (painting the town)
30. Killer whale
32. Rock 'n' roll shoe material
33. Sea eagle
36. More frigid
38. White, in old Rome
40. Penn. neighbor
42. Hurt
43. Part of a prairie schooner slogan
46. Tone \_\_\_
49. "My Sister \_\_\_"
51. On the briny \_\_\_
52. \_\_\_ Leone
54. More than a frag.
55. Ace
57. Fill
58. Thrilled
61. Hip instrument
63. French summers
64. Arrow poison
65. Portable housing
68. Plant grown for fodder
69. The "Old Sod"
70. Done
71. Fast plane
72. Urban blight
73. Slips a mickey

### DOWN

13. Kitchen "necessity"
5. Harvest
10. Fitting
13. Troop snap
14. Spanish being verb
15. Buy goods
17. "Designing \_\_\_"
18. Numerical prefixes
19. Angry
20. Work group
21. Author Leon
22. Gaseous prefix
23. French king
25. Conflict
27. Popular pentameter
29. Outrigger
31. Like some love-letters
34. Dutch commune
35. Channel-saving broadcast and recording process
37. \_\_\_ settlement (push for an agreement)
39. Non-scale tones
41. Holds a note over
44. Sun, fare
45. Chinese way
46. A plus
47. Lassoes
48. V.U.s
50. Regard
53. Button on the back of amps
55. Type of reverb
59. Blue dye
60. Andean country
62. Strange Greek prefix
66. Plumbing joint
67. Radical '60s org.

## Solution for September Mix Words



# NEXT IN MIX

## NOVEMBER

- AES Issue with Expanded Distribution
- New Products Directory
- Ethics in the Recording Industry
- HyperMedia Update

## DECEMBER

- Tape & Disc Technology
- Mastering/Pressing/Duplication Directory
- TEC Awards Winners and Wrap-Up

### AD CLOSING:

OCTOBER 7

### MATERIALS DUE:

OCTOBER 14

## JANUARY

- Music Software Developers
- Northwest Studios Directory
- Acoustic Recording Techniques

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NOVEMBER 7

### MATERIALS DUE:

NOVEMBER 15

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\*Source: Publishers' BPA statement of circulation for six months ending June 1988 (average of qualified and non-qualified circulation).

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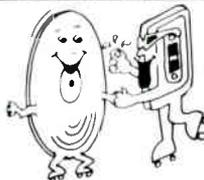
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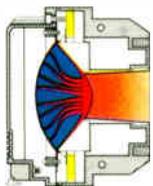
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