

Hal Blaine on the Beach Boys • Village Recorder Turns 20

U.S. \$4.95 CANADA \$5.95 SEPTEMBER 1988

MIX

A SPECIAL SUPPLEMENT
Los Angeles
Recording:
Back in the
High Life Again

THE RECORDING INDUSTRY MAGAZINE



Huey Lewis'
"Small World"

Directory:
Southern California
Recording Studios



Standard on ours is "N/A" on theirs.



Every recorder in the C270 Series comes *loaded* with professional features that aren't available—not even as options—on “comparable” machines from other manufacturers . . .

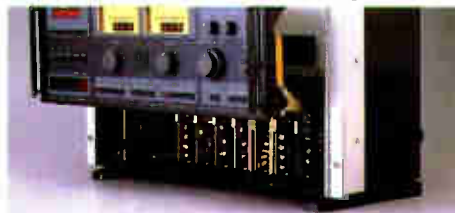
- Dolby HX Pro® Headroom Extension and proprietary phase compensated audio electronics
- Seamless and gapless punch-in and punch-out
- Integral scrape-flutter filter in head assembly
- Constant tape tension on both spooling motors
- One-hand cueing under full servo control
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- Front access to all audio electronics, even when rack-mounted
- Plug-in record and reproduce equalizers for optimal performance and easy speed pair conversion
- 3 peak LED indicators: +6, +9, +12 dB (C270)
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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
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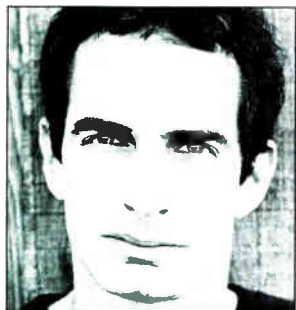
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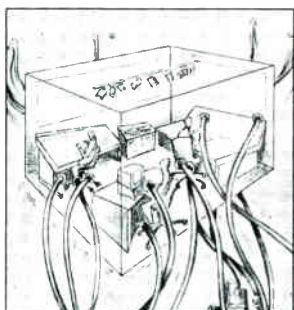
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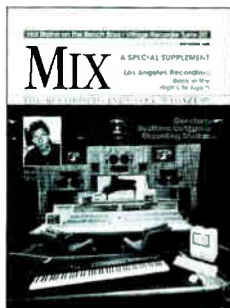
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Cover: Record Plant celebrates its 20th birthday this year. Pictured on this month's cover is Studio One at the recently upgraded Sycamore Avenue facility in L.A. Designed by Tom Hidley, the control room features a new Neve Series V console with GML automation and DTM-1 near-field monitors. For more information see article on page 60. **Photo:** Ed Freeman. **Huey Lewis Photo:** Aaron Rapoport

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FROM THE EDITOR

Report From Our Guest Editor

Los Angeles is a city without equal. Both brash and exhilarating, the city exerts a magnetic and beguiling influence, especially in any dimension of the entertainment industry. The Southern California recording scene is packed with talent looking for a chance to perform on both sides of the control room window. Making it in Tinseltown takes a lot of hard work, an impeccable reputation and a great deal of high-power networking.

Exactly how L.A. came to assume such prominence within the film, recording and post-production industries is not easy to tie down. The motion picture business made the westward trek to the Los Angeles basin over 75 years ago, in response to some shady maneuverings by the East Coast film magnates, and to search for year-round sunshine. That the majority of the new wave of movie moguls settled around Hollywood Land was accidental; that the wife of a property baron liked the name enough to use it for the fledgling film community is, as they say, just another page in the history books.

During the past three-quarters of a century, Los Angeles and its immediate environs have seen a great deal of changes. Today, the Los Angeles area represents a unique community of producers, engineers, session musicians, recording studios, video post-production houses, film scoring and re-recording facilities, music editing rooms and a host of support services without which the world of professional audio production would soon grind to a halt.

For quite a while now, *Mix*'s illustrious editorial team has planned to throw the creative spotlight on Southern California's recording community, and they asked me to coordinate the project. Beginning on page 47 are the fruits of that endeavor.

We've tried to bring you a "mix" of the history as well as the current issues and newsmakers in this recording mecca. We've plugged some of our best writers into some of the best stories we could find and, all in all, I'm sure you'll find the information included here both fascinating and informative.

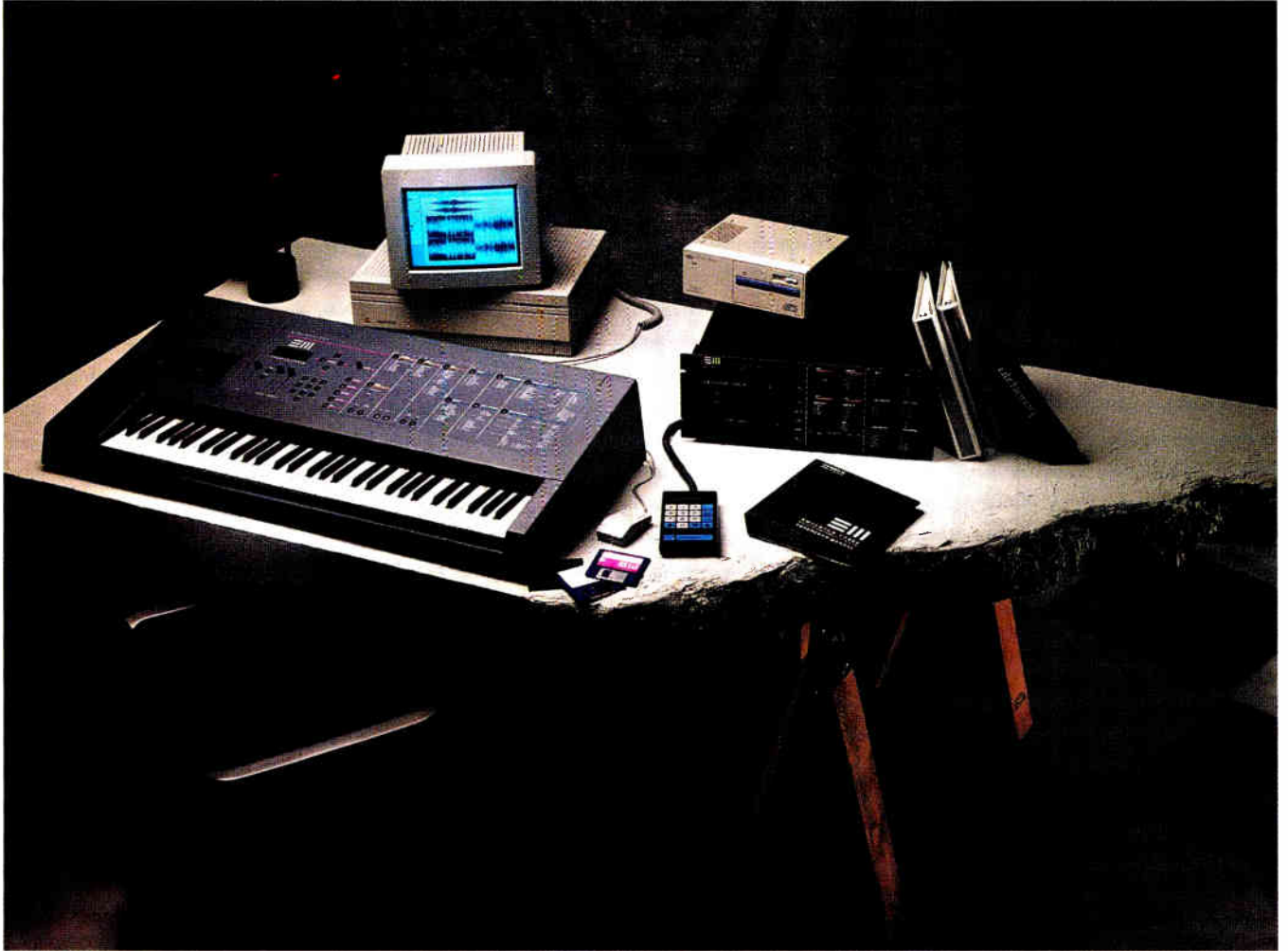
Read on,

Mel Lambert,
Coordinating Editor

* * * * *

Other business: You'll find that Stephen St. Croix's column, "The Fast Lane," is missing from this issue, as he is currently vacationing somewhere so far away that there is no electricity to power his modem. He'll be back with us next month.

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CURRENT

DASH Makes Significant Strides

At a recent press conference, Sony, Studer Revox and TEAC gave an update on their plans to support the DASH format. Sony and Studer jointly announced that they are set to release a 48-channel recorder. Though no date was specified, and there was no indication of who would release the item first, the companies said that at least one product announcement will be made before the end of the year. The DASH 48-channel machine is based on the same half-inch width as the 24-channel recorders.

The 48-channel recorders will be introduced by all three companies and will support full digital audio interchangeability with present and future 24-channel DASH recorders. The companies did stress that while they were introducing DASH 48-channel to cover the top segment of the professional market, DASH 24-channel remains the best solution for a majority of users, in terms of flexibility, universality and overall cost.

TEAC also announced its intention to display its prototype DASH 24-channel recorder before the end of the year. It will support full digital audio interchangeability with the present and future 24-channel recorders of other DASH companies. The recorder is based on TEAC's proprietary development, with the exception of DASH key devices such as heads and LSI, which were developed in common by all DASH companies.

AES 85th Convention

The 85th AES Convention, slated for November 3-6, will be held at the site of the 1986 show—the Los Angeles Convention Center. Live sound demonstrations rooms and an extensive educational program

of workshops and technical papers sessions will be centered at the Los Angeles Hilton hotel, just four blocks from the convention center.

The theme for this year's show is "A Century of Technology in the Service of Artistry," to reinforce the interdependency of the creative and technological sides of the audio industry and to celebrate the 100-year anniversary of recorded sound. For more info, contact the AES at (212) 661-8528.

Record Rental Extension Act Passes

The House Judiciary Committee unanimously passed the Record Rental Act Extension in June. This legislation will extend the provision of the Record Rental Amendment of 1984, which provides sound recording copyright owners the exclusive right to authorize record rentals.

Congress originally enacted the law for a five-year period. The bill requires a two-thirds vote for passage in the House. The House bill would extend the amendment for five years; the Senate bill, which passed in June, is a permanent extension of the law. A House/Senate conference will convene to settle the term for this legislation.

Radio '88

Three full-length seminars, special sessions for engineers and five technical panels are just a few of the highlights of NAB's Radio '88, set for September 13-17 at the Washington Convention Center in Washington D.C.

Special seminar topics planned exclusively for radio engineers are: "The Digital Radio Station," "Directional Antennas" and "RF Compliance." Technical panel topics are: "FCC's Engineers Forum," "PCs for Engineering Applications," "Inter-

ference: Its Causes & Cures," "FM Directional Antennas" and "EBS—What's Old, What's New and What's Changing."

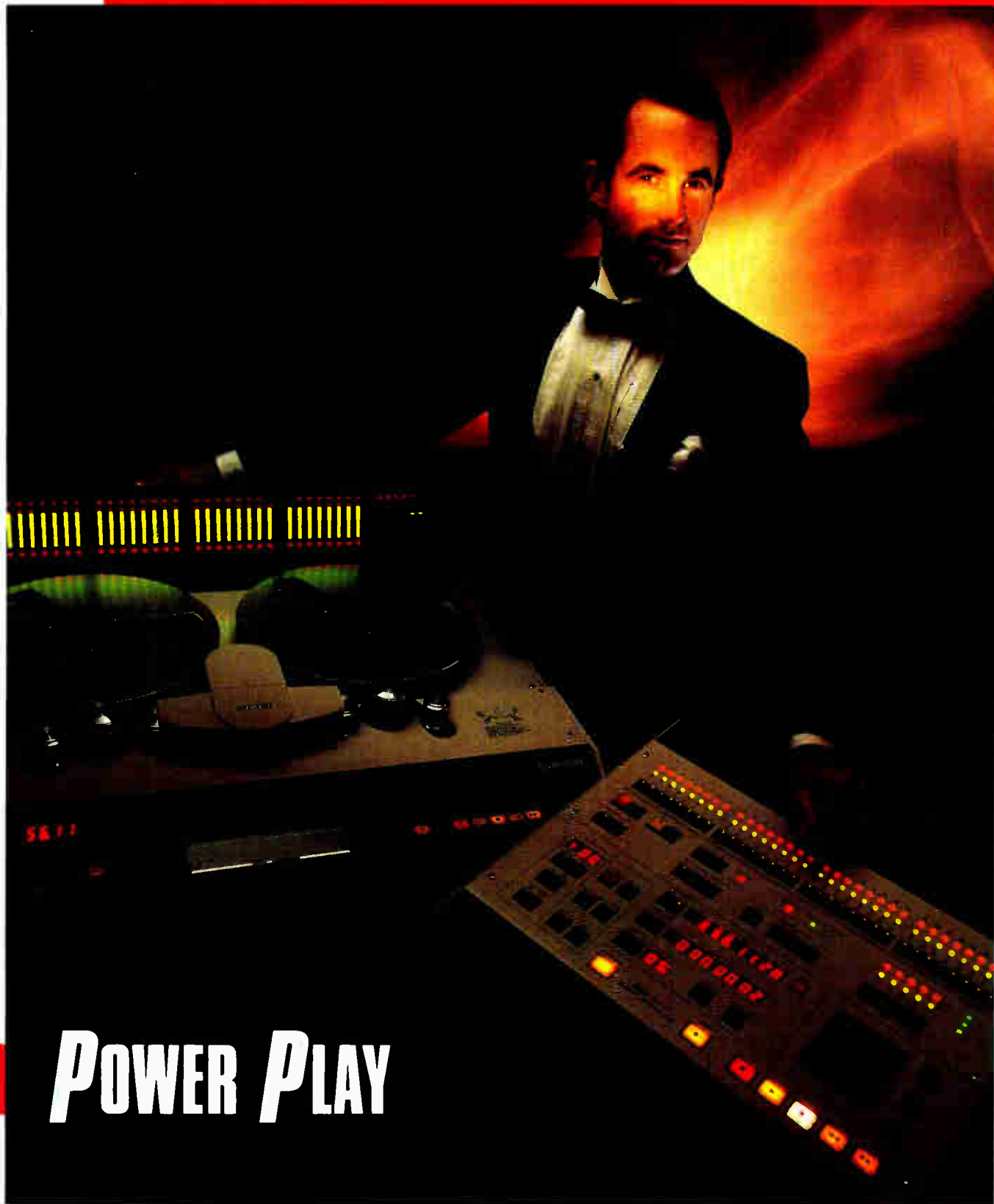
Other planned events include radio station bus tours, a computer fair, the Radio Award luncheon, exhibit hall reception and dinner/entertainment party. For more information write: Radio '88 Registration, NAB, 1771 N St., NW, Washington, D.C. 20036.

Musictech Set for Fourth Year

Dedicated solely to musicians as a way of promoting new products and information, Musictech '88 will be held September 17-18 at the Hyatt Hotel in Chicago. The two-day show has expanded to include four main rooms, two of which will be used for keyboard exhibits, and the others for pro sound and recording components and computer/software displays. Six seminars will be held in conjunction with the show. For more information, contact Gand Music & Sound, Inc., 780 Frontage Road, Northfield, IL 60093, (312) 446-4263.

NARAS Announces 1989 Grant Program

The National Academy of Recording Arts and Sciences (NARAS) recently announced the Academy's 1989 program of grants, providing research opportunities in the creative and technical aspects of the recording industry. Three grants of up to \$5,000 each will be announced on January 1, 1989. Non-profit organizations should mark applications to Grant Program; individuals to Research Opportunity Program. They should be mailed to NARAS, 303 N. Glenoaks Blvd., Suite 140 M, Burbank, CA 91502-1178, and applications must be postmarked no later than September 1. Call (213) 849-1313. ■



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OTARI

INDUSTRY NOTES

Charles W. Rhodes, principal research scientist with Philips Laboratories, Inc., and a developer of high-definition television (HDTV), has been appointed chief scientist of the **Advanced Television Test Center (ATTC)**. . . The **HDTV 1125/60 Group**, an organization of manufacturers of HDTV program production equipment, has been formed to support the 1125/60 production standard. **William G. Connolly** will head the Group's technical efforts. . . **Philip Hopbell** was named manager of production services for **American Interactive Media**. **George Rebane** was named vice president of technology. . . **National Public Radio Satellite Services** has developed the **Sound Connection Network**, enabling producers to transmit audio signals between studios via satellite. . . **Turbosound**, a British manufacturer of loudspeaker enclosures, responded to a 60% sales increase in 18 months by opening their second new facility. . . **Allen & Heath** have dropped "Brenell" from their name, the first of several expected major changes. . . **Editel/Chicago** named **Richard Mandeberg** director of operations. . . **EdgeTech (U.S.) Inc.** has formed a new subsidiary, **Edge Distribution Corp.**, to act as U.S. distributor for several companies, starting with **BSS Audio** and **Turbosound**. **Dave Talbot**, EDC's new vice president of electronics products sales, will oversee U.S. distribution of BSS Audio products. . . **Levien Instrument** is seeking expert feedback on the aural qualities of their new digital music system. Interested "ears" should write **Levien** at Box 31, McDowell, VA 24458, or call (703)396-3345. . . **Lindsay A. Lautz** has been elected president and chief operating officer of **Groupe Andre Perry** for the western region. They also appointed its creative, sales, client service and engineering staff for the new \$10 million Washington, DC, video post center. . . **Muzak** announced an early July delivery date for their **Music Plus** direct broadcast satellite product. . . **Rob Levy** was promoted to commercial

account executive for **Editel/LA**. . . **Craig Taylor** is the new Northeast regional sales manager for **Sony's** Broadcast Products Division. . . **Aphex Systems, Ltd.** announced agreements with two new foreign distributors, **Gould Marketing (Canada)** and **LEAB (Sweden)**. . . **Torbett/Keyser Group, Progressive Audio Representatives** and **On The Road Marketing** are now sales reps for **Audio-Technica** pro audio gear. . . **Musiplex**, the Atlanta-based studio and production facility, has acquired **Lamping Audio**, a pro audio equipment and instrument maintenance and repair company. . . **Pat Chupko**, a former pro audio sales manager of **Sam Ash Music**, has joined **AST Sound** as a sales engineer. . . **The Mitek Group**, a Winslow, IL, loudspeaker manufacturer, has appointed **David Armon** as director of international sales. . . **Fuji Photo Film U.S.A.** announced three promotions: **Keith Scott** is now an account rep for professional products, **Scott Petrozzini** is a senior account rep and **Tom Volpicella** becomes professional district sales manager. . . **Farallon Computing, Inc.**, a Berkeley, CA-based vendor of twisted-pair networking systems, and **WOS Data Systems**, a software design company in Lawrence, KS, signed a letter of intent to merge under the **Farallon** name. . . **Vaughn Duplication Services** has installed the **Macrovision** anti-pirating video protection system in its Minneapolis facility. . . **New England Digital**, in an effort to increase its presence in the small and mid-sized studio market, introduced a third-party leasing program through **Terminal Marketing** of New City, New York. . . **Fane Acoustics Ltd.**, the British loudspeaker manufacturer, has formed a Chicago subsidiary to promote and expand sales in North America. . . **DAX Audio Group** of Portland, OR, has added six new sales reps. . . **MIDI City** opened a second "super store," in L.A.'s San Fernando Valley. An Orange County facility is projected for this year. . .

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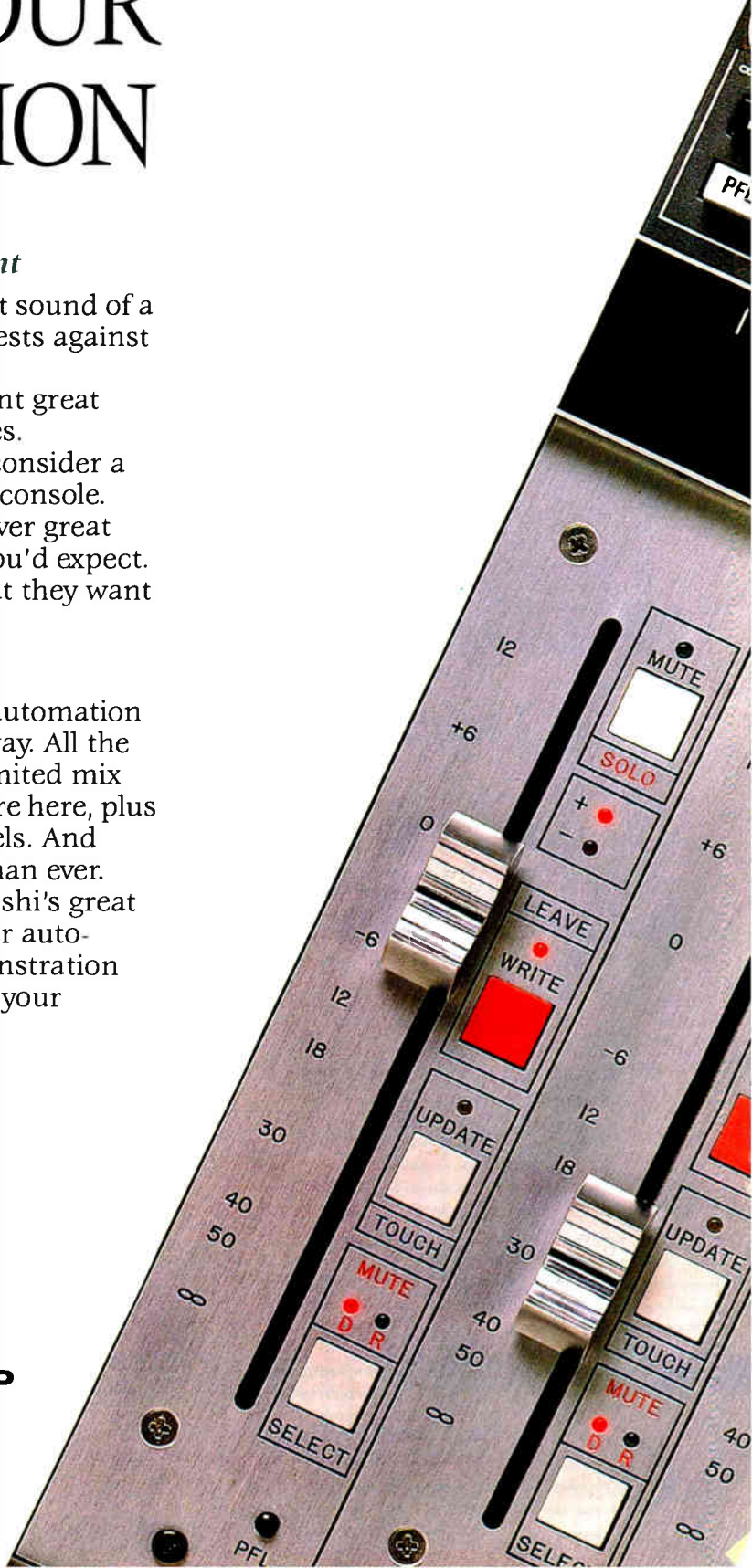


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London Office: AMEK at HHB, 73-75 Scrubs Lane, London NW10 6QU. Telephone: 01-960 2144



SESSIONS AND STUDIO NEWS

SOUTHWEST

Rock Studio in Norman, OK, has been the site of a self-engineered/produced debut album project by **The Fanatics**. . . Recent activity at **Lone Star Recording** in Austin included **Agony Column** mixing their debut album for Passport Records, with **Stan Copping** producing and **Kerry Crafton** engineering. . . Dallas-based **Omega Audio's** 48-track remote facility traveled to Jackson, MS, for a live double album recording for the Jackson College of Ministry and Grammy Award-winner **Lanny Wolfe**. **Philip Barrett**, **Steve Lowney** and **Andy Vastola** engineered. . . **Crystal Clear Sound** of Dallas played host to a collaboration of local rock musicians dubbed **The Shocking Vibes**, with producer/engineer **Chris Craddock**. . .

NORTH CENTRAL

O'Jays singers **Eddie Levert** and **Walter Williams** joined students from West Technical High School at **Audio Recording Studios** in Cleveland to sing and record "They're Counting On Us," a song supporting Cleveland Public Schools and quality education. The tune was written and produced by **Dunn Pearson, Jr.** and **Joey Porrello** of **The Music Cafe** in Cleveland and New York. . . At **74th Street Studio** in Minneapolis, **Joey Molland** mixed previously unreleased **Badfinger** live tapes with engineer **Mark Healey** and assistant **Scott Bartel**. . . **Darryl Duncan** was producing vocal tracks for Epic Records artist **Billy Always** at **Studio A** in Dearborn Heights, MI. **Eric Morgan** was at the console with assistant **Randy Poole**. . . **Miller M.I.D.I. Productions** in Warren, MI, reports that vocalist/songwriter **Mikie Shy** has completed work on his debut release, *Love Don't Know Me No More*, for Oneida Records. **Ron Stephens** produced the date, with **Chuck Miller** engineering. . .

At **Selah Records** in Detroit, producer **Michael Brooks** has been laying tracks with vocalist **Ester Smith** for the Sound Of Gospel label. . . From LaPorte, IN, comes word that local favorites **The Backstreet Blues Band** have recorded a demo at **Best Little Recordings** with **Brian Roseman** at the board. . . Chicago's **DKP Productions** was recently used for a project by **The Ultraviolet**. **Freddie Salem** produced and **Jon Hermann** engineered. . .

NORTHWEST

Recent activity at **Mobius Music** in San Francisco included work on a project for jazz vocalist **Madeline Eastman**, with **Paul Potyten** producing and **Oliver DiCicco** engineering; also, completion of guitarist **Henry Kaiser's** CD release for SST Records, with **Jane Scolieri** assisting DiCicco at the console. . . At **Ironwood Studio** in Seattle, engineer **Jay Follette** was busy working with R&B band **Beat Street**. . . **Elvin Bishop** is putting the finishing touches on his debut album for Alligator Records at **Starlight Sound** in Richmond, CA. The project is being engineered by **Bill Thompson** with assistance from **Andrew Gray**. . . Seattle's **Steve Lawson Productions** reports that composer **Carroll Howell's** soundtrack to the TV documentary *Choices* has won an Emmy for original music composition. . . Narada Records recording artists **Eric Tingstad** and **Nancy Rumbel** completed tracking on another album at **Triad Studios** in Redmond, WA. Tingstad produced the project with **Larz Nefzger** engineering. . . New album projects at San Francisco's **Dave Wellhausen Studios** include a solo classical guitar album by **David Tanenbaum**, produced by **Dean Kamel**. . . **Freaky Executives** are working on their first album for Warner Brothers at **Different Fur Recording** in San Francisco. **Chico Ben-**

nette is producing the tracks, with **Larry Ferguson** and **Mark Slagle** engineering. . . Across town at **Russian Hill Recording**, filmmaker **Errol Morris** has been working on the sound post-production for his new film, *The Thin Blue Line*. Also in at the facility is blues legend **John Lee Hooker**, whose latest album is in its final stages. Engineer **Sam Lehmer** has been working on the project with producer **Roy Rogers**. . . From Santa Rosa, CA, comes news that **Dick Smothers Jr.** and his group **Kamikaze** are finishing work on a project at **The Banquet Sound Studios**. **Warren Dennis** is producing and engineering. . .

SOUTHEAST

Ray Simpson has been at Atlanta's **Musiplex** studios working on overdubs for his upcoming Virgin Records album. Producers **Dean Gant** and **Mike Powell** are working with engineer **Thom Kidd**. . . Also from Atlanta comes word from **Cheshire Sound Studios** that **Maniquin** recorded tracks for their debut album on CBS/Epic Records. The tracks were produced by **Charlie Singleton** with console assistance from **Lewis Turner Padgett**. . . Atlanta's **Doppler Studios** reports that **The Georgia Satellites** recorded a cut for a new Walt Disney movie, *Cocktail*, starring **Tom Cruise**. . . **Telstar Recording Studio** in Sarasota has been used to cut recent tracks by **The Outlaws**, with **Dirk Van Tilborg** and **Bud Snyder** engineering. . . Producer **Bob Montgomery** has been at Nashville's **Soundshop Recording Studios** with engineer **Pat McMakin** to record material for a new CBS album for **T.G. Sheppard**. . . **The Fox Brothers** of Morning Star Records are working on a new album at **Acorn Sound Recorders** in Antioch, TN. The project is produced by **Eddie Crook** and **Bil Vorn-Dick**, with VornDick and **Arnold O'Neal**

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... **Kenny G** has been at **Glass Slipper Productions** in Playa Del Rey with co-producer **Preston Glass** finishing up his latest Arista release. The project was engineered by **Maureen Droney**. . . Among the recent projects at **Cherokee Recording Studios** in L.A. is the soundtrack for the new film *Wired*, based on the life of John Belushi. **Neil Portnow** is producing, with engineer **Rick Hart** at the console. . . **Metallica** is currently finishing their new album for Elektra/Asylum Records at **One On One Recording** in North Hollywood. **Flemming Rasmussen** is engineering and co-producing with Metallica. . . Other news from North Hollywood includes recent sessions with Virgin recording artists **When In Rome** at **NRG Recording Services**. **Richard Burgess** is producing with **Jay Baumgardner** engineering the sessions. . . **Rotondi** just finished their new album for ROM Records at **Pacificque Studio** in North Hollywood. It was produced by **Paul Lacques** and **Richie Lawrence**, with **Dennis Moody** engineering. . . Island Records' artists **Tony Joseph** and **Larry Robinson** were at **Skip Saylor Recording** in L.A. remixing the new **Brothers Johnson** single for A&M. **Rick Kemp** handled the engineering chores, with **Chris Puram** assisting. . . At the **Bossa Nova Hotel** in San Fernando, **Michael Sembello** and Latin artists **Wilkins** and **Marisela** recorded and mixed tunes for the hit movie *Salsa*. Engineering were **Tom Vicari**, **Hilary Bercovici** and **Bud Rizzo**. . . **The Jacksons**, minus the glitzy gloved one, zipped into **The Enterprise's** Studio A in Burbank to track and mix cuts for their upcoming CBS release. **Gene Griffin** produced, **Dennis Mitchell** manned the desk and **Joel Stoner** assisted. . . At **Track Record Inc.** in North Hollywood, **Billy Idol** was in to start working on his latest LP for Chrysalis Records with engineer **Dave Concors**. Producing is **Keith Forsey**. . . Also in North Hollywood, **Genetic Music** reports that vocalist **Freda Payne** recorded two songs with producer/writer **Jim Vukavich**. **Richard Rosing** engineered. . . I.R.S. recording act **Shok Paris** is in at **Preferred Sound** in Woodland Hills to record their debut album with producer **Kevin Beamish**. The engineering is being handled by **Bruce Barris**, with assistance from **Scott Campbell**. . . Recent activity at **Westlake Studios** in L.A. includes **Barry Manilow** tracking with producer **Eddie Arkin**, with **Michael DeLugg** at the board. . . **Lucinda Williams** has been recording an album for the Rough Trade label at **Mad Dog Studio** in Venice. Co-producing with

Williams are **Gurf Morlix** and **Dusty Wakeman**. . .

STUDIO NEWS

Mr. O Audio Studios in Columbus, GA, recently augmented its equipment arsenal with a Tascam 16-track recorder. . . **Real Time Duplicators** in Bay Shore, NY, announced a recent purchase of 50 new cassette decks for their facility, which now operates 24 hours a day. . . San Francisco's **Mobius Music** installed a Neve 8068 console in its recently remodeled studio. . . Chicago's **River North Recorders** hired **Marti Berghorst** as manager of studio operations. . . **Alpha Audio** in Richmond, VA, completed installation of a Synclavier Digital Audio System and Direct-To-Disk multi-track recorder. . . **The Recording Studio, Inc.** in Sunnyvale, CA, purchased a 24-track MCI machine. . . Also upgrading to 24 tracks is Charleston, SC's **On Line Audio**. The new system includes a custom Soundcraft TS 12 console and an Otari MTR-90 recorder. . . **Flood Zone Studios** of Richmond, VA, has upgraded its facility to 24 tracks with the installation of a new Studer A80 Mk IV. . . **Spot Recording** of Santa Ana, CA, has expanded its Studiomas-ter Series II mixing console to a 40 x 16 configuration, and added a Macintosh SE with music software. . . Seattle's **The Music Source** has expanded its facilities to three rooms: Studio A is now automated 48-track, Studio B is automated 24-track and Studio C is a 24-track MIDI and voice recording room. All rooms feature new video sync equipment by Adams-Smith. . . LA's **Record Plant** has recently installed a 60-input Neve console with GML automation in its main room. . . From London, Ontario, comes news that **SRS Recording Studios** installed a new Mitsubishi Westar 8000 automated console. . . The recently remodeled **Key Studios** in Jacksonville, FL, now boasts a Neotek Series III 28 x 24 console and Tannoy LGM 12 monitors. . . Hollywood's **Sunset Sound Recorders** installed a 64-channel Amek APC1000 automated mixing console in Studio Two's control room. . . Breaking the long freeze on multi-track availability in Alaska, **Home Studios** in Fairbanks recently purchased a Tascam MS-16 16-track recorder. . . On the video post-production front, **Modern Telecommunications, Inc.** in NYC announced acquisition of the East Coast's first Quantel Harry E-Motion with increased LP storage. . . **Kajem/Victory Studios** opened a new Studio B MIDI suite in their Gladwyne, PA, facility. . .



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SONY

Professional Audio

by Ken Pohlmann

OPTICAL RECORDING

IT'S ALREADY HERE

A

lot of people think audio recording deals primarily with tape recorders—you know, things with reels of magnetic tape. While that has been true in the past, and will continue to be true for a while, it will soon be patently untrue. Present digital (and analog) formats, both 2- and multi-track, will soon go by the wayside, unable to support longer word lengths and higher sampling rates on one hand, or offer

"Less than four months after commencing product deliveries, New England Digital Corporation's sales of its optical disc storage and retrieval system have surpassed the million dollar mark. Within a very short time this product area will become a multimillion dollar segment of our business. The system's popularity to date cuts across all of our markets—music recording and composition, film/video post-production and commercial production—signalling to us that the optical disc has become an integral part of today's digital recording environment. The optical disc allows users to store up to 2 gigabytes of memory on-line."

—New England Digital press release, February 4, 1988.

"In about 18 months, Tandy said, compact disc players will hit the market that will make indestructible and near-perfect recordings that millions of consumers can readily afford. The idea of a \$500 machine that makes recordings like a sophisticated recording studio is something few in the industry would have thought possible only a year ago."

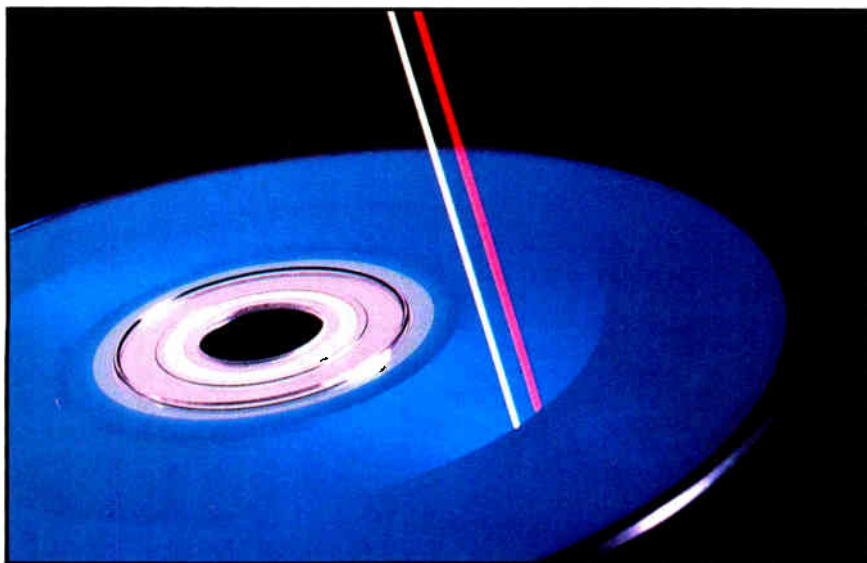
—*Wall Street Journal*, April 22, 1988.

"If they can get this (Tandy technology) into the market faster... we can kiss digital audio tapes goodbye."

—Frank Zappa, *Wall Street Journal*, April 26, 1988.

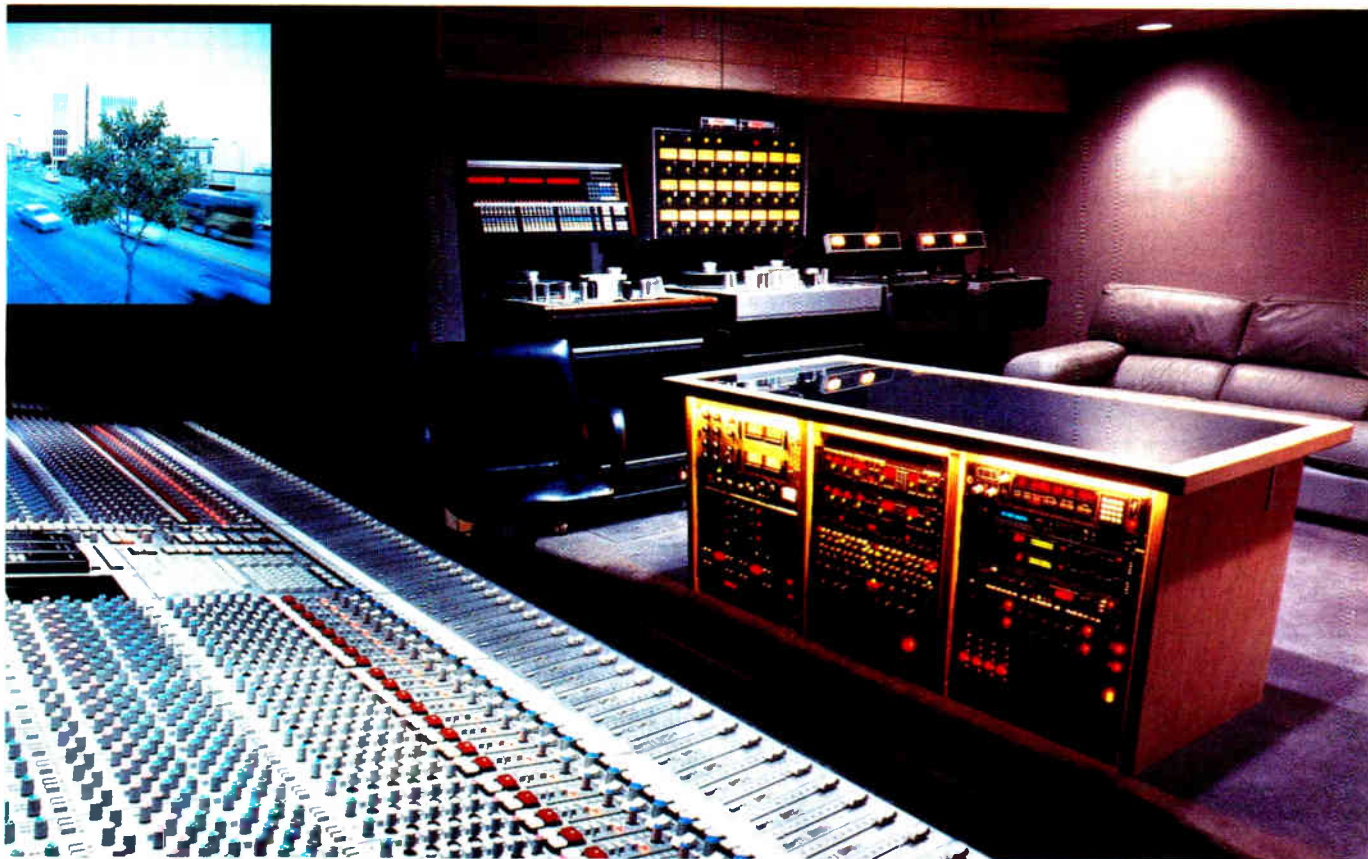
Projected worldwide shipments of optical disc drives, 1988: 297,700; in 1991: 1,048,100.

—Source: Freeman Associates, from *Computer Design*, September 1, 1987.



random access and cost-effectiveness on the other. You see, magnetic tape storage will be seriously challenged by magnetic disk storage, and both will be made obsolete by optical disc storage, probably in less than ten years. Skeptical? Consider the following sampling of news items:

L.A.'s best SSL Mix Room.



SUMMA MUSIC GROUP STUDIO A/64 MAINFRAME SSL G SERIES

L.A.'s newest SSL room is the world class mixing/tracking studio that has attracted recent clients like Bruce Hornsby & the Range, XTC, Randy Newman, Starship, Brian Wilson, Sheena Easton and Jermaine Jackson, and star producers like Neil Dorfsman, Paul Fox and Dennis Lambert. . . In short, some of the most *discerning* artists, producers, engineers and mixers in the world!

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Using a mouse you identify splice points with microsecond precision on the display, instructing the computer to digitally crossfade from section to section.

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Even punch-in without erasing. The computer records and logs each move, and can instantly retrieve any pass for comparison.

With Direct-to-Disk, audio information is recorded and stored on a network of reliable, high-speed winchester hard disk drives, which offer not only **superior audio fidelity** and data

integrity compared to tape, but superior performance. And because winchester disks are a **random access medium**, rewind, fast-forward, auto-locate and SMPTE lock are instantaneous.



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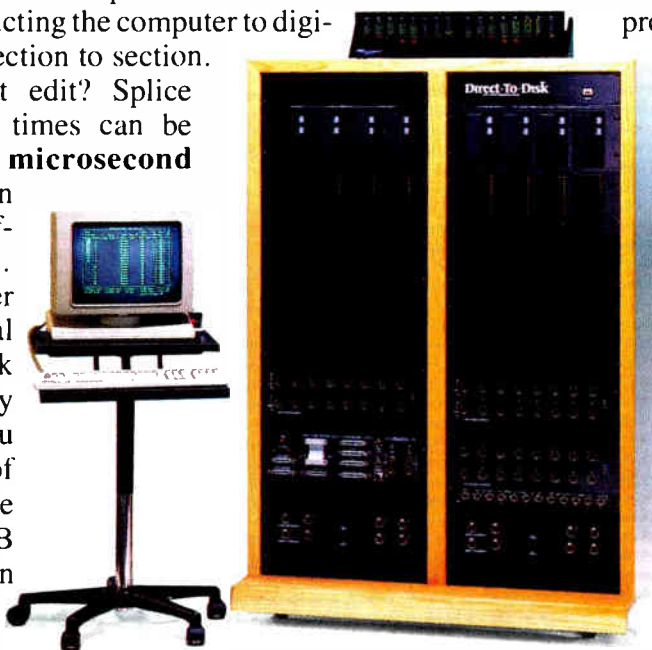
The stand-alone Direct-to-Disk is based on the same hard disk storage and proprietary processing technology that has

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"In the next five years the optical market will be ten times its present size: \$17.889 billion as compared with \$1.689 billion in 1987."

—Gene Selven and Michael Moon, *The Laserdisk Professional*, May 1988.

"In a field as young as optical recording we should not discount the probability of a revolution leading to entirely new possibilities."

—*Philips Technical Review*, April 1988.

Not desiring to insult *Mix* readers, I won't belabor the obvious. Let's simply point out that optical recording is a rapidly emerging technology and would appear to be well suited to audio recording. Moreover, its considerable applications in the computer industry, where the really big bucks reside, should speed its development.

Of course, as a new technology, optical recording faces uncertainty, including several cases that are chronic to any new technology. For example, standards are notoriously scarce in the optical storage area. Data formats, densities, transfer rates, medium materials, and even disc sizes have yet to be agreed upon. While consolidation will occur in that area, there's still a lot of work to do. The result: a slowed timetable for proliferation.

Still, optical recording is here now and is in wide use in a variety of applications. Readers of computer magazines, CD newsletters and other technology publications (including *Mix*; of course) know that scarcely a month goes by without another new product announcement. But NED's system and the CD notwithstanding, the optical disc is still an unknown quantity in the audio field—an industry viewed as technologically conservative by some. Still, precisely because of NED and the CD's success, we should see the optical disc begin to make dramatic advances in studios everywhere.

Those advances will come as hardware products, of course, and probably can be divided into three general areas: write-once, erasable magneto-optical and erasable dye-polymer systems. Each system is already in use; however, owing to complexity, the present cost and state of development, the three will probably be introduced into the audio recorder market in successive stages.

A write-once optical disc is exactly that. Data is written permanently and

cannot be erased, in much the same way that a photograph is a permanent record. The basic mechanism is simple: A laser may burn a hole in a recording layer or change its reflectivity. Such systems are often referred to as WORMs, for Write Once, Read Many. NED uses such a system. Write-once technology is well developed, may employ a variety of methods and is appearing in many places at low cost.

One example, largely overlooked by the press, is the Philips/Sony Compact Disc—Write Once (CD-WO) stand-

The considerable applications of optical recording in the computer industry, where the really big bucks are, should speed its development.

ard released last February. The CD-WO format encompasses both CD-DA and CD-ROM applications, and a disc may contain both user-recorded and prerecorded material. To ensure compatibility among users, the format uses a pregrooved disc. As with other write-once systems, a variety of materials may be used. The recording layer may have a decrease or increase in reflectivity when recorded to. In CD-WO, to simplify the servo system design, the high to low materials are used in a narrow pregroove system, and low to high are used in an alternative wide pregroove disc. The disc also contains CLV clocking information (as a radial groove wobble) and time code (as a modulation of the groove wobble) over the entire disc surface. In terms of disc dimensions, scanning velocity, disc capacity, encoding, error correction, subcode and data structure, CD-WO is identical to good old CDs.

A CD-WO is laid out with three areas: first, there is a prerecorded lead-in area holding the TOC (table of contents). Next, a pregrooved program area holds user-recorded (after recording) information; this area consists of an op-

tional prerecorded area user table of contents (UTOC) and recordable user area. Finally, there is a prerecorded lead-out area. Any prerecorded data including the optional prerecorded area would be stored as CD pits; all user data is stored as a reflectivity change.

The prerecorded TOC in the lead-in area contains the following: the start position of the optional prerecorded CD tracks; the position of the UTOC area; the start position of the recordable user area; the position of the lead-out area; and information on the physical parameters of the recording layer, such as required laser recording power and the polarity of the recorded information (reflectivity increase or decrease). The start position of the user-recordable area is also stored in the UTOC.

A few more facts on CD-WO: Both CD-DA and CD-ROM data can be recorded in one track. Tracks in the user-recording area can be created at will through pointers in the UTOC. A single-track numbering system is used for all prerecorded and user-recorded tracks. A disc can contain a maximum of 99 tracks of any duration. A disc may be recorded entirely at once, or discontinuously over a period of time, with new tracks starting at the end of previously recorded ones.

Dye-polymer erasable technology is similar to write-once technology; however, the changes effected in the recording layer are reversible. For example, a low to high change in reflectivity could be reversed to change data content. In other systems, the recording layer is physically changed when recorded and changed again when erased.

Tandy's THOR-CD (THOR standing for Tandy High-intensity Optical Recording) uses the latter approach. Although Tandy hasn't disclosed the details of its read/write technology, the operation of the system can be surmised. A dye-polymer disc is made by sandwiching two layers of plastic materials coated with a dye that absorbs laser light. The media are written by laser heating, which causes the first surface to buckle inward, forming a small depression on the surface. This formation can be read by the read laser. Erasing and re-recording is easily accomplished: when the second surface is heated, the depression flattens out again, leaving the surface in its original

—CONTINUED ON PAGE 166

by Mel Lambert

THE PRODUCTION ENVIRONMENT JUST HOW IMPORTANT IS IT?

W

hile commissioning and editing the articles that comprise the Southern California recording supplement in this issue, I was reminded again and again of the unique character of Los Angeles facilities, their owners, technicians and operational staff. All of which is hardly surprising, given the ways in which the history, geography and inhabitants of L.A. and its sister communities have impacted the music recording, motion picture and broadcast industries. But beyond the business aspects of what makes L.A. tick, and the primary pulse of its forward directions, I was reminded time and again that ideas and motivations are highly colored by one's immediate surroundings.

Many of us can lay claim to possessing a reasonable understanding of just about every "species" of audio recording and production task (aside from the more specialist occupations, such as live sound mixing, where the necessary skills are—by force of circumstances—developed on the job, and take into account the myriad changes in acoustics, stage dimensions, performance levels, etc.). And, over the years, we develop the necessary technical skills and diplomacy. (Remember, the pro audio community is nothing if not a "people-oriented" service industry.)

To do the job properly means we must have an understanding of audio techniques and technology. We can

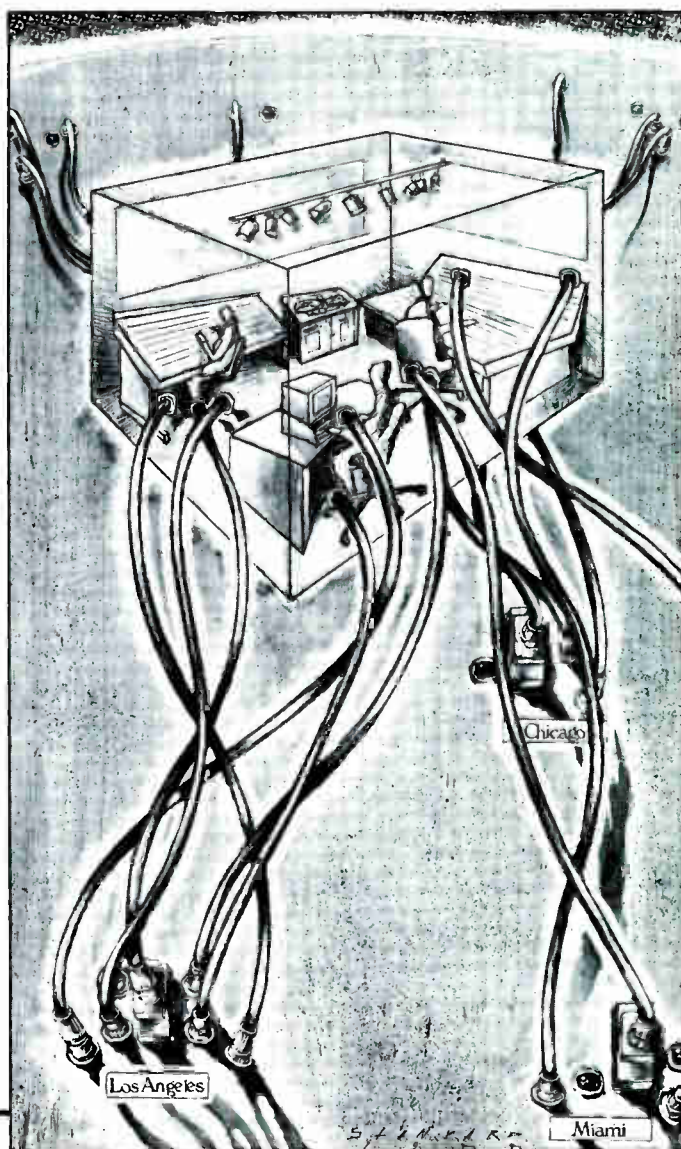
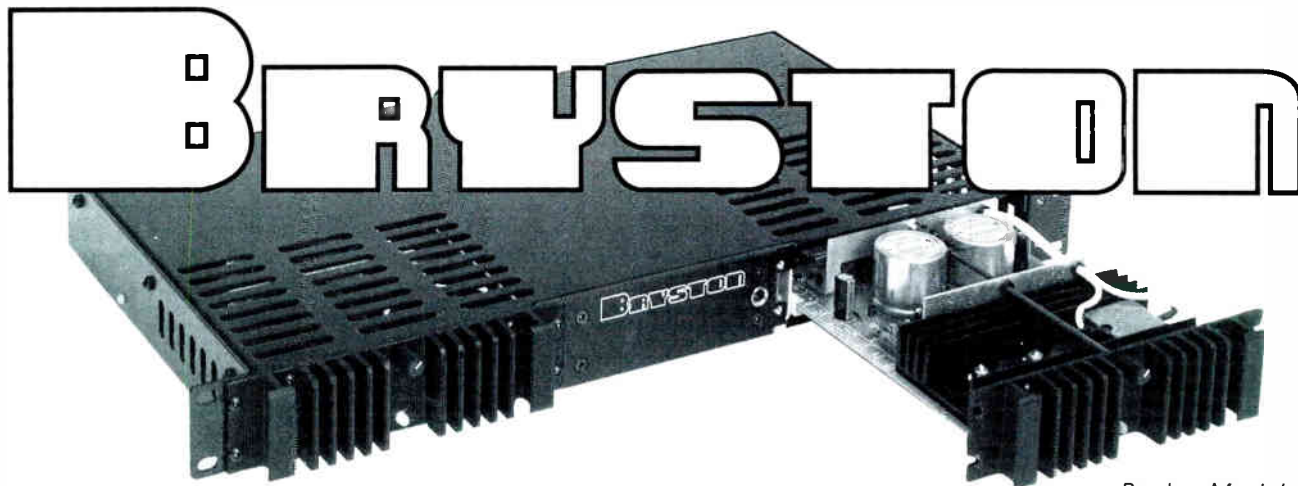


ILLUSTRATION BY STEWART JANZARD



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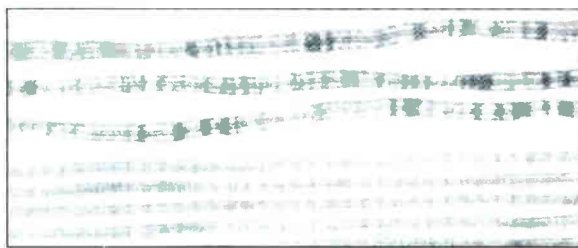
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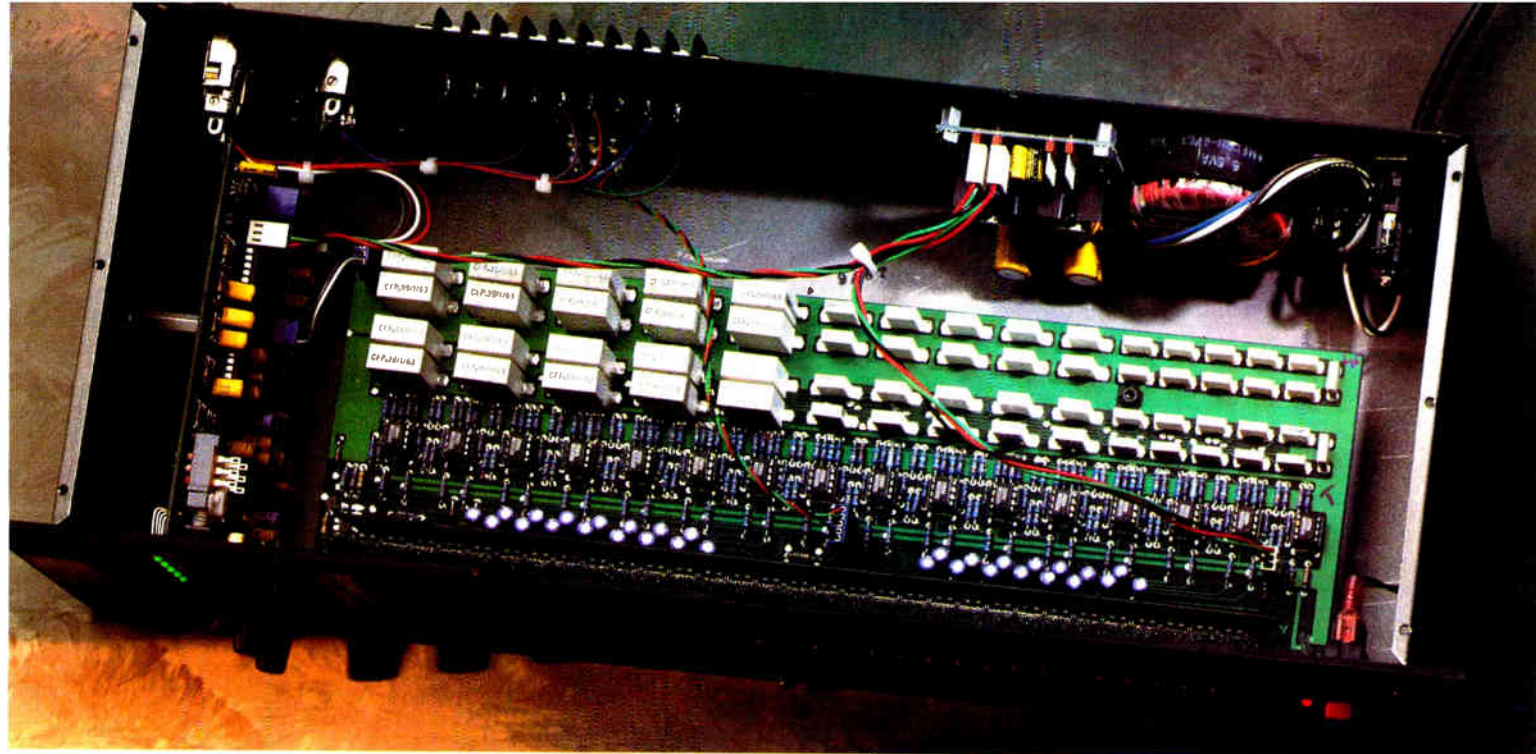
secure the necessary knowledge of recording and production tasks in various ways. One would be to undertake formal training at one of the excellent college degree programs around the country. While these courses represent a good starting point, quite often—mainly because of the size of classes and the generally restricted facilities available—they cannot provide sufficient hands-on opportunities to convince us that we *really* know how to set up a complex orchestral balance, or how to mix to picture via the Dolby Stereo surround-sound matrix.

Another way is to read up on the latest developments in the subject, either in some of the good textbooks or by subscribing to the various monthly trade magazines. Again this represents a reasonable approach, one that often will supply answers to questions you come across day to day in the studio, such as how to set up a stereo compressor on the console's 2-track mix output, or how to gate the return from a digital reverb to achieve that happening snare-drum sound.

The way that the majority of us develop our operational chops is by getting down to it; the control room and studio are our classroom. But what if you work in a Chicago video post house, rather than, let's say, a music recording complex in Nashville, or a scoring stage in Miami? Would you enjoy the same degree of exposure to the wide variety of production and recording tasks that you would in a studio that attracted a more diverse client base? I think not.

One possible answer is to relocate to a city like L.A., New York, London, Tokyo or one of the other major recording and production centers situated around the world. Although multi-room facilities that can accommodate a diverse assortment of sessions do exist in other, smaller cities, they are reasonably few and far between and—sad to relate—often represent the exception rather than the rule.

Aside from the obvious ways in which to develop production skills, an easier method of expanding your horizons (or your studio's) might be to enlighten regular and/or prospective customers about the kinds of additional audio manipulation tasks that can be provided. We all like to feel we enjoy a good reputation for a particular



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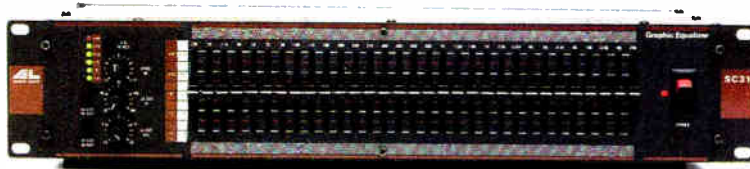
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JUXTAPOSITIONS

production skill, primarily because that usually gets us the gig in the first place.

But it might just be the case that the session producer you work with three times a year is now becoming involved in film scores and is looking for a facility and engineer to handle the task for him or her. And what about the jingle producer from the local ad agency that's looking to move into corporate multimedia productions, who needs to find a local studio that knows about surround-sound arrays and pulsed projector systems?

As long as you refrain from giving the impression that you are a "jack of all trades, master of none" (by talking up your capabilities in too many areas at once), I'm convinced there is extra business to be gained from letting current and prospective clients know that you have skills beyond your current specialization.

On a related tack, I am convinced that modern trends in acoustic designs for production facilities are making it easier for us to handle a more diverse collection of sessions. Not so long ago, it was accepted that we should try to ensure a commonality of design, so tapes recorded in one studio would sound exactly the same when the time came to overdub in another studio halfway across the world. And, yes indeed, so long as the same acoustician was involved in the design and construction of both facilities, then there was a better than average chance that the acoustic environment would be sufficiently similar to minimize, if not eliminate, any sonic differences between tapes recorded at other facilities. (Personally, I disliked the sound characteristic produced by virtually all of these rooms, not to mention the ear fatigue I experienced from mixing on bright, strident monitoring systems in rooms that used an inordinate amount of bass trapping.)

Although I readily acknowledge that this particular designer's marketing tactics proved extremely successful for him (he went on to build several hundred versions of his acoustic environment, in just about every major city in the world), I still have one major, fundamental problem with the concept.

While I applaud most vigorously the idea of a designer striving to achieve such a homogeneity of acoustic envi-

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Kenny Aronoff



ronments, I repel most vigorously any attempt to force us to work in restrictive spaces. And that is exactly what I find objectionable about these rooms: they were fine for loud rock and roll, when the room would load up nicely and the MF edge produced by the monitors gave the track just the right amount of drive and energy. But these control rooms and studios—with their highly absorbent, dead acoustics—were pretty much impossible to use for anything else.

Sure, you could disconnect the wall boxes and use near-field monitors for that mix-to-picture date, or equalize the heck out of the room system to make it work at other, less raucous SPLs. However, there was no escaping the fact that in contrast to the diversified types of sessions our facilities were being asked to handle, these rooms were one-dimensional in what they offered.

And I think any engineer who spent his or her formative years working in one of these types of rooms (the acoustician I'm thinking of spurred his contemporaries into at least mimicking

I am convinced that modern trends in acoustic designs for production facilities are making it easier for us to handle a more diverse collection of sessions.

the types of acoustic abuses he perpetrated) might be suffering from the mistaken belief that specific environments are, by definition, only suitable for certain production tasks. I do not believe that any acoustic environment should intrude sufficiently to prevent us from becoming involved in additional flavors of audio production.

All this leads me to the conclusion that any regional differences we do

experience between studios—and which comprise a complex admixture of the owner's response to the local market needs, and the staff's understanding of the regular client base's *raison d'être*—can be attributed to a healthy response to local needs and a determination to provide the best approach to various production tasks. If we all mixed audio in exactly the same way, in identical acoustic spaces, the world would be a dreary place. Let's try to do everything we can to preserve a semblance of uniqueness in the studio business. *Viva la difference!* ■

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 invent a better sounding, one-word alternative to the generic expression "digital audio workstation."



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Huey with engineer Bob Missbach at Studio D in Sausalito.



PHOTO: CHRISTOPHER MILES

HUEY LEWIS AND THE NEWS

AN INTERVIEW WITH
HUEY LEWIS AND BOB MISSBACH

BIG FUN IN A SMALL WORLD

Every time I've seen Huey Lewis over the past 15 years—whether he was fronting the great unsung band Clover, or his current band Huey Lewis & the News, or playing at the Bay Area Music Awards, or schmoozing at record industry parties—he's always looked completely relaxed. In part, that's because he's invariably seemed comfortable with nearly every aspect of his career. And why not? He's managed to become hugely successful on his own terms—radio shifted to accommodate him, rather than vice versa; he gets along swimmingly with his bandmates; and though he is fam-

ous beyond his wildest expectations, he manages to live a fairly sane, unfettered existence in his beloved Marin County, California. An undeniable part of Huey's charm is that you believe if all his fame and fortune evaporated tomorrow, he'd still be happy if he could land a gig singing in a local club. I've never heard a bad word spoken about him, never heard an ugly rumor about a rampaging ego. He's the sort of person everyone calls by first name—it's hard to imagine him as "Mr. Lewis." He's just "Huey." This is one guy who really is as nice as he seems. A nice guy who finished *first*.

by Blair Jackson

On the sunny spring day when *Mix* editor David Schwartz and I set out to interview Huey and engineer Bob Missbach (who's been at the board for the last couple of News albums), there are just a few overdubs remaining to be done for Huey Lewis & the News' new album, *Small World*, at Studio D in Sausalito. Studio D seems like the perfect environment for this kind of band—the atmosphere is laid back, and the main recording room is well-suited to the band's "live" sound, particularly the drums. The studio is close enough to the players' homes that traveling back and forth is a breeze, and it's off the beaten track enough that groupies and—even worse—record biz types aren't likely to be hanging out at the back door.

After two consecutive multi-platinum albums (*Sports* and *Fore*), one might expect Huey & Co. to rest on their laurels, maybe push the cruise control button for a while and churn out *Son of Sports*. But the music coming from the big playback speakers in Studio D's control room tells a different story. The band's rhythmic assault is more complex this time out, the sound unmistakably influenced by cul-



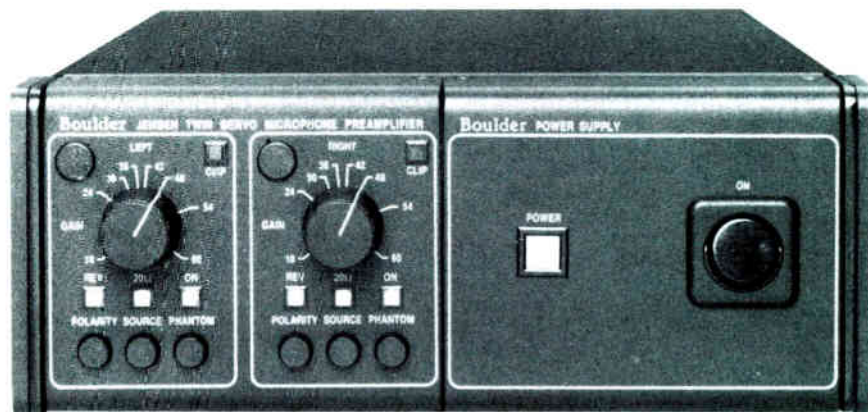
tures outside the U.S. The quintessential American rock and roll band has seen the world in the last few years and liked what it saw (and heard) enough to bring that world into its music. Not that the basic ingredients of the stew

have changed particularly; more like some new exotic spices have been added. Huey certainly seems pleased by what's gone down at Studio D the

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last few weeks, and by the time you read this, Chrysalis Records' executives will doubtless be pleased as well. This one has "hit" written all over it. No wonder Huey is so loose this afternoon.

During a break in the action, Huey and Bob Missbach chat with us about how Huey Lewis & the News work in the studio, and about Huey's expectations and aspirations. It's a casual, friendly conversation. The only thing missing from this scene in Studio D's control room is a pitcher of margaritas.

Can you contrast the making of this album and the last one?

Huey: This one was a lot easier all the way around. And a lot more fun, too. The last album, I felt like we had a lot to prove and there was a lot more pressure. And of course the ideas for songs only come when they come; you can't really conjure them up. You have to let them fall out of the sky initially.

How do you do the songs? Do you stockpile them along the way, or go in and try to get eight songs at one time when album time comes?

Huey: All those things. You stockpile them—bits and pieces usually—and then if you haven't stockpiled enough, you say, "OK, we gotta write a song. Let's meet at 10 o'clock." I think usually the best ones come to you, but not always. Sometimes you make an appointment to write a song and it works.

What's an example of one that dropped in your lap?

Huey: "Workin' for a Livin'," one of the first tunes we ever wrote, literally took about 15 minutes to write.

When you write a song or collaborate with someone, do you have a regular approach to how you work on it? Do you sit down at the piano and knock it out, for instance?

Huey: We have a couple of different approaches. One of them is that Chris [Hayes, News lead guitarist] and/or Johnny [Colla, the band's sax man] typically write music, or a progression, and I listen to it and write a melody and some words. That's one way. Another is I have an idea for a feel, or a melody, or a lyric fragment. I communicate that to the band, and they write the song from there.

For this record, we started getting some good ideas as soon as we finished making *Fore*.

Bob, were you aware that the band

was struggling when they were making Fore?

Bob: I was aware of it, but it didn't dictate what I had to do. I had to scramble a bit more as plans would change from day to day, but it didn't really affect the approach to recording it.

Huey: I worried constantly on that record. I'd leave the sessions here around 11 or 12 at night and go to bed and literally worry until three or four in the morning. It wasn't easy going.

What were you worried about?

Huey: Nothing came easily. I didn't have the ideas that I knew were just great. All the things were written the other way: "Yeah, I think this'll work," and then they'd get better and better as we worked on them. But there was nothing that I thought was great from the get-go. There are things on *Fore* I like quite a bit now, but when we were actually making it—whew! With this new record there are three or four things I've never really worried about, that I know are good tunes.

How do you put down basics? Do you play the song as a band first?

Huey: Yeah, we play as a band and then do it all over again later. [Laughs] Really, though, we do operate on a theory that it's sometimes better and faster to do and then redo than it is to do it right the first time. I think Bob will probably corroborate this, but there's very little on this record that we haven't redone. Almost nothing hasn't been redone. Maybe a rhythm guitar part here or there.

But you do it with the whole band rather than starting with the rhythm section, for example?

Bob: We start every basic the same: the whole band plugs in and approaches the song like they're going to play the whole thing. The prime objective, though, might just be to get a good drum track. There have been a couple of times where we've recut a song two, three times, until we get the right feel, the right tempo.

How familiar are you guys with a tune before you record it?

Huey: Pretty familiar. We've usually worked it up for three or four days before we try to record it. We're kind of spoiled these days. We used to actually pre-produce the record and have the tune really down. Nowadays, it's so much easier to write when you're in a multi-track studio and it all sounds good. Now we kind of arrange the song first and get a melodic idea and a lyrical idea and we cut the thing, more

or less like a demo, and then we flesh it out and put everything on it and try different things until we see how it's going to work as an idea. Then, when we're satisfied it's going to work as an idea, we put it away and work on something else. When we've got nine or ten tunes—the forest is more or less intact—we go back and redo everything. We go back to the drum track and take a look at it, if not recut the whole tune. So we sort of demo them first, then turn them into masters. In some cases the drum track holds up, and sometimes we recut 'em. It's about 50-50.

Bob: I don't know, I think it's probably more like a third get redone. *That's pretty good, because your records don't sound labored over.*

Huey: Well, that's the trick. Every step of the way, that's the trick. Although the whole band plays at once on most of our stuff, we really do redo everything but when we do, we leave all the other tracks up, because you can't just play bass to a drum track; you can't get the feel. There's all kinds of places to hit the beat—in front of it, in back of it, and so on—and the tune wants it to be in a certain place. So we try to monitor the whole thing all the

time as we replace one of the parts. That way we keep the feel intact. We're trying to get it to sound like we've just jumped in there and played it very well live. And we haven't, of course—that's the ruse.

It's to Bob's credit, largely, that we pull it off. He's very musical so the punches are always right there. And when we do vocals, for the most part, we sing it down three times and then laboriously comp it and he matches the tones very well. So we're always choosing between performance and performance, and very little punching until the very end.

Bob: The approach with the vocals is that, instead of singing one line at a time all the way through the song—a hard way to get any momentum going—it makes a lot more sense to sing all the way through the song three or four times, then go back and put it together and see what we've got. If you're working on the same verse for an hour, it's hard to get a lot of feeling.

Huey: I think it's a subliminal thing. You can get a vocal that way that's tremendously in tune but it has no fire. *How much do you depend on particular tools or resources in the studio to*

support the sound?

Huey: The newest thing we've got is this Dolby SR. Bob was pushing for it for a long time before I agreed to it. I'm Mr. Low Tech, as you know. [Laughs] I mean we've had big records that are pretty shoddy-sounding compared to what's out there. On "Power of Love" there are dropped drumsticks and all sorts of mess-ups. Yet that was a Number One record.

Anyway, Bob convinced me we should try the Dolby SR, we brought it in and it blew my mind! It really sounds better. There really is a difference.

Bob: The tracks really come back off the tape. For me—and I haven't done a lot of multi-track digital—it rivals it, if not betterers it.

Huey: To me, digital has a sound, and I don't notice a sound with the SR. It just sounds clear.

Bob: In fact, you said after the first couple of songs that it sounded better comin' off the tape than it did going in! [Laughs]

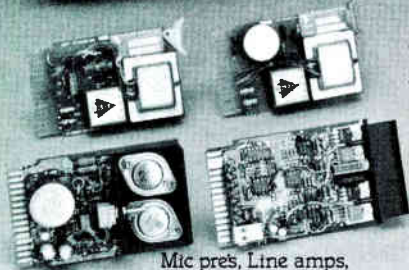
But in terms of other tools, we have a computer for miscellaneous sequencing and stuff like that, but it's not running a whole lot of programs. We're not taking advantage of some

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of the technology that other albums are using. *Certainly you're not using a lot of drum machines.*

Bob: Well...that's our secret. [Laughs]

Huey: We play to a click track, and actually we've cut tracks before that are all machine tracks. We've had one on every record. In fact, "I Want a New Drug" is all drum machine. So are "Bad is Bad" and "Hip to Be Square," and so is one of the tunes on this album.

Is Billy [Gibson, drummer] involved with those tracks?

Huey: Absolutely. He programs them. Then what we do is a lot of the fills—toms and cymbals and so on—humanly. Other times we'll actually play to the drum machine and use the kick drum from the machine and maybe the hi-hat, and Bill will play live snare, toms and cymbals. "Stuck With You" was cut that way. One of the tunes on this record, too. The majority of the tunes we've done, though—maybe 80%—are Billy hearing a click track, then playing his kit and us playing with Billy. The real key is to just listen to the song, because the song tells you how it wants to be cut. That sounds a bit cosmic, but it really is true. Certain tunes want to be right there in the pocket. Other tunes want to breathe a little more.

Do you try to keep in mind how a tune will sound performed live? For example, do you limit the number of overdubs for that reason?

Huey: Nope. We worry about that later, I'm afraid. The thing is, today, with recording technology being what it is, playing live and recording are two completely different animals, and when you try to equate the two you run into trouble—it becomes a lowest common denominator situation. The thing to do is make the best possible record you can and then make the best possible live show you can. If you're making a record today to be played on the radio, if it's going to be successful, it's going to be played all too often on every station, every hour on the hour. Therefore, the emphasis is on execution, whereas when you're playing a live show, they're only going to see the song once and what it really needs is fire, not perfection. It needs to be spectacular, not necessarily consistent, whereas the opposite is true of the record. So we've just abandoned trying to equate those two.

Since radio is the bull's-eye, do you

spend a lot of time with roughs, listening to them on car systems and then coming back in and working on them?

Bob: I check all my sounds at the beginning to make sure I'm in tune between the control room and the rest of the world. Then every day I check at home and check in my car and make sure everything's OK. Then for almost



"The song tells you how it wants to be cut. That sounds a bit cosmic, but it really is true."



the entire duration of the overdubs, I don't listen outside of the room. After 14 hours a day of this stuff, you don't want to go home and hear it more! However, we make rough mixes of tunes every day and anyone who wants a cassette copy gets it, so they can listen to parts—that's mainly what it's for. And the quality of the rough mixes changes daily as the parts change.

Huey: I'm the same as Bob on this. In the beginning of the project I will listen sonically to make sure the way I'm hearing it in the studio is the same way I'm hearing it in my car and at home. Once I've ascertained that it's great, then I don't listen sonically anymore. I do take rough mixes to listen to parts, but sonically we figure we're in the ballpark and then we don't worry about it until mix time.

Bob: The guys in the band are always coming in with the rough mixes in the morning with comments about the parts or the tempo or whatever. It's an ongoing thing and everyone is involved with it.

In the mixing process, is it generally the two of you at the console, or one or the other, or do you spell each other?

Bob: What works the best is I just

get the green light to go. Because I do all the overdubs with them, when it comes time to mix, I've got a concept of how it all should sound. They don't have to explain everything to me, because over the months that we've been working on the thing I know what they're going for.

Huey: We've rough-mixed the tune maybe 30 times.

Bob: Exactly. So they let me go and I get it going and then he comes in and the others come in and they start giving me lists and I go down the lists and fix blends and balances and pans and echoes. Then they listen again and hopefully give me a shorter list until we whittle it down and everyone's satisfied. They stay out of the room—keep their ears fresh—then come back to listen and make suggestions on how to change it from there.

Huey: And the truth is, we're usually next door finishing the record. We have been, in every case so far. [Laughs]

How does a band co-produce a record?

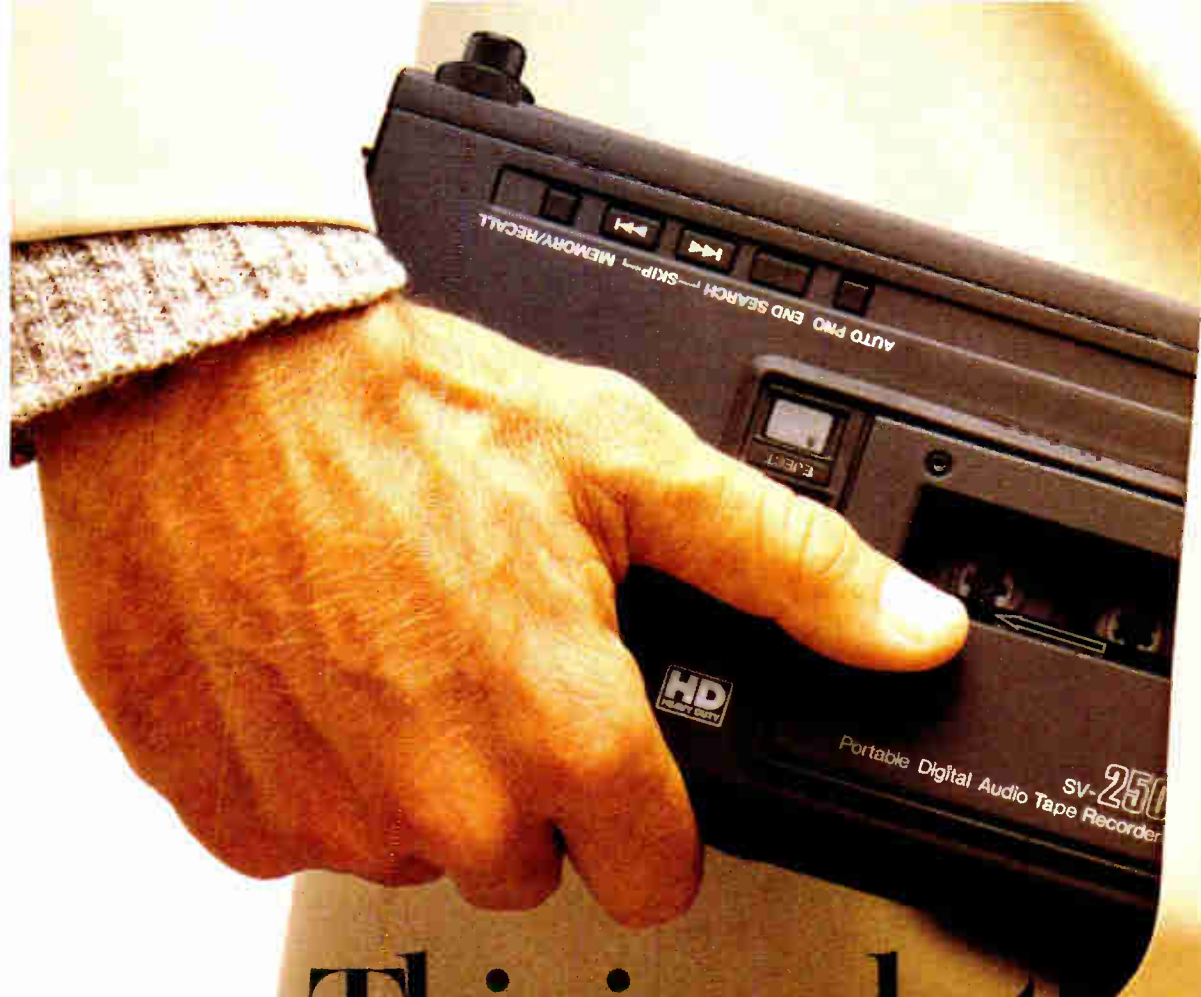
Huey: We all get along well and we've more or less developed a formula of working that makes it easier than ever before. There are pitfalls, but in general it works well.

Our first album was produced by Bill Schnee and we went for a different approach. It was real fun, too. We had a real live sound and the whole thing was sort of an art statement. It wasn't big-time radio sounding. It was what it was and I have no regrets about it, though it didn't sell well.

Was that done at Schnee's studio?

Huey: No, that wasn't built yet. It was done at American Recorders, which has since been torn down. That was Richie Podoler and Bill Cooper's joint, where "Let There Be Drums" was first cut. It was wild. It had been an 8-track and then they added four more and then four more in the wall back there, and rotary pots and those old Altec cabs.

Then, with our second album, we tried a lot of producers, although I was adamant about doing it ourselves, because I knew we had to make a move toward the "commercial," and that if anybody was going to do that it should be us. That way, if we went too far we'd only have ourselves to blame. So I insisted on that after doing test sessions with all these people. Finally, the record company let us do it track by track. In the early days, it was really me inflicting my style on everything. It



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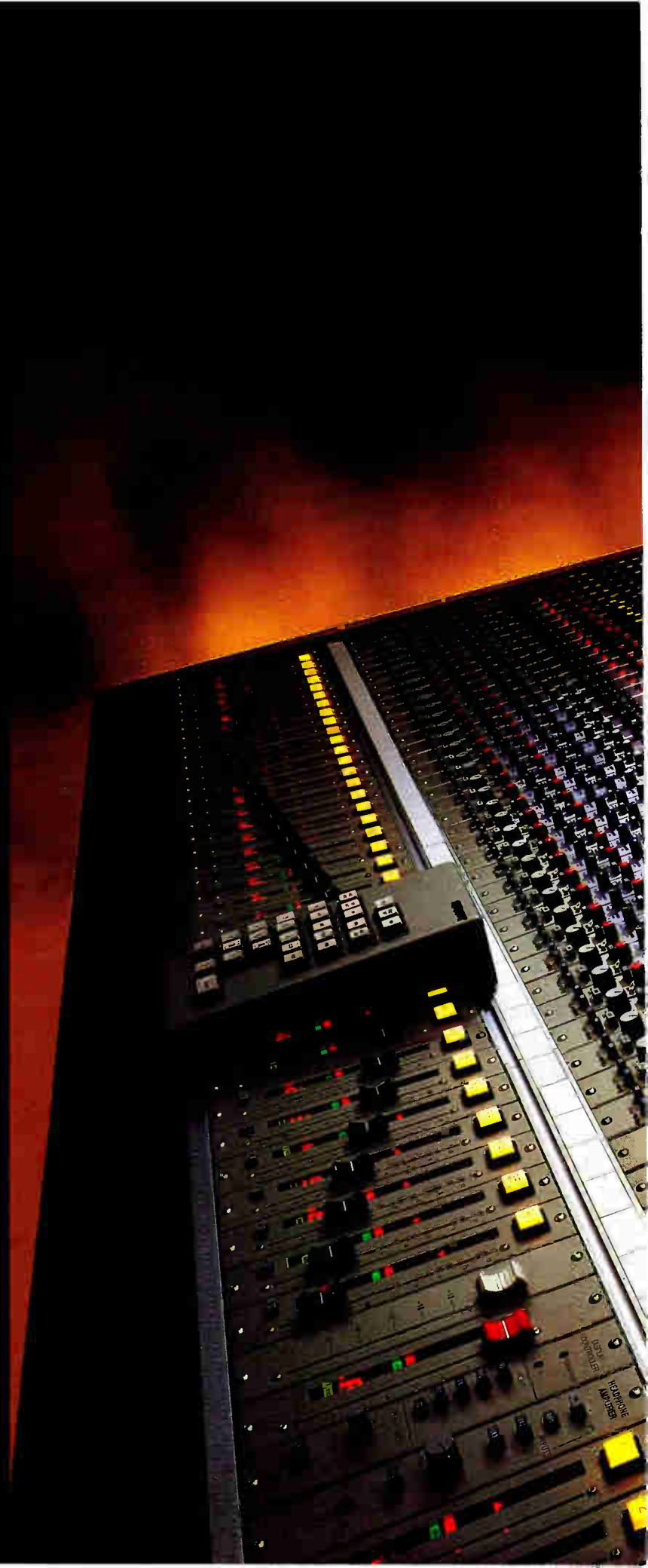
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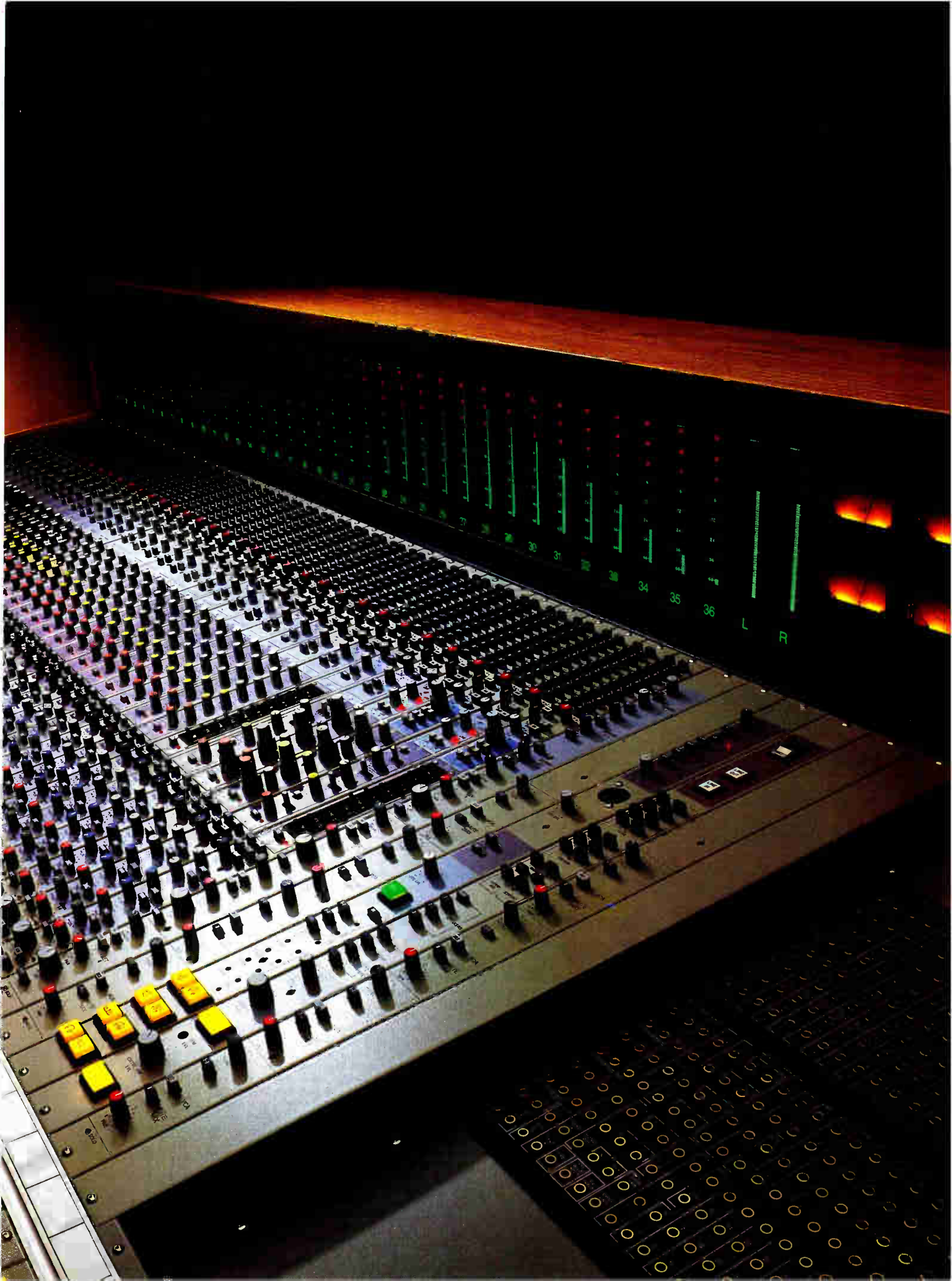
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was real important to create this style that was going to be Huey Lewis & the News. So what I liked and didn't like, I was really adamant about. Nowadays that style has pretty much been created and we can tap into the formula.

The main thing for me now is motivation. The downside of producing ourselves is that we have the same six guys—seven, with Bob—in the same room—this is the third album we've cut here—and there's no new element. So it's harder to get motivated sometimes. We'll show up in the studio and it's like—well, there's no real deadline and we can go ahead and order Italian food and blow it off and watch the ball game on TV. [Laughs] The problem then becomes playing with spark. Because we're not hungry for it anymore, you know what I mean? Let's face it—the only time we're hungry is when we're on a diet. [Laughs]

But getting back to the original question, we all understand the band and know what works best in most situations better than any outside producer could. We know the tones we want to use. We know our formulas and are comfortable with them.

Is there any particular concept behind

the new record, any slant you were going for that was different than the previous ones?

Huey: *Sports* was basically a record we wrote on the road on what we called our "Workin' for a Livin' Tour" after *Picture This*. Our record company went through a bunch of changes and we didn't know what label we were going to be with, and we had a band to feed, so we just hit the road. We had a modest following. We played the clubs in America for eight months. We toured city to city really hard and what came out of that was the *Sports* album. "The Heart of Rock and Roll" was the key-note there. We discovered towns like Cleveland, Detroit and these other places that are just fabulous rock and roll towns. Tulsa, Oklahoma, is a fabulous rock and roll town. It was a very American record because it came out of that experience.

With the success of *Sports* and *Fore*, which strangely enough has done much better in the rest of the world than *Sports*, we've spent a lot of time abroad and this album is what's come out of our international travels. I think it's international sounding, and less straight ahead. It's a bigger chunk, real-

ly. It's more musical, it's more diverse. There are more different rhythms and not just two and four all the time. I like it a lot.

Can you talk a little about some of the individual tunes?

Huey: The title track, "Small World," is our impressions of how the world has become so small. It's got the lines, "Some people take and then they never give/You've got to learn to give and take if you want to learn to live/in a small world." And that's essentially what's going on there. There's another one called "Old Antone's" that's a Cajun tune inspired by a place in Lafayette, Louisiana, where we saw this great Cajun band. We made it into a fictitious place called Old Antone's and then wrote a song about Friday nights there. We got Bruce Hornsby to play accordion on it, and hopefully Sean will play it live. There's a tune called "Walk-in' with the Kid," which is a real tough, attitude groove about taking a walk with my kid. It's sort of disguised as a gang—me and the kid are tough and nobody's gonna mess with us. [Laughs] "We'll cruise the playground and the park/And fool around till it gets dark/When we get home they'll

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want to know what we did/Walkin' with the kid."

We wrote an instrumental called "Fun Police" because we figured we'd give the sports people at the networks something else to play in back of their highlights instead of "I Want a New Drug." [Laughs] We were going to call it "49er Highlights" but we were afraid that might not work some places.

There's a disguised ballad called "World to Me," which Chris wrote and which I think is really good. I don't know if it's a single, but it's a great song. The only outside tune is a song written by Alex Call, my old friend from Clover, called "Perfect World." Again, it's got a Third World, international flavor to it. And the lyrics are great.

Are you influenced much by outside sources? When you're sitting in a hotel room in Pittsburgh listening to the radio, do you hear a great drum sound and say, "Hey, we gotta try that!"?

Huey: Not really. What I hear that I like is the old stuff. I always go back to soul music. Mind you, I do like the odd new song now and again, but by and large, when it's inspiration time I always go back to the old Stax/Volt stuff, the early stuff. I guess in my mind I sound like Wilson Pickett; I'd love to be Wilson Pickett. Of course I'm not. [Laughs] But I try to listen to a lot of different things. On my car radio I've got a button for an AOR station, a Top 40 station, a new music station and a country station, and I listen to all of them.

Would you have liked to produce some of those old soul records?

Huey: Oh yeah! That's when producing was really fun—when you had technical limitations. I'm not much of a producer. I don't have any kind of patience. Bob is a good producer and will be a great producer because he's got the musicality, he knows the machines, he's got the whole ball of wax. But I just do not have the patience for sitting around and sampling the drums: "How's your snare drum?" "It's OK." "Well, could it use a little more crack in it?" "I suppose so. What've you got?" "I've got this, this and this." "OK, but I've got to hear it in the track." "Fine, give 15 or 20 minutes." So then you do that and he says, "Well, I like the crack, but does it have as much bottom as the other one?" Next thing you know it's Tuesday. "How'd you do?" "Well, I think we've got our snare drum sound!" [Laughs] That sort of thing drives me crazy, but you'd be a

fool if you didn't do that. You've got to check out all the options.

So, Bob, do you feel an obligation to check out every piece of gear you read about?

Bob: Not everything. But I do feel that part of my job is to present them with technical possibilities. I've got to make it easy for them to play their music and have it sound the way they want it to sound. I don't want them to have to wait for me to do something. And I don't want them to be victims of the technology. My job is to know what their vision is and to help them realize it. That means I have to know what equipment to have around and how to use it.

Huey: Like I said, I'm very low tech, and so are most of the guys in the band. But then there's Sean, who likes nothing better than to curl up with a nice manual. [Laughs] So when it comes to some things where a track's not happening and we need something technical, we'll tell Sean and Bob to go at it. "Go to it, boys. We'll be in the next room practicing our putting!" *Do you ever consciously go after the older soul sound on your records?*

Bob: A little, maybe. There are a couple of songs where we use good old-fashioned room mics for the drums, to get a room sound. This is a great room for that; Studio D has about the best room sound around here. So some days I work on that—getting the room to work.

Do you ever use old microphones on vocals?

Bob: We do. As a matter of fact, we've exclusively been using an M-49 that Huey bought last album. It's got a nice hot sound. It works perfectly for Huey's voice.

Have you ever had any real nightmare experiences in the studio, either with Clover or this band?

Huey: Well, the whole last album was pretty rough. But I guess the worst was when the record company decided after the first album that we needed to work with a real "producer." So we met with ten or 12 producers—who shall remain nameless—and we'd meet them one day, work up a song in rehearsals and go cut it the next couple of days in demo versions. It was really tedious. We're a pretty complicated band in some ways, because there are a lot of different elements to juggle. It's just very hard for someone to come in from the outside and say, "OK, you do this and you do that."

Plus we're all so stubborn.

Can you talk about the group dynamic?

Huey: Well, suffice it to say that Sean and I have been playing together for about 16 years. Johnny, Mario and Billy have been in bands together for 17 years. That's really where it's at. We're really the union of two rival bands—Clover and Soundhole. We knew each other all along and have

try to understand things about each other and that has ramifications much larger than just in entertainment.

What's your best international playing experience?

Huey: Lots, really. But I guess maybe I'd single out the shows we played at Hammersmith Odeon in London. They were standing room only shows and all these great people came to see us—George Martin, Bob Geldof, some guys from Pink Floyd. And just seven years previous to that, Sean and I had been booed off that stage opening for Thin Lizzy! In fact that happened several times. We [The News] also played Manchester Free Hall to a sold-out crowd, and that's another place I'd been booed opening for Thin Lizzy. Paris was also amazing. That's a tough nut to crack, but we had a sold-out house at the Zenith, and Bruce Springsteen and Bob Geldof came by and we had a jam. It was fabulous. Japan was also great. The crowds there are unbelievable. They're very enthusiastic. They go nuts, but they're totally quiet when you want them to be. They clap in time, they sing in time. They're very knowledgeable.

Do you feel as though your audience is growing with you? A lot of bands get fixated at an adolescent stage.

Huey: Yeah, I do think so. We've got a pretty broad following; it seems to cut across a lot of age groups. So we don't write to any one group. I mean, we write the stuff that seems most real to us. It's gotta be that way, because I've always felt the thing about rock and roll is that it's got to be true, period. It doesn't matter what you're singing about, but it has to be true. When the guy sings, "I'm going to Kansas City/They got some crazy little women there/And I'm gonna get me one" we have to believe he's going to Kansas City, he knows about the crazy women and he wants to get one, period. [Laughs] That's rock and roll. And if Peter Gabriel wants to sing about Biko, we have to feel the passion that it's true. If it's false, it can be a silly little love or a song about apartheid, and it's still false. You have to sing what's in your heart. That's what the public can relate to. That defies age and everything else. ■

Blair Jackson is managing editor of Mix. He was a big fan of Clover, and even liked Huey's group when it was a "skinny tie band," as we used to say in the late '70s.



been friends. This band—Huey Lewis & the News—is now in its tenth year, so we know each other real well. We've developed our style. And part of the key is that we have disparate tastes and different approaches, so there's a lot to draw on. But through the years we've ironed out all those things so we know what Huey Lewis & the News is. That makes it easier.

How far in the future have you thought about your career? What are your aspirations for the next year or two?

Huey: This is a big album for us. I'd like us to be internationally popular. We already are a bit. *Fore* did that for us to a degree, and it was very gratifying. And I think now we have a chance to capitalize on that. This year I'd like to really tour the world properly. I don't want to sound pretentious, but you know, it really is a small world and music is one of the things that makes it smaller. And that's a really gratifying thing—to be in Tokyo or Paris or Athens and seeing people react to a song that you wrote in Mill Valley, California. Music really does bring people together, and I think that too often, because of the oceans that separate us, we don't

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by Richard Elen

APRS

A PERSONAL VIEW

The APRS (Association of Professional Recording Studios) Exhibition in London has long been one of the premier pro audio exhibitions in Europe. The APRS (which was the inspiration for SPARS) promotes the exhibition as just one of the services to its members, who comprise studios, manufacturers and, more recently, equipment rental companies. And this year for the first time, at least one studio booking agency—the General Bookings Company—offered its services from a booth at the show.

The APRS Exhibition is just that: an exhibition. And despite many suggestions to the contrary over the years, seminars and the presentation of papers do not figure in the show. Neither do workshops, and it has been only these last two years that exhibitors in demonstration booths have been allowed to actually make noises. Yet these factors, which might seem restrictive elsewhere, are an accepted

**The
straightforwardness
of presenting products
to a potential
audience is one
of the reasons
for the success
of the
APRS Exhibition.**



part of the APRS scene. The center of attention is the exhibition: the presentation of products to a potential audience. Perhaps that straightforwardness is one of the reasons for its success.

And successful it is. In recent times, the show has outgrown two other venues in London, and this year annexed another floor in the vast Olympia exhibition center. By and large this meant more space for exhibitors and visitors alike: thus, many companies showing their wares at the show felt that attendance was down this year. Not so, says APRS supremo Philip Vaughan, who claims that the number of visitors, at 5,554 over the three days, was little changed from last year (down 4% to be precise), with 555 overseas visitors representing almost exactly 10%. Vaughan suggests that the apparent space in the aisles was simply a result of the visitors having an extra floor. And while everyone exhibiting admitted feeling there were fewer people about, many were of the impression that there were as many serious inquiries as ever, while the proportion of time-wasters was lower than in the past—obviously better for business. Many blamed the (apparently phantom) lack of visitors on reduced advertising (in fact there was *more* promotion

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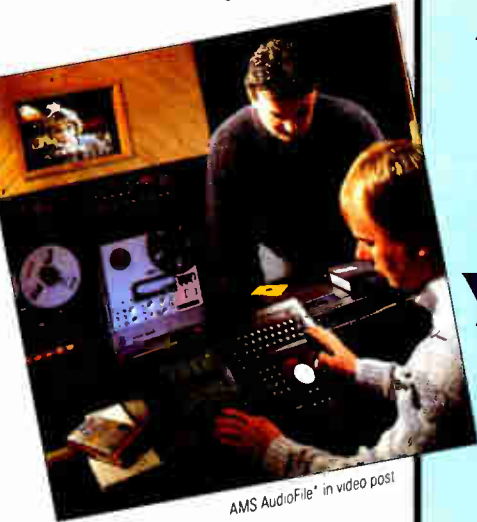
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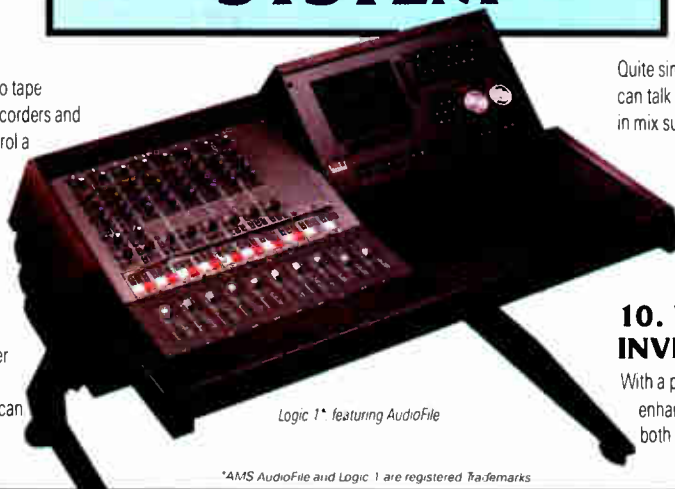
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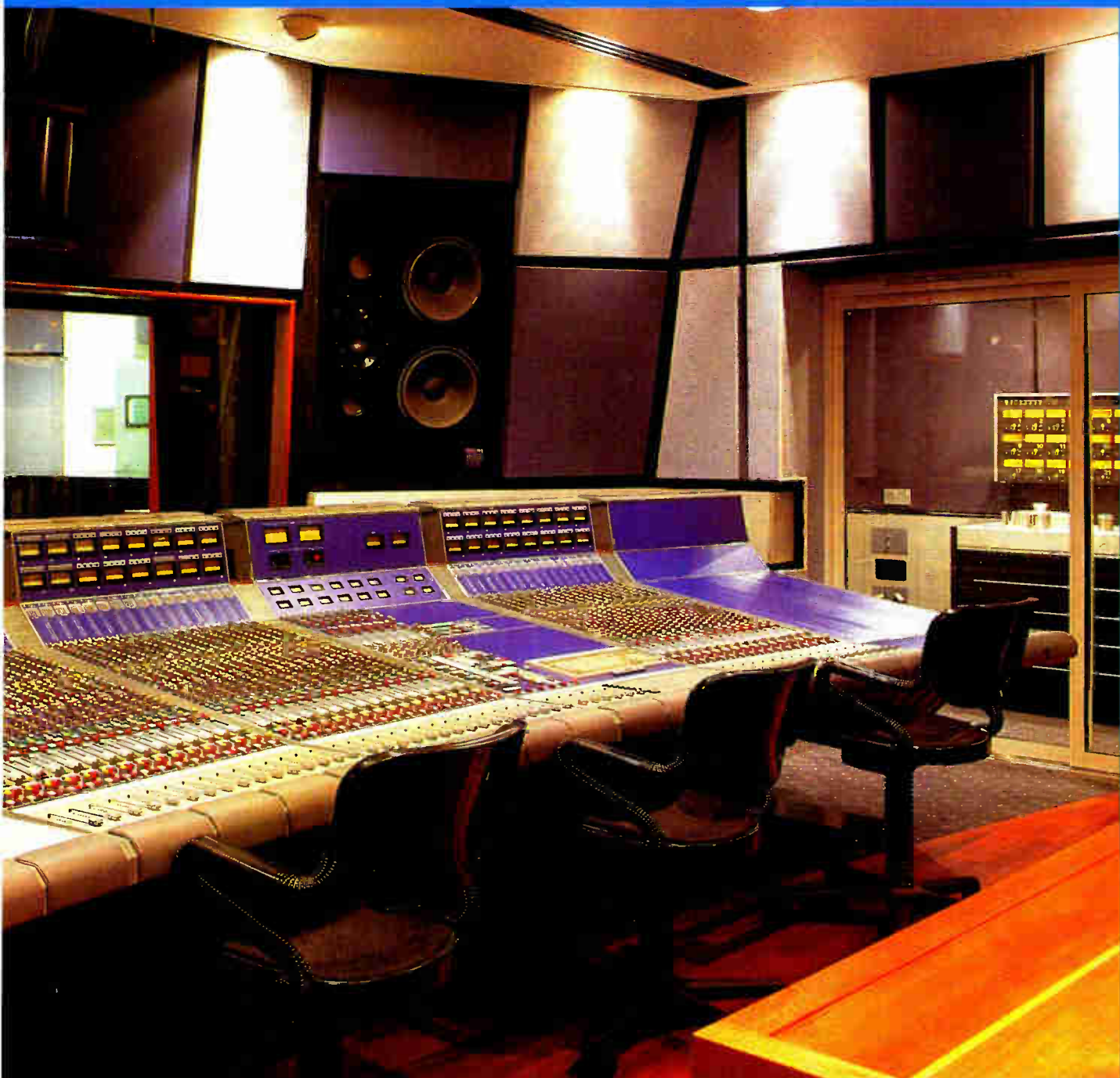
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ducer, who began his career in Boston and relocated to Southern California in the early '70s. "It was set up solely for remixing 24-track tapes; it had only a small overdub booth for vocals or instrument touch ups—although I seem to recall that we did track an entire drum kit in there one night, mainly because the producer hated a snare/kick sound on an otherwise happening track.

"The control room was real big," he continues. "We could get everyone in back of the console and had plenty of space for the racks of outboards we would rent from [rental houses] down the street. During that formative era, we really got to push the outer edge of the technical envelope; many of those L.A. sessions resulted in some of the most amazing music I have ever been involved with!"

Film Community Comes Full Circle

If the recording and production studios were benefiting from the introduction of multi-track hardware, the film community also picked up on the technology. Not long after the advent of the first mono and 2-track tape machines from Ampex and 3M, film post-production began to move away from optical recorders toward 16mm and 35mm mag-film dubbers and recorders. Utilizing standard film stock coat-

ed with iron oxide, and running specially designed mono, 3- and (later) 6-track heads, the art and science of film sound mixing—including the separation of individual music, dialog and effects elements carried on separate dubber channels so each could be edited and slipped in sync against picture—became the norm for Hollywood. At the same time, the size and complexity of film-dubbing consoles increased as more and more input and output buses became necessary to accommodate the additional DME tracks and submixes.

With the introduction in the mid-'70s of Dolby Stereo surround-sound techniques—first using four mag tracks on the release prints, soon followed by matrix-encoded Lt-Rt optical tracks—the L.A. film community proceeded full speed ahead to produce some truly innovative soundtracks. The move to stereo for theatrical release also introduced the public to surround-sound video playback in the home.

As the economic recession began to affect the traditional music recording studios around L.A. during the late '70s, many of the more innovative facility owners looked to other audio production areas for business. "We certainly felt the recession a decade ago," recalls the owner of a multi-room L.A. facility. "Our room occupancy dropped

off suddenly, as the labels began to cut back on budgets and stopped signing new acts.

"We looked at alternative sources of revenue and were attracted to the audio-for-video and film markets. Sure, there was more to getting into that area than simply adding a time code synchronizer and a U-Matic—as well as a large-screen video projector—but we were lucky to find the right combination of engineering staff who understood the differences in working with rock and roll acts and film and TV producers. While the music people liked to work at night, we found the media guys kept daytime hours.

"It's worked out well for us since then. We have successfully diversified into various areas of audio-for-video and film, including the occasional low-budget scoring date, and still handle traditional music sessions—which is our primary orientation here, despite the fierce competition and cost-cutting we're now seeing around town."

The Impact of MIDI and Synthesizers

A major factor in the shakeup in the music and recording industry during the early '80s was the advent of low-cost synthesizers and MIDI-controllable drum and percussion machines. Add these to the growing availability of semi-pro 4-, 8- and 16-track tape machines and consoles, along with the highly affordable home studio. For demos, pre-production and even budget releases, the personal-use studio became a viable alternative for a growing number of musicians, songwriters and producers.

As one studio owner recalls, "MIDI and the low-cost, semi-pro gear hit us like a brick! Now, a band could lay down not only keyboard parts using MIDI, but also very credible string, horn and percussion tracks that would have cost a fortune to duplicate in the studio. Also, they could work out arrangements in a much more cost-effective environment than a full-blown 24/32-track room. We even had one-inch, 16-track tapes come into the studio that the band wanted to bounce up to 32-track digital, continue their vocal overdubs and then remix.

"Very quickly, we had to turn our attention to building a dedicated remix room, because we started to lose out on the tracking dates to the home studios. We also added a MIDI pre-

—CONTINUED ON PAGE 218

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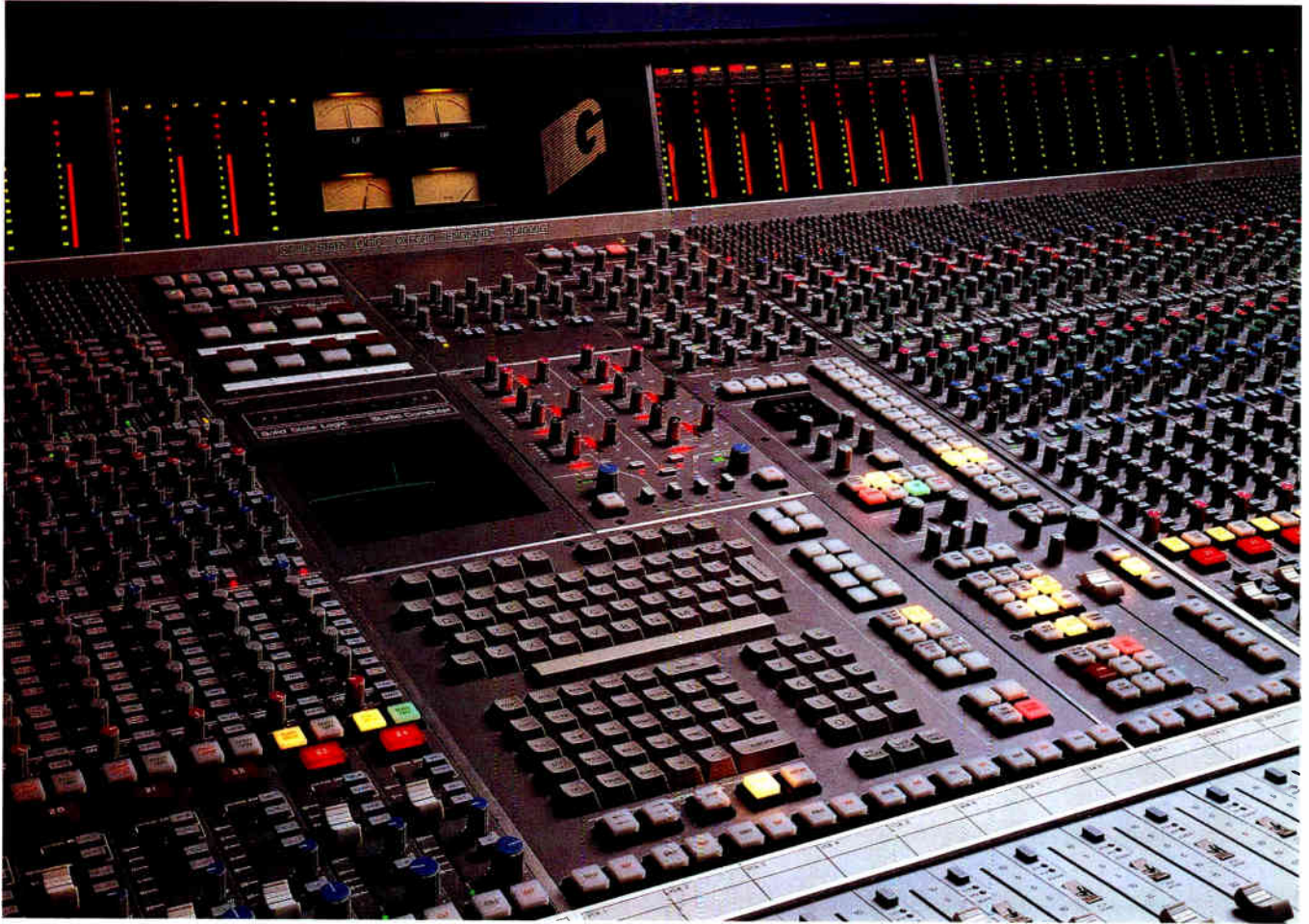
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INTERNATIONAL · UPDATE

than last year, primarily in mainland Europe) but felt the people who needed to come to APRS didn't require promotion to do so; they'd come anyway. Less UK advertising probably helped the serious potential purchaser get a good look, rather than anything else.

The exhibition's keynote was "evolution, not revolution," and there was little, if anything, that had not been seen in some form before elsewhere. The one thing that would have been brand-new was only murmured about: the Audio Tablet, from Peter Gabriel's Real World Research outfit, which was being demonstrated "back at the ranch" by distributor Syco Systems' top man, Stephen Paine. It wasn't at the show, although it was mentioned widely. "The Tablet," as it is becoming known, is a random-access editing system which has so impressed BBC Radio that they've bought six, while a major UK rental company, Audio FX, is buying four—instead, says AFX marketing director Richard Goldblatt, of one or more of the competing digital stereo recorders. And none of *us* has actually seen one yet!

On the subject of digital recorders, that was the other major new announcement at the show: a joint release, by Sony and Studer, of a 48-track DASH recorder. TEAC joined them in announcing a 24-track DASH machine to appear before year's end.

Yes, it was digital audio that had pride of place at APRS '88. Even if few items were strictly new, those that were there were at least working better than last time we met (or were finally working at all). In fact, the Big Two digital manufacturers—Sony and Mitsubishi, if they slipped your mind—showed tweaked versions of their top-end machines, in the form of the 3324A and the X-850 II. It would be mean to say they have been modified to go through doors more easily, but it would be true to point out that increased use of LSI technology has made the X-850 II smaller and lighter, while the 3324A boasts big wheels, handles on the sides, completely redesigned filters and other technical advancements.

The Akai A-DAM digital multi-track was on show in working order. It doesn't matter about incompatibility between studios when you can put

your digital recorder in the back of a station wagon and off-load it at the studio where you want to work. And at around \$35,000, it won't be that incompatible for long. Seventeen minutes per 8mm videotape may be a limitation for some, but not for many. And 12 tracks is fine for the growing number of people who want to hook up computer-based MIDI systems to time-coded tape with a view to recording a few acoustic instruments—more on this later.

On the subject of digital audio workstations, there were a comparatively large number at APRS this year, from the jumped-up sampler (like Hybrid Arts' effort) to the ultimate post-production systems from the likes of New England Digital, Digital Audio Research, Solid State Logic and AMS/Calrec.

The DAR SoundStation II was hampered only slightly by new software delivered the morning of the exhibition. Whatever you think of the screen display—modeled by all appearances on the AMS AudioFile except for the rather curious way of handling direc-

is in no doubt.

During the course of the show, NED (whose UK distributor, Turnkey, was recently taken over by Harman International, resulting in the forced redundancy of one of its top Synclavier experts) acquired a very large screen, driven by a Mac II under the table. Although it was only running a terminal program, the effect was hundreds of times better than any display I'd seen on the system before. And there is apparently to be a full Mac II front-end in due course, which will make a huge difference. Downstairs, another bit of the Harman empire was showing, for the first time, the REIMS console: a cost-effective, automated console with everything you'd want on it except, for some unaccountable reason, centralized routing. Odd.

And rather down-market of such systems, but a million miles away from being a jumped-up sampler, the Audio+Design SoundMaestro system was on full view—with almost all its software in place. This is a stereo, digital, hard disk-based editing system aimed at VAPP and CD premastering and it is one of the best-functioning

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programs I've seen on an Atari ST. It sounds good too, and although rock-and-roll editing is under development, this system is an excellent example of modern technology that doesn't need to imitate analog tape recorders to make an edit simple, accurate and fast. What a pity A+D have to waste their time writing software to satisfy the traditionalist potential purchaser rather than adding further facilities. Also on show at the same booth was A+D's "ProDAT," a modified Sony 1000 DAT recorder with every interface you can possibly imagine—at around \$3,500, not a bad price in the UK.

Of course, computers were in evidence everywhere, more than ever before. And this year it was not all Atari STs, as in 1987. There was the largest number of Macintosh systems gathered together in one place in the UK since the MacUser show last November. There were PC clones and Amigas, you name it. One outfit, The Synthesiser Company, had an entire wall of their booth covered with different types of machines, each running more than one program. The Macintoshes, some of which had large screens, looked their usual selves, running several programs under *MultiFinder*; while Dr. T's multi-tasking environment on the ST did everything but look user-friendly. In the corner, an Amiga (noted for its color graphics) did an excellent job of pretending to be a poorly set-up PC clone (thanks to some more boring screen design) until you dragged the sequencer out of the way *while still playing* to reveal another (unfortunately, equally ugly) program working busily away. The TSC stand also showed the new Simmons electronic percussion brain and system.

At the TSC booth I discovered a Very Important Fact, later independently confirmed 100% by three other sources: there is *no* DRAM (Dynamic Random Access Memory) shortage. The reason U.S. customers are finding the price of memory upgrades going sky-high and availability at an all-time low is that only Toshiba knows how to properly make the bigger chips, and as Reagan is annoyed with them, you can't buy their chips in the States. In Europe we can get them with little or no problem. Any other "explanation"

you hear is, quite simply, not true.

Most of the computers were attached to MIDI control programs. Steinberg, well known for their top-class ST software, have turned their attention to the Mac, while their UK distributors, EvenLode, recently acquired Digidesign and were showing *Turbosynth*, Digidesign's answer to Blank Software's *Alchemy*. And in another booth they were in competition on the ST with another German ST MIDI company, C-Lab, who offers *Notator*, the best combined sequencer/notation package I have seen.

There was even the odd synthesizer lurking at APRS. Or, if you were on the Syco stand, a "Re-synthesizer," in the shape of the Axcel. Although looking at the vast array of touch-sensitive LEDs that comprise its "front panel" is enough to make your eyes go funny, there is nothing funny about the way this example of Canadian genius can

tion in the world market, behind Philips/Dupont Optical and Sony.

Present owners are investment company Quatro Ltd. and its associated company, Pro-image Studios Ltd. Quatro and Pro-image will retain majority ownership after \$25 million is raised from institutional investors.

Genetic Studios Re-Opens with Digital System

One of the UK's first studios to recognize the potential for residential recording facilities, Genetic Studios has rebuilt its complex, which features 32-track Mitsubishi digital recording.

In 1978, owner Martin Rushent built the original Genetic Studio, the recording site of hits by the likes of Elvis Costello, Altered Images, The Stranglers and Human League during the following eight years.

At the end of 1986, Rushent decided to reevaluate the studio business.



run an FFT on virtually anything, in virtually an instant. The resynthesized signal can then be manipulated to your heart's content. All you need is sensitive control room lighting so you don't get spots before the eyes. After I'd seen that, it was time to go home.

Australia's Disctronics Goes Public

Disctronics Ltd., the world's third largest manufacturer of compact discs, announced plans in June to become a listed public company. Public listing was planned through BGL International Ltd., which will change its name to Disctronics Limited.

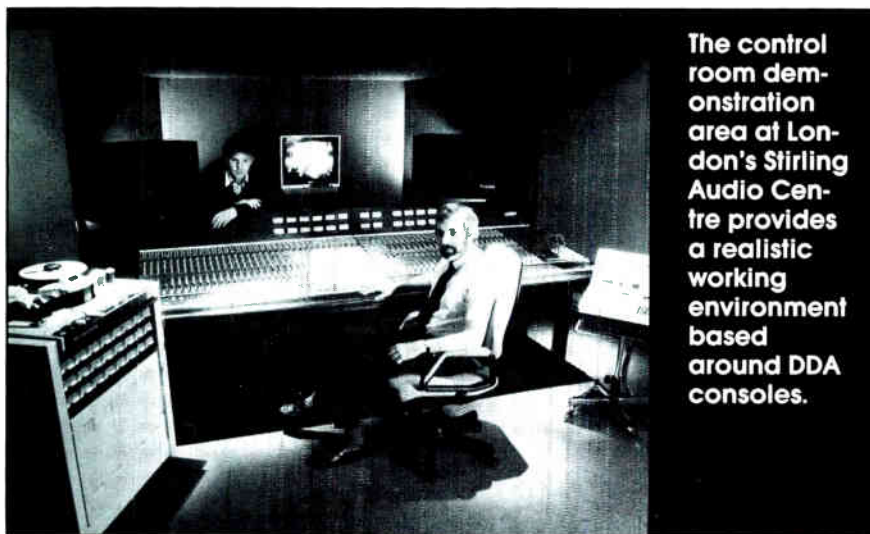
Disctronics' initial plant opened in early 1987 in Melbourne. They acquired their Southwater, UK, plant in August 1987, and Laservideo's Anaheim, Calif., and Huntsville, Ala., plants in January of this year. Disctronics' global network of factories places the company in the third posi-

"We felt there was a surplus of studios competing for work from UK artists, so we decided to concentrate on attracting foreign acts, especially from Europe and America, who would benefit from working in a residential location," explains Rushent. In deciding to offer a digital recording facility at competitive rates, Rushent chose the digital Mitsubishi X-850 "because it is now the standard format worldwide."

Although the studio refurbishing will continue for several more months, Genetic is very much in business, with bookings for the two-studio complex extending to the end of the year.

International Studio News

UK's PML studio recently purchased two DDA AMR 24 consoles. A 36 x 24 desk was installed in their new room designed for exclusive use by the production team of Stock, Aitken and Waterman, while a second 28-input



The control room demonstration area at London's Stirling Audio Centre provides a realistic working environment based around DDA consoles.

board was placed in the studio's new tracking room... Other DDA news comes from Tel Aviv, Israel, where a 16-input DDA D Series console was installed as part of an extensive concert hall sound reinforcement system in the Tel Aviv Museum—in time for the country's 40th anniversary celebration... A 32-channel DDA DCM-232 board was the choice of Rainbow Studios in Oslo, Norway... Mayfair Studios in London reports that the finishing touches have been put on their new Studio Two, and the room is ready for its first clients, The Bee Gees, scheduled to record their new album there. The studio's 72 input SSL desk is one of only five in the world... Leo Sayer's most recent album has been completed at his own West London studio, using a Soundtracs CM-4400 console for recording and mixing... A pair of Soundtracs PC24 consoles were recently purchased by Mark Knopfler and Alan Clark of Dire Straits for use in their home studios. Knopfler's system will be used with a Synclavier to produce finished masters... Great Linford Recording Studios in Milton Keynes has announced the opening of "The Pavilion," a digital overdub/pre-production suite. The new facility features a Neve desk, and overnight accommodations for up to six people... The SSL-equipped Crescent Studios, located in Bath, has recently acquired an ATC SMC200 monitor system, a SMPTE/MIDI system for synchronizing to video and an array of new outboard equipment... BBC Scotland has recently taken delivery of three Lyrec TR-533 24-track audio tape recorders. One is for the large classical music studio, another for the

pop and light music room and the third is for the audio/video dubbing studio, for use in sweetening and dubbing in conjunction with a Q-Lock Eclipse synchronizer... Across the Channel, Harrison Systems has announced that the Ministry of Culture of France is the latest European customer to acquire the totally automated Series Ten mixing desk. The console will be used in their Paris facility for audio training in the cinema, video

and music sound recording fields... Meanwhile, on this side of the Atlantic, Soundcraft Electronics Canada reports that DMS Studios in Montreal has purchased a second Saturn 24-track recorder and TS12 in-line console for its facility...

Bits & Pieces


The recently opened Stirling Audio Centre in London features a 1,000 sq.ft. area for demonstrating a wide range of professional audio equipment to recording engineers, broadcasters and musicians. The new facility also contains a full control room suite and a "MIDI Corner," where equipment can be tried out in a hands-on situation... Vancouver-based Richmond Sound Design reports that Det Norske Teatret in Oslo, Norway, has installed a custom 320-channel RSD Command/Cue theater sound memory programming system. The system controls levels, fades, panning and routing of sound throughout the theater. The software-based system includes a programmer's workstation and remote operator's touch screen...

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Music Group's new Studio A is a "room-with-a-view" over Sunset Boulevard in West Hollywood. Recording hardware includes an SSL Series console, custom George Altschurger main monitors, Studer analog and Mitsubishi digital multi-tracks. Hi-tech in Tinseltown.

STUDIO PHOTO • RICHARD AARON, INSET • JAMES BLANK/AFTER IMAGE, POOL • MONTES DE OCA/LIGHT IMAGES

LOS ANGELES RECORDING & PRODUCTION

DIVERSIFICATION & SPECIALIZATION

by Mel Lambert

In these days of changing economic realities and a continuing reevaluation of our industrial and commercial trading relationships with the rest of the world, it is hardly surprising that the professional audio industry is facing some interesting—albeit turbulent—times. With diversification being the name of the game for an increasing number of studios throughout the country, facility owners are seeing an ever-wider spectrum of audio projects pass through their doors.

Nowhere is this diversity more evident than in the Greater Los Angeles metropolitan area—including the San Fernando Valley, Burbank, Glendale, Orange County and related communities throughout the L.A. basin—arguably the mecca of the Southern California recording industry. With a history that has been influenced by the major and independent record companies,

motion picture industry, radio and television networks, advertising agencies, corporate and industrial clients, the L.A. studio industry has been through a great deal of interesting changes during the past 75 years.

The major “species” of audio production—music recording, motion picture scoring, audio-for-video, broadcast and multimedia, jingle/commercials, film and video post-production—are alive and well and occupying session time at a growing number of L.A. facilities. This article looks at the role of Los Angeles and its surrounding area in the developing world of audio recording, and examines the unique phenomena that put Los Angeles on the map as one of the world’s major recording and production centers.

The analysis presented here results from literally dozens of hours of informal discussions with leading figures and founding fathers/mothers in the Los Angeles recording community.

In fact, I talked to so many individuals while researching this article—and also while networking with facility owners and equipment manufacturers during the commissioning of accompanying articles—that I decided to refrain from mentioning any “industry sources” by name. Instead, I report the opinions of individuals anonymously. None of these people were reluctant to pass on their opinions to *Mix* readers or sought a cloak of anonymity. Rather, it would be unfair to attribute a quotation to just one person, when it was often shared by many of the facility owners, engineers, producers and session musicians.

Hollywood: Foundation of the Motion Picture Industry

It has often been observed that the story of the Los Angeles recording community closely parallels, in its formative days at least, the fortunes of the motion picture industry. In the early decades of this century, before that age of sound, L.A. was home to the talented producers, directors and craftspeople who molded the future of the film community. When sound came to the movie industry in the late '20s, with the 1927 release of *The Jazz Singer*, the technicians who handled the early disk and later optical- and mag-based systems quickly became an integral part of the production team. Orchestral recordings represented new challenges, as did the capturing of usable dialog when the director insisted that no microphones be visible anywhere on the set—not even a boom.

The spacious recording area for Rumbo Recorder's Studio A features acoustic design supervised by owner Daryl Dragon, whose nautical interests are reflected in some of the maritime features.



During the '40s and '50s, a growing overlap and synergy existed between what were to be the two fastest growing media of those two decades: movies and popular music. In fact, the larger record companies were closely associated with the film industry. It is hardly surprising, therefore, that this synergistic relationship resulted, particularly on the West Coast, in a high concentration of film music and commercial releases from bands and soloists featured in the hit musicals of the day being recorded in L.A. facilities.

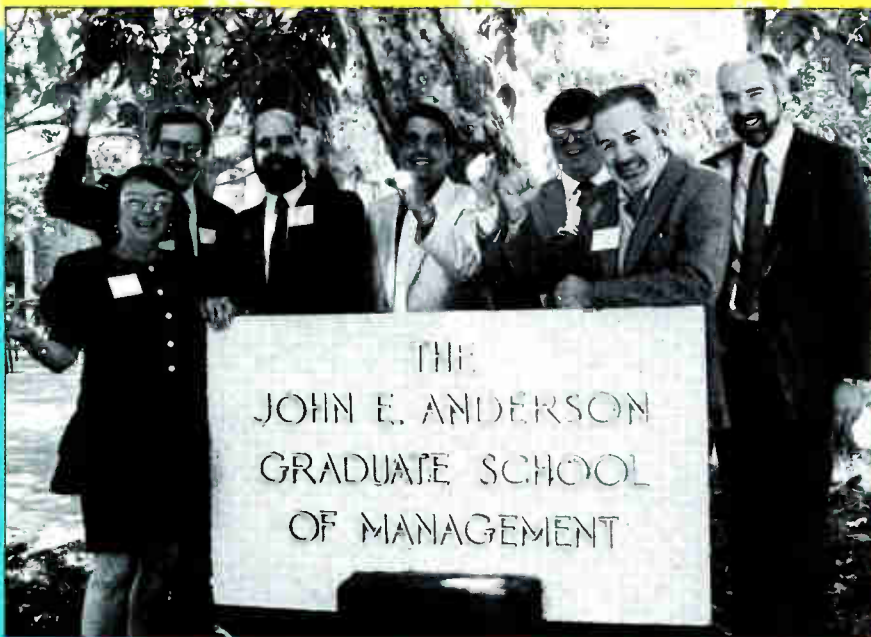
(Interestingly, this phenomenon has seen a resurgence during the past half-decade, albeit in a mutant form, as film soundtrack albums began to supply an increasing amount of the music that made its way onto the charts; whether this proves to be good or bad for the future of the music industry remains to be seen. Certainly, few artists are reluctant to pass up the exposure of being included on the soundtrack of a popular movie. I wonder, however, at the artistic possibilities of communicating with an entire generation of moviegoers via a three-minute single played over a car chase, gun battle or love scene.)

Parallel with the ongoing rapport between the film and record indus-



PHOTO: ELIZABETH ANNAS/PHOTOSENSATIONS

Ground Control's Studio A control room features a 60-input SSL SL 4000 E-Series with Total Recall automation, two Studer A800 analog 24-tracks, Studer A820 analog 2-tracks, a Mitsubishi X-850 PD-Format digital 32-track, a TimeLine Lynx time code synchronization system, plus TAD TSM-1 monitors powered by Studer and Perreux amplifiers.



SPARS executive director Shirley Kaye (far left) with board members (left to right) Richard Trump, president of Triad Productions; Dwight Cook, president of Cook Sound and Picture Works; SPARS president Guy Costa, vice president of operations at Motown Industries; Nick Collieran, president of Alpha Audio; Chris Stone, president of Record Plant; and David Porter, president of Music Annex, at a recent SPARS business conference.

SPARS IN SOUTHERN CALIFORNIA:

Assisting & Advising the Studio & Production Services Industry

by David Gordon

SPARS (Society of Professional Audio Recording Services), which serves the entire industry nationwide, is especially active in Southern California. Its members include major facilities and manufacturers, as well as the growing number of personal-use studios and specialized service facilities. Membership in SPARS offers numerous benefits, including reduced admission rates for the highly successful business



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TRUTH: JBL eliminates these consequences by achieving a new "truth" in sound: JBL's remarkable new 4400 Series. The design, size, and materials have been specifically tailored to each monitor's function. For example, the 2-way 4406 6" Monitor is ideally designed for console or close-in listening. While the 2-way 8" 4408 is ideal for broadcast applications. The 3-way 10" 4410 Monitor captures maximum spatial detail at greater listening distances. And the 3-way 12" 4412 Monitor is mounted with a tight-cluster arrangement for close-in monitoring.

CONSEQUENCES: "Universal" monitors, those not specifically designed for a precise application or environment, invariably compromise technology, with inferior sound the result.

TRUTH: JBL's 4400 Series Studio Monitors achieve a new "truth" in sound with

an extended high frequency response that remains effortlessly smooth through the critical 3,000 to 20,000 Hz range. And even extends beyond audibility to 27 kHz, reducing phase shift within the audible band for a more open and natural sound. The 4400 Series' incomparable high end clarity is the result of JBL's use of pure titanium for its unique ribbed-dome tweeter and diamond surround, capable of withstanding forces surpassing a phenomenal 1000 G's.

CONSEQUENCES: When pushed hard, most tweeters simply fail. Transient detail blurs, and the material itself deforms and breaks down. Other materials can't take the stress, and crack under pressure.

TRUTH: The Frequency Dividing Network in each 4400 Series monitor allows optimum transitions between drivers in both amplitude and phase. The precisely calibrated reference controls let you adjust for personal preferences, room variations, and specific equalization.

CONSEQUENCES: When the interaction between drivers is not carefully orchestrated, the results can be edgy, indistinctive, or simply "false" sound.

TRUTH: All 4400 Studio Monitors feature JBL's exclusive Symmetrical Field Geometry magnetic structure, which dramatically reduces second harmonic

distortion, and is key in producing the 4400's deep, powerful, clean bass.

CONSEQUENCES: Conventional magnetic structures utilize non-symmetrical magnetic fields, which add significantly to distortion due to a nonlinear pull on the voice coil.

TRUTH: 4400 Series monitors also feature special low diffraction grill frame designs, which reduce time delay distortion. Extra-large voice coils and ultra-rigid cast frames result in both mechanical and thermal stability under heavy professional use.

CONSEQUENCES: For reasons of economics, monitors will often use stamped rather than cast frames, resulting in both mechanical distortion and power compression.

TRUTH: The JBL 4400 Studio Monitor Series captures the full dynamic range, extended high frequency, and precise character of your sound as no other monitors in the business. Experience the 4400 Series Studio Monitors at your JBL dealer's today.

CONSEQUENCES: You'll never know the "truth" until you do.



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tries, the major radio networks were more than willing to use the West Coast as a base of operations and further fuel the technical developments in the emergent studio business. During the '40s and early '50s, the expanding NBC, CBS and ABC networks ran live broadcasts from major dance halls, clubs and production studios around the L.A. basin. Many radio producers and engineers forged successful careers by developing and then finessing the ability to quickly mic a large orchestra, vocal section and soloist, and make the ensemble sound like they did on 78 rpm (and later single and album) commercial releases. Some of the earliest independent recording studios were set up specifically to handle such live or prerecorded (to disc) broadcast sessions.

Expansion of the Record Business

If the war years represented lean times for the entertainment and music business (many seasoned studio owners, producers and engineers recall the American Federation of Musicians' ban on the majority of recorded music during WWII), the subsequent postwar boom in consumer spending and accelerating interest in popular music helped fuel the expanding studio business of Southern California.

"Yes indeed, those really were gangbuster days," recalls a prominent studio owner who relocated from the Midwest in the late '40s to work at, then manage, a major L.A. recording facility. "Just after the war, with a lot of servicemen passing through L.A. [and other West Coast naval ports] on their way back from the Pacific Theater, the club scene here was real hot. And because it was pretty cheap to record a session at one of these places, we were often brought in to cut a couple of sides for them.

"Pretty soon, though, it became obvious that there were two major pulses here in L.A.: the film business, which was mainly union gigs looking after audio recording on permanent soundstages and on location, film scores and post-production; and the live radio shows from various venues around town, plus the occasional recording. There were one or two non-film, non-broadcast studios that took care of the odd music session, jingle recording or commercial, but the wide selection of

studios we see today sprinkled throughout the Los Angeles basin didn't start to happen until the mid- to late '50s."

Major Labels and The Independent Studios

The driving force behind this virtual explosion in recording and production capability was the youth market, which, in turn, created and subsequently paid homage with the consumer dollar to its new idol: the recording artist. As the role of the record-

—FROM PAGE 49, SPARS

conferences held throughout the country and access to all printed material and audio cassettes produced by the society. SPARS also operates an on-the-job internship program at recording facilities and administers the respected SPARS exam. Members of SPARS are part of a national network of audio professionals, sharing valuable information regarding the financial and technical needs of today's evolving audio industry.

"Our major role is to serve as an information network that reflects the changes in the industry," says Guy Costa, president of SPARS and managing director of Motown/Hitsville Studios in Hollywood. "At one point we clarified what we call the 'Mothership Scenario,' which is the type of large facility with many satellite operations. We've also identified the progressive diversification in the industry in order to provide tips on marketing and successful business operations. Now we are seeing growth in the area of personal-use and home studio operations. Our recent business conference held at UCLA was a very successful seminar where industry leaders shared valuable insights of marketing diversified recording services.

"Our internship program has provided a doorway for new talent into the higher echelons of the industry, with on-the-job experience that often leads to employment at such studios as Motown/Hitsville, Record Plant and Capitol Studios here in Los Angeles," Costa continues. "The SPARS exam helps to identify valuable people and give them access to the job market. A good example is Ron Lagerlof, who was

ing artist began to gain prominence throughout the industry, and as the youth market became increasingly hungry for new, fresh talent, the record labels and the A&R coordinators began to search out more and more new acts to fill the label's roster. One of the carrots that could be dangled before the artist/band by such A&R types was the opportunity to get involved with other aspects of their release's production, and also to select the recording venue.

brought to my attention because of his high score on the exam, and is now my studio manager. The exam has been very successful and is continually being updated to reflect the creative production aspects of engineering as well as the technical certification."

Perhaps the most dramatic presence of SPARS was in the clarification of the tax situation for independent engineers. Chris Stone, president of Record Plant and former SPARS president, explains, "In 1982, the SBE (California State Board of Equalization) demanded that independent engineers pay 6½% sales tax on all their earnings, retroactive to 1976. There was widespread panic.

"One of our members, David Rubinson [then owner of The Automatt Studios in San Francisco], called me, and we helped form the California Entertainment Organization. CEO raised \$125,000 for lobbying in Sacramento, which led to a revision of the tax law and the exemption of independent engineers from taxation on record dates. Our efforts led the way for similar revisions in a number of other states.

"This issue is an ongoing one, especially with regard to the tax situation for audio in the film industry. SPARS is a leading force in defending the rights of those throughout the audio industry.

"Membership in SPARS also means free consultation from the board of directors," Stone adds. "I just received a call last week from an engineer who needed help in his dealings with the SBE, and we resolved his problem in 20 minutes. Members call us when they are in trouble, and we are there when they need us." ■



Studio 55's Studio B is equipped with a 72-input Solid State Logic SL4000 E-Series console retrofitted with a G-Series computer and G-Series EQ sections. Like Studio A, the room features Studer A800 multi-tracks and Ampex ATR-102 2-tracks, in addition to a custom TAD monitoring system designed by George Augspurger.

The end result, during the '60s, was the demise of the label-owned studio and the growth of the independent facility. The causes for this switch in emphasis are too complex for a single article but can be summarized this way: "You have to understand a major label's mentality," recalls a well-known, veteran producer. "On the one hand, it was grooming all this new talent and, on the other, trying to run its in-house studios. But the labels possessed a corporate mentality that didn't cut it with these new up-and-coming artists, who were wielding a lot of power because of their earning potential. In other words, 'Don't mess with success'—let the groups record where they felt the most comfortable—became the way it was."

We need to acknowledge that these label-owned studios were far from out-of-date when it came to their recording hardware. Technology wasn't the question; it was more the creativity in the studio and the freedom to use the environment in ways they chose.

"Sure, we pushed for and got a lot more artistic freedom," confesses a successful guitar player from the late '60s who is now producing up-and-coming bands in L.A. "The new independent L.A. facilities—particularly

those that were opened by people with close connections to emerging bands and solo artists—were where we wanted to record. They not only had the latest hardware and toys, and the hippest engineers—those guys could make a track jump!—but a vibe you didn't find in the label-owned studios."

Capitol, Motown, Warner Bros. and A&M—to name but a handful of the current major labels—operated very successful, multi-room facilities in Hollywood, but the day of the independent was here to stay.

Multi-Track and the Studio Business

Concurrent with independent facility growth—and arguably one of the reasons enhanced creativity in the studio became possible—was the advent of multi-track. Mono led to stereo in the early '50s, followed by 4-track during the early '60s, 8-track on one-inch and then 16- and 24-track on 2-inch during the late '60s and early '70s. And of course, dbx and Dolby Laboratories came along at just the right time (chicken or egg, I wonder?) with elegant noise reduction systems that allowed usable results to be achieved with narrow track formats.

Undeniably, the recording studio

became, for a growing number of artists, an integral part of the band: multi-track techniques extended what four or six band members could achieve individually and allowed multiple parts to be generated with consummate ease. And with extensive overdubbing now possible, it is small wonder that the quality of audio performances of albums and singles recorded during the '60s and early '70s at Los Angeles studios reached an all-time high.

A seasoned session musician who has appeared on thousands of singles and album cuts recorded at dozens of L.A. facilities recalls: "We also began to develop a network of studio regulars that could cover for band members who might not have their chops together. We made a lot of those guys look real good: by overdubbing guitar and synth lines, we could add that elusive 'something' to a track that took it beyond a conventional three-minute song. We were in hot demand all over the Southern California area and, of course, also helped some of those newer bands come to terms with all the amazing creative possibilities available with multi-track."

In fact, it is no exaggeration to state that many albums produced at Los Angeles studios during that era were so dependent upon the layering techniques available with 16/24-track, they could never be produced live. It is often said that the Southern California studio industry drove the race toward multi-track technology. As the melting pot of recording creativity during that era, L.A. saw the introduction of the first 8-, 16- and 24-tracks, along with increasingly complex recording consoles and outboard processing equipment.

The use of sonic textures and colors became so important on albums produced at L.A. studios during that period, many companies—now household names in the pro audio industry—can trace their origins to those formative decades. And it was those companies in regular contact with the production facilities of Southern California that developed the new analog and digital reverb and time-domain processors, equalizers and tools of the audio trade.

Also of growing importance during this era were studios that began to specialize in certain aspects of recording. "I remember the first room in town that was built just for mixdown," recalls another veteran engineer/pro-

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Motown/Hitsville's Dawn Studio is set up to handle audio-for-video mixing and is equipped with an LCRS (left, center, right and surround) monitoring system for Dolby stereo mixdown. Other hardware includes a 40/32 Neve Model 8078 console with Necam 96-fader automation, dual Ampex ATR-124 24-tracks, Ampex ATR-104 4-tracks, Sony PCM-1610 digital processors and an Adams-Smith Model 2600 time code synchronization system with Compact Controllers.

ducer, who began his career in Boston and relocated to Southern California in the early '70s. "It was set up solely for remixing 24-track tapes; it had only a small overdub booth for vocals or instrument touch ups—although I seem to recall that we did track an entire drum kit in there one night, mainly because the producer hated a snare/kick sound on an otherwise happening track.

"The control room was real big," he continues. "We could get everyone in back of the console and had plenty of space for the racks of outboards we would rent from [rental houses] down the street. During that formative era, we really got to push the outer edge of the technical envelope; many of those L.A. sessions resulted in some of the most amazing music I have ever been involved with!"

Film Community Comes Full Circle

If the recording and production studios were benefiting from the introduction of multi-track hardware, the film community also picked up on the technology. Not long after the advent of the first mono and 2-track tape machines from Ampex and 3M, film post-production began to move away from optical recorders toward 16mm and 35mm mag-film dubbers and recorders. Utilizing standard film stock coat-

ed with iron oxide, and running specially designed mono, 3- and (later) 6-track heads, the art and science of film sound mixing—including the separation of individual music, dialog and effects elements carried on separate dubber channels so each could be edited and slipped in sync against picture—became the norm for Hollywood. At the same time, the size and complexity of film-dubbing consoles increased as more and more input and output buses became necessary to accommodate the additional DME tracks and submixes.

With the introduction in the mid-'70s of Dolby Stereo surround-sound techniques—first using four mag tracks on the release prints, soon followed by matrix-encoded Lt-Rt optical tracks—the L.A. film community proceeded full speed ahead to produce some truly innovative soundtracks. The move to stereo for theatrical release also introduced the public to surround-sound video playback in the home.

As the economic recession began to affect the traditional music recording studios around L.A. during the late '70s, many of the more innovative facility owners looked to other audio production areas for business. "We certainly felt the recession a decade ago," recalls the owner of a multi-room L.A. facility. "Our room occupancy dropped

off suddenly, as the labels began to cut back on budgets and stopped signing new acts.

"We looked at alternative sources of revenue and were attracted to the audio-for-video and film markets. Sure, there was more to getting into that area than simply adding a time code synchronizer and a U-Matic—as well as a large-screen video projector—but we were lucky to find the right combination of engineering staff who understood the differences in working with rock and roll acts and film and TV producers. While the music people liked to work at night, we found the media guys kept daytime hours.

"It's worked out well for us since then. We have successfully diversified into various areas of audio-for-video and film, including the occasional low-budget scoring date, and still handle traditional music sessions—which is our primary orientation here, despite the fierce competition and cost-cutting we're now seeing around town."

The Impact of MIDI and Synthesizers

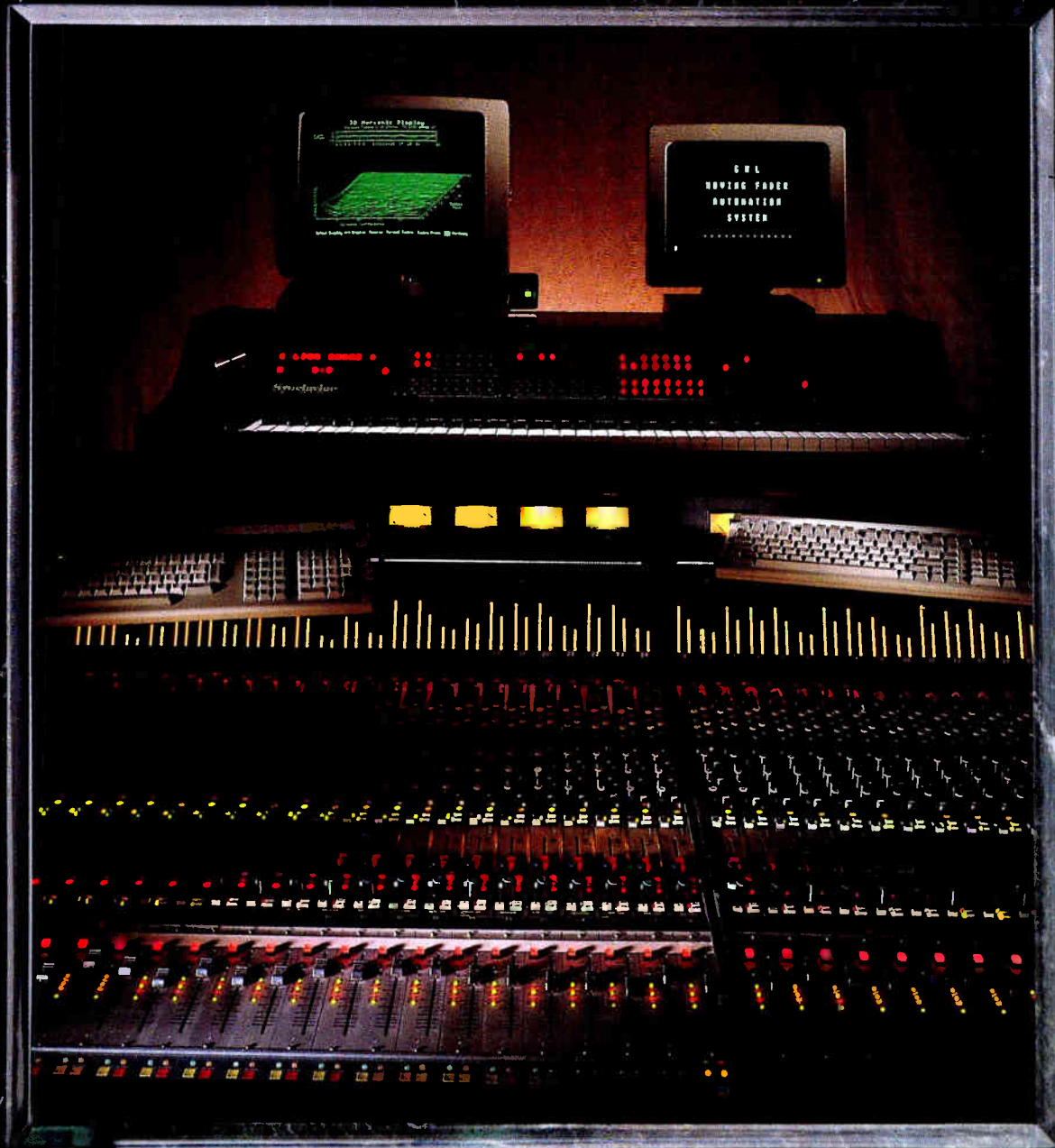
A major factor in the shakeup in the music and recording industry during the early '80s was the advent of low-cost synthesizers and MIDI-controllable drum and percussion machines. Add these to the growing availability of semi-pro 4-, 8- and 16-track tape machines and consoles, along with the highly affordable home studio. For demos, pre-production and even budget releases, the personal-use studio became a viable alternative for a growing number of musicians, songwriters and producers.

As one studio owner recalls, "MIDI and the low-cost, semi-pro gear hit us like a brick! Now, a band could lay down not only keyboard parts using MIDI, but also very credible string, horn and percussion tracks that would have cost a fortune to duplicate in the studio. Also, they could work out arrangements in a much more cost-effective environment than a full-blown 24/32-track room. We even had one-inch, 16-track tapes come into the studio that the band wanted to bounce up to 32-track digital, continue their vocal overdubs and then remix.

"Very quickly, we had to turn our attention to building a dedicated remix room, because we started to lose out on the tracking dates to the home studios. We also added a MIDI pre-

—CONTINUED ON PAGE 218

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by David Schwartz

Sometimes I wish I'd grown up in L.A. That's where it was all happening when I was young. The cool studios. The hot sessions. The great musicians and personalities.

The soundtrack of my childhood and teen years came from Hollywood. From the Beach Boys to The Byrds, from Phil Spector to the Mamas & The Papas, from the Tijuana Brass to Frank Zappa, it seemed like there was at least a little L.A. in all of us.

In this special look at L.A. recording, we go back to some of the independent studio pioneers responsible for shaping this creative community. There were the networks and there were the major labels and there were the film sound studios, but there was also a growing movement of creative recordists who set out to make a different kind of industry—one that was oriented toward quality and innovation, with the spirit of the entrepreneur.

"The independent studio was a novelty," says Stan Ross, co-founder of Gold Star Studios, which opened for business in 1950 and ran for 32 years. "Most of the majors [labels] had their own studios, so we were kind of unique with the concept of the demo studio. An act would come in and just try out ideas without the worry of the studio budget or the honchos breathing down their necks."

"At that time there was no such thing as a recording industry or equipment manufacturing as we know it now," adds Stan's co-founding partner, Dave Gold. "There was very little information around on how to put things together, or how to use them. No magazines or books. Broadcast was our only backup, and that was pretty limited as far as information was concerned. It took a lot of research to find data about equalizers, etc. We built our first board with six inputs and one mono master output."

Harry Bryant was a guiding force at Radio Recorders, the world's largest independent recording studio in the '40s and '50s, hosting seemingly every major talent in the music business in their 7000 Santa Monica Blvd. studios in Hollywood.

Gold Star Recording's Dave Gold (left) and Stan Ross helped give birth to Phil Spector's "Wall of Sound."

GOLDEN MEMORIES

*L.A. RECORDING
PIONEERS IN THE
GOOD OLD DAYS*



Says Harry, "I started out working for the South Carolina telephone company in the early '30s and graduated from the RCA Institute through a correspondence course. I then made my way to California and started working as a mixer in nightclubs. My first love was working with the big bands. I started working part time for Radio Recorders in 1936, just about the time they got started.

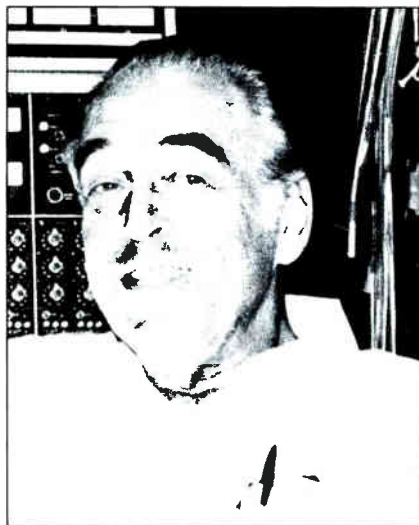
"There were four owner-partners at Radio who all doubled in mixing live sessions, disc recording and creating sound effects. They also built most of the electronic equipment they used. Radio Recorders' major business at that time was recording phonograph sessions, live dramatic or comedy shows and radio commercial spot announcements onto wax discs. These masters were processed to form stampers for making 12-inch phono records at 78 rpm, or 16-inch records at 33 $\frac{1}{3}$ rpm for radio stations.

"After the war, we were one of the first studios to jump on the tape recorder bandwagon. We had quite a few different models: Rangertone, Magnacord, Presto; but Ampex made the only one that was 100% professional. It was the Cadillac of the industry and cost about \$4,000. We worked very closely with Ampex and had about 20 of their machines [the Model 200] by 1960. We even ended up with the serial #1 recorder. We were the largest user of Ampex in the city."

With a staff of 35 engineers, Radio Recorders also became a leading center of learning for the recording industry. Many of today's most successful engineers and producers are alumni. "It was a fantastic organization with an almost father-to-son relationship between the older engineers and the younger people coming in," says former Radio employee Armin Steiner. "It was a great fraternity of learning and you just couldn't help but learn."

Harry Bryant was elected president of the Audio Engineering Society in 1959, just about the time Radio Recorders began merger talks with Universal Recorders.

Bill Putnam started Universal in Evanston, Illinois, back in 1946. It was a small studio with a Western Electric broadcast console and a belt-driven lathe disc recorder, but by the late '50s it had become a powerhouse on the national scene. Putnam wanted to move west, though, and sold out his



Wally Heider bought L.A.'s first three 8-track recorders.

interest in Chicago to pick up a building at 6050 Sunset Blvd., near Hollywood's "Gower Gutch," which he named United Recording.

"United grew and grew," says Putnam, "with three studios, a mixdown room, three mastering rooms and a small manufacturing plant, all in 15,000 square feet of building. In the early '60s we began negotiations to acquire Western Recorders at 6000 Sunset, just one block away from United.

"At Western, Studio 1 was the old Radio Center Theater, the origin of many network programs during the heyday of network radio. It had over 300 seats, which we removed, poured in a flat floor and ended up with a nice large studio of about 65,000 cubic feet. Studio 2 had a 10-foot ceiling, which we raised to 17 feet. Studio 3 was made from the space we had left over. As fate would have it, this was the studio that became legendary—home for the Beach Boys, Glen Campbell, Jan & Dean, Johnny Rivers, the Mamas & The Papas, Rick Nelson, Three Dog Night."

Back at Gold Star, big things were beginning to happen by the late '50s. One producer, in particular, was carving out a new approach to studio technique at Gold Star. According to Stan Gold, "A very young producer named Phil Spector came in and made a couple of smash hits here, so he kept coming back. And he made hit after hit with The Crystals, The Ronettes and many others.

"Phil Spector's 'Wall of Sound' became a world-famous signature, but it actually started as an accident. Phil had booked the studio and had forgotten

how small the studio was. He had five guitars, woodwinds, brass, percussion, drums and so on. When the band began to play, it sounded like they were all in a jammed-up room. So we got the idea of making them sound larger, and we put echo on every other guitar, every other horn, the drums leaked in, and that was the beginning of Phil's 'Wall of Sound.' If the studio had been bigger, the 'Wall of Sound' wouldn't have happened; at least not this way."

Meanwhile, Armin Steiner had been perfecting the idea of the home studio, working out the technical details with Bert Sax. He met Bert through his brother, Doug Sax, who had been developing his skills in direct-to-disc recording and lacquer mastering.

"We had two Ampex 350 2-tracks and an Ampex 400 mono machine and some very good microphones," says Steiner. "The Formosa St. Garage Studio, as it was known by friends, became very successful over the next seven years. The first record we did was Dick & Dee Dee's 'The Mountain's High And The Valley's Deep,' and it became a Number One record in a very short time.

"There was a real family feeling in that studio. When The Supremes came to town my mom would usually make lunch for everybody. We would work all through the night, and sometimes I would be doing a session in my pajamas or bathrobe. Herb Alpert would come over with Hal Blaine at 2 a.m. to do a tambourine part so he could master the next morning. These kinds of things were common, and all of us were growing with the industry in those early days.

"We finally got evicted from the garage studio, not because of the music leaking out, but because of the cars coming and going at all hours of the night."

Steiner moved over to Vine Street, opened Sound Recorders and had L.A.'s first 8-track tape machine in the mid-'60s.

Not far from there, Wally Heider, who had come to town in 1959 as a \$35-a-week apprentice at Bill Putnam's United Recording, was getting ready to go out on his own, too. "I found a room about 12' x 15' on the ground floor of an office building on the corner of Lexington and Highland in Hollywood," says Wally. "I had an Ampex 3-track and a 12-in, 3-out Universal Au-

dio board. I think I paid \$50 a month for the place, and the owner agreed to let me have a shower and sleep in a vacant office across the hall for another \$25 a month so I could be close to my equipment.

"During that first three months my first big remote came in—a week in Chicago at the Villa Venice with Dean Martin, Sammy Davis and Sinatra. A remote truck in those days was just an empty truck with a bunch of gear put in and tied down so that it would travel. If you were lucky and were doing more than three or four days, and had a room you could move into, you would take advantage of that space and security for the equipment. If you were just one night somewhere, though, it wasn't worth the trouble of moving out of the truck.

"The first multi-tracks in remotes were 2-tracks. Then we started transferring the 2-track tape to 3-track, which meant they had an extra track to overdub applause or a singer or string section. The first 4-track machines I had were Ampex 354s.

"I remember the AES show here in L.A. when 3M was first showing their 8-track. I went over to the Roosevelt Hotel about 11 at night with my friend from Florida, Mack Emerman, talking about the future of 8-track, if any. At about 1 or 1:30 I went to the house phone, called 3M's sales manager, Scotty Lyall, and bought the first three 8-tracks in town. It took 3M about a year to get in serious production with the machine, and so for that first year we did real well renting those machines out at \$100 a day to others in town. When 16-track happened, we did the same thing, to a lesser degree."

Multi-track was being accepted faster by the late '60s, and the independent studios had all but taken over the bulk of the recording projects in L.A. Personal service, high quality equipment and unique environments had made an important place for the boutique recorders.

For a confused but enthusiastic industry, the Golden Age of Recording had arrived. The youth of America supported the phenomenon and made L.A. music an important part of their lives. ■

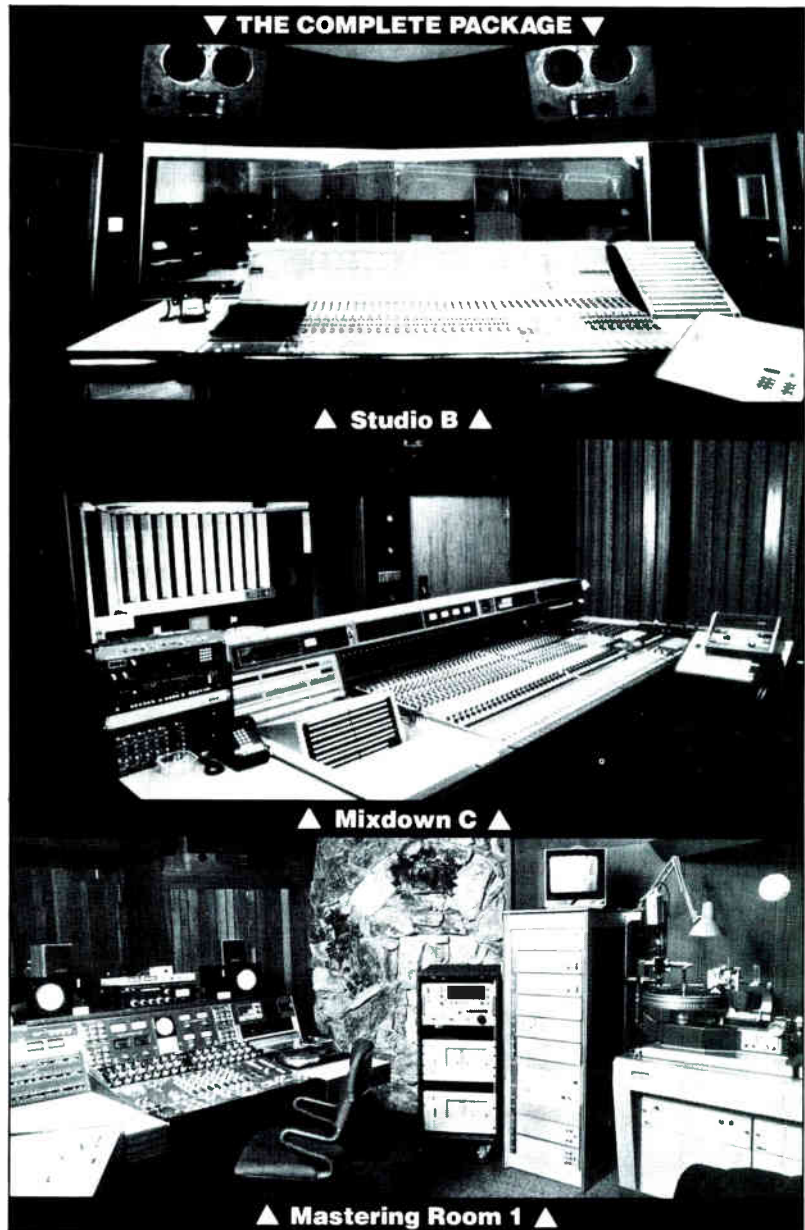
Mix editor-in-chief David Schwartz used to play in a rock band back East in the '60s and was a certified California dreamer.

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PHOTO: E. BILLY



(Left) Record Plant's Third St. Studios closed down in December '85, with a Christmas party and superstar jam session including Al Kooper, Jim Keltner, and (pictured left to right) Joe Walsh, Waddy Wachtel and Stephen Stills.

(Below) In December 1987, the studio officially became "Record Plant, a Chrysalis Group PLC Company," with Chris Stone as president. Pictured (left to right) after the signing ceremony: Terry Connolly, managing director of Chrysalis Group PLC; George Martin, Chrysalis Facilities Division chairman; Chris Stone; and John Burgess, managing director of AIR Studios.

THE RECORD PLANT IS GROWING

by David Goggin

If the L.A. Record Plant has a personality, it must be that of Chris Stone, president, founder and den father of this venerable 20-year-old recording institution. Chris is like a trusting dad who raised his own share of hell while growing up. You want me to buy you a keg for your birthday party? Sure, but don't let the girls dance on the tennis court in spike heels like the last time, OK?

The only real reason for building any recording studio is the music. The image of these "Palaces of Pop" is so decorated with rock gossip and technogab that we tend to forget about the main theme. The Record Plant started out with two things in mind: to have the Best Technology in the Most Comfortable of surroundings. With that in mind, the music could be created and preserved, Stone considered.

During the past 20 years, the Record Plant has gone through some, shall we

say, heavy changes. Its history parallels nicely the evolution of the music industry and even the lifestyles of two decades. From the first sessions with Jimi Hendrix to 1988 with Eddie Murphy, John Landis and Nile Rodgers cooking up a score for Murphy's new film, *Coming to America*, Chris Stone's Record Plant has catered (often literally) to the making of popular music.

Since nothing in the recording business is permanent—except change (echoes of 1968)—a studio must re-



PHOTO: NEIL RICKEN

flect the times; if it can anticipate the times, so much the better for business.

Planting the Seeds

In 1968, Chris Stone was national sales manager for Revlon. Armed with his trusty MBA from UCLA, he had become quite a marketing sharpshooter for folks like Mattel and General Electric. When his wife, Gloria, was pregnant with their first child, Stone was introduced to another expectant father, Gary Kellgren, a recording engineer who had become a favorite of musicians such as Hendrix and Zappa. The idea was that the nervous parents-to-be could chat about the challenge of having babies.

In the course of their prenatal meetings, Chris and Gary became friends and talked shop. Kellgren wasn't too interested in cosmetics, but Stone became fascinated with the music biz. He visited Gary at New York's Mayfair Studios and entered a new world peopled with strange characters who were making music and millions of dollars. Poor Gary: the engineering artiste at the console—and under the console soldering inventive connections that we make with a flick of a switch today—was pulling down \$200 a week.

Chris thought this was a little odd. He asked Gary if he could take a look at the books. The studio was billing five grand a week. Chris suggested a little meeting with the boss, and the next thing you know Gary is making a grand a week. They became better friends.

Stone, getting bored with life at Revlon, thought there was a good future in recording. Kellgren, displeased with the austere, industrial atmosphere common to recording studios of the day, had a dream—a studio that felt like a *home*. They became partners and borrowed \$100,000 to launch the New York Record Plant in March 1968.

The only studio in New York with 12-track recording, the Plant set the pace for the competition and was immediately booked for three months in advance. The first session was with Jimi Hendrix for his historic *Electric Ladyland* LP. The first big mix session was *Woodstock*, and their first remote job was *The Concert for Bangladesh*.

True to its original theme, Record Plant offered the creature comforts of home and the best technology available. Among its innovations was the "jukebox," now known as a monitor

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PHOTO BY JEFF JAY

Producer/composer Nile Rodgers (seated right) inaugurated sessions at Record Plant's renovated Stage "L" on the Paramount Pictures movie lot for Eddie Murphy's "Coming to America." Also pictured are engineer Ed Cherney (standing), music editor Dan Carlin, Jr. (seated left) and Synclavier programmer Richard Hilton (rear).

mixer, which Kellgren built to keep producers busy while he got on with the engineering. Gary is also credited with pioneering the use of flanging for that memorable "psychedelic" sound.

Moving West

Business was booming with clients like Buddy Miles, Velvet Underground, Traffic and Vanilla Fudge. The partners decided it was time to open another studio on the West Coast. To raise the necessary capital, they merged with a new cable company, Television Communications Corporation.

Invitations, in the form of personalized bricks that created a few headaches for the post office, were sent out to announce the opening of the new facility. Stone discovered an enterprising young designer, Tom Hidley, who was invited to handle the acoustics in the new facility. Hidley would go on to design more than 400 studios worldwide, but would always supervise new Record Plant rooms and facilities. On December 4, 1969, the new L.A. studio on Third Street opened its doors, and a bricklayer built an autographed lobby wall that would stand for 15 years.

The tracks increased from 12 to 16, and next, the studio boasted the first 24-track in the world. The music biz

was thriving, and clients like the Rolling Stones, Linda Ronstadt, Three Dog Night, Fleetwood Mac and the Eagles started calling Record Plant home. Stevie Wonder booked Studio B for a few years and cut *Talking Book*, *Innervisions*, *Songs in the Key of Life* and *Fulfillingness' First Finale*. Record Plant became legendary for its non-stop hit recording and wild home life, as well as for technological leaps including the first digital 32-track, the late 3M M81 Digital Mastering System.

A third facility opened in Sausalito in 1972, the year that TVC merged with Warner Communications. Because Warner already owned studios in New York and L.A., they offered to sell the Record Plant back to Stone and Kellgren. The duo took ownership of the L.A. studio and sold the New York facility. Sausalito would be sold in 1980, with all of the focus remaining in Los Angeles.

During the record business' heyday in the '70s, Record Plant fueled its expansions with revenues supplied by such artists as the Bee Gees, Harry Nilsson, Jimmy Webb, Sly Stone, Quincy Jones, Crosby, Stills & Nash, Diana Ross, the Blues Brothers and the solo Beatles—just about every major star made a point of spending time at

the Record Plant.

The soaring success of the studio was marred by two tragedies. In 1977 Gary Kellgren drowned in his swimming pool, and a short-circuit torched Studio C in 1978. But the studio had momentum of its own and continued to expand its L.A. base of operations. In 1982, Stone leased the Glen Glenn stages M and L on the Paramount Pictures movie lot and immediately pumped \$500,000 to bring the facility's film audio up to record standards. While the studios on Third Street continued making gold, the Paramount studios scored with blockbuster hits like *Star Trek*, *Annie*, *48 Hours* and *An Officer and a Gentleman*.

Diversity or Die

Stone anticipated the new attention to film music that was creating highly successful soundtrack albums. With scoring sessions going well at the Paramount stages, he realized that all the studios would have to be able to handle music scoring, as well as making records. In 1985, the Third Street studios came down, and a brand new \$2 million facility was erected on Sycamore Avenue, in the heart of the TV and film community. The versatility of the new studios attracted film producers, while still holding strong with the record clients.

In late 1987, Stone sold half the operation to Chrysalis, an aggressive music company with solid holdings in the film and TV world. Now officially known as "Record Plant, a Chrysalis Group PLC Company," the studios are part of an international team with sister facilities in England. Chris remains as president of the new organization, still the den father he always has been.

Mix: Now that you've settled in with Chrysalis and the new partnership, what's coming up for the next 20 years at the L.A. Record Plant?

Stone: Well, the wonderful thing about having Chrysalis as a partner is that it gives us the ability to do it all *again!* The thing that first attracted me to the recording studio industry—first in New York, and now in Southern California—was the fact that it was *always* changing. I came from the consumer world where I had my basic training and grew up as a businessman; the studio world is very different.

Many days I come in and have a blank schedule and wind up having 20

meetings. There is something new always happening.

Just in the past year, I have seen an accelerated audio evolution, based on the "Tapeless Studio," new computer software and hardware and, more importantly, the very successful marriage of audio with visuals. One strong indication is that a growing number of independent stations and networks are following NBC into offering Stereo Television. There is a heightened awareness of audio quality in Hollywood, because it translates as heightened income. The TV and film audience wants *better* quality, and the producers are willing to pay for it.

High-resolution video is coming on strong, which means that the visual world as we know it will get better and better in logarithmic leaps and bounds. The picture is getting better and, through digital technology, the sound quality is getting better. With satellites we can send both digital sound and picture to any place in the world.

The past 20 years have been incredibly dynamic, but now we find ourselves with new tools that will bring the most incredible changes since the advent of multi-track. All this means better control and better reproduction of music. That's what the business of recording here in Southern California is all about.

Our marketing has changed from one of specialization to one of flexibility. We have found our area of expertise in Los Angeles and are now exploring that niche with new technology. The fact that audio and video have come together is now giving us the ability to move forward another giant step with these merging technologies. In addition to making records, we plan to expand even more heavily into audio-for-video, because we believe that, in time, video will replace film. Major release films as we know them today will disappear, and the major Hollywood producers will use satellite technology to send their feature films to video theaters at any location in the world.

We also believe that some of the new recording techniques—such as the ability to record a group from various locations around the world at the same time—will become commonplace within the next few years. In many ways, this business is even more exciting in L.A. now than it was in the

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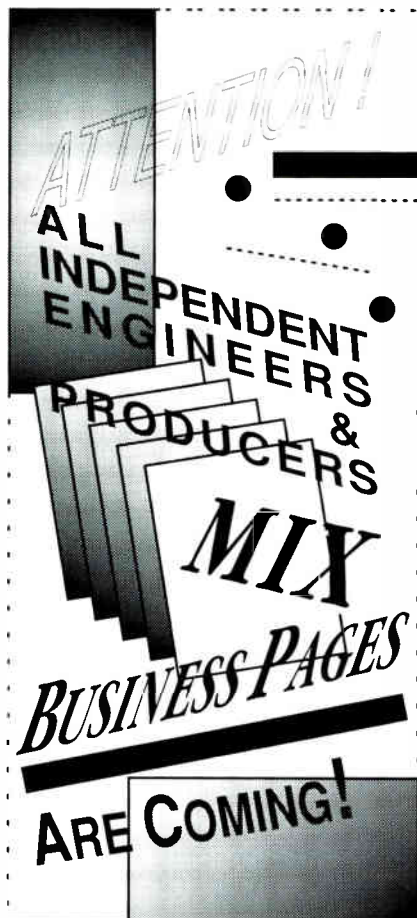
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past. And, with the backing of Chrysalis, which is very involved with the record and video business, Record Plant will be able to stay in the forefront of the technology that will take us into the next century.

The key to these new developments is sound *and* picture; that combination, and the need to provide services, is shaping our destiny. Our aim is to provide the finest music recording to go along with the new visual technologies.

Mix: Can you focus your attention on what is happening at the Paramount lot?

Stone: We have just finished our upgrades of Stage L by putting in a new Solid State Logic console. Here's a nice example of what's going on these days in Hollywood: Nile Rodgers arrived with his New England Digital Synclavier and composed the score for Eddie Murphy's new film. He played it to picture for John Landis, the director, got his approval and then printed it out on the Synclavier. He gave the charts to the orchestrator and then recorded it with a 60-piece orchestra.

In the middle of a session with 60 musicians in Stage M, Landis decided that he didn't like one of the music cues! Nile had his Synclavier with him in the room and recomposed the cue on the spot. While the orchestra was at lunch, the orchestrator recast all the parts and the cue was redone after lunch. That couldn't have been done even a *year* ago.

The fact that we will be upgrading the SSL in Stage M to the new G Series computer system to go along with the SSL in Stage L, will give us the flexibility to do either records *or* film and television in our Paramount facility, which is located right in the middle of the most successful film company in the world.

Mix: When you think back over the last 20 years, is there one particular session that stands out as symbolizing the "Spirit of Record Plant"?

Stone: There have been so many magic sessions over the years... but if there is a single one, I think it was the first remote recording we ever did, a little concert held at Madison Square Garden in 1971, "The Concert for Bangladesh." To see the magic of those artists, recorded live, exposed me to the charisma of our industry, but also

showed me that truly historic music *can* be made if spontaneity is present. I think it set the stage for the '70s, for the kind of music that was to come; many of the things that have spilled over into the '80s were created in the '70s, in terms of the people and the music and the direction of rock and roll. Even today, that concert is regarded as a classic. It set a standard for artists getting together for the common cause and making great music with a human goal.

Mix: What set Record Plant apart from other studios in the beginning was an attention to comfortable surroundings. Is it still as important today as it was 20 years ago?

Stone: Absolutely, this feeling of the environment being very important was Gary Kellgren's belief, and demand. When we started Record Plant, recording studios were like hospitals: fluorescent lights, white walls and hardwood floors. We turned the recording studio into a *living room*.

The best and greatest compliment that any artist who came to work with us could make was, "My god, this is beautiful—I want to live here." I think if there is anything that has made us successful here in L.A., it has been the continuing requirement that our studios and control rooms be designed for comfort. We want to put the artist at ease, whether it's a film scoring client, or a heavy metal client. The proof of the success of the concept is in the hits that have been made in our studios.

A good example of that philosophy is the new roof garden we just built. One of our old friends, producer Tom Allom, told me that we had everything except a place to go outdoors, like we had at the old studio on Third Street. Well, the new studio takes up all of the ground space, but Tom said that he would buy the trees if I would build a place on the roof. So we did it! It's affectionately called "The Tom Allom Memorial Roof Garden." He's still very much alive, but admits to occasional moments of being brain dead from all the heavy metal he's endured!

We're very proud of our history, but we are always looking toward the future. As the old saying goes: "You ain't seen—or heard—nuthin' yet." ■

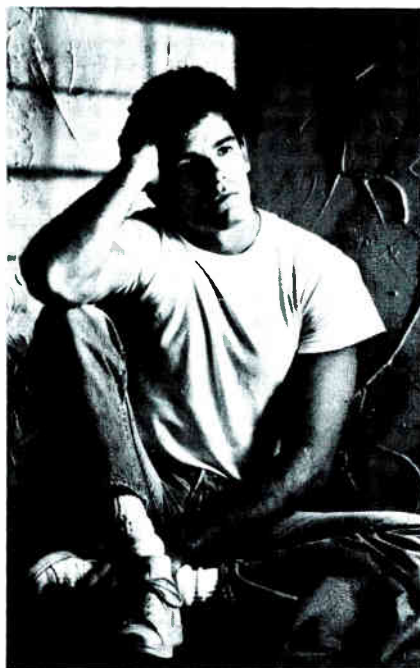
David Goggin is a freelance journalist specializing in the audio, video and film industries.

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Mix 9/88

MAKING TRACKS IN TINSELTOWN

ALONG THE MUSIC SCENE

by Tony Spera

Sixteen-hour days, no time off for vacations, making the impossible part. Bearing the clock. Pressure, pressure and more pressure. Such is the life of a session player in the session capital of the world: Los Angeles.

While the artist and the producer get the credit and share the glory, this typical studio player gets a check and perhaps a chance to move up the call list. Yet it is the combined skills of this elite corps of sonic specialists that provide the canvas on which the artist can exhibit his or her true colors.

In years past, when the recording industry was still booming, dozens of session players flourished in the Los Angeles area. With the music business recession of the late '70s and the introduction of MIDI in the mid-'80s, things began to tighten up. The LinnDrum and the subsequent introduction of other low-cost drum machines knocked many studio timekeepers off of their thrones. Because of synthesizers like the Prophet 5 and the Yamaha DX7, horn and string players began to feel the pinch. With the advent of inexpensive sampling technology, bass players, guitarists, and nearly every one else

Larry Williams' credits include Michael Jackson, Eric Clapton and George Benson.



PHOTO: BARRY LEVIN

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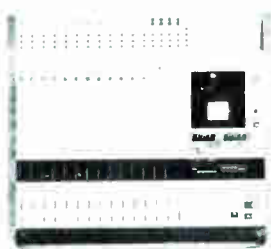


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was threatened. Now that the dust has finally settled, one thing is becoming quite clear: it's a keyboard player's world. The number of working guitarists, bass players and drummers has been whittled down to fewer than played on a single Phil Spector date in the '60s.

And since keyboard players (with the assistance of synths, samplers and drum machines) now have the ability to build a record from the ground up with very little outside help, the line between session player, session engineer and session producer has become a fine one. Because of this, many studio musicians who used to run from session to session with a cartage truck in tow, are crafting records in the comfort of their home studios. Many have become world-class producers and songwriters in their own right—now that the means of sonic production are firmly in their grasp.

To find out how the L.A. session scene has changed, we spoke to several of the key players, whose combined achievements read like a Who's Who of the music business. All are keyboard players. All are producers in varying stages of maturation and development. All are gifted musicians and composers who can successfully breathe life into the most timeworn cliché. And all are very much in demand in Tinseltown.

MICHAEL OMARTIAN

Michael Omartian is one of the long-time anchors of the L.A. music scene. As a session player, his keyboard and arranging skills have adorned records by Steely Dan, Dolly Parton, Billy Joel, Al Jarreau, Barbra Streisand, Michael McDonald, Boz Scaggs, Loggins & Messina, Tavares, Manhattan Transfer and many others.

As one of the first session musicians to wear the producer's hat, he has picked up three Grammys (including the prestigious "Producer of the Year" award) for his creative achievements. His productions include Christopher Cross' Grammy-sweeping first album, as well as LPs by Rod Stewart, Peter Dinklage, Donna Summer, Jermaine Jackson, Debby Boone and The Imperials.

Although he still gets called to play an occasional date, he has little time to play on more than his own productions, many of which are recorded in his home studio. When we spoke, Omartian had just completed albums for the Jacksons and Christopher Cross,

and was beginning projects with Jennifer Rush, Francis Raffael (from the cast of *Les Misérables*) and a new band called The Sharks.

According to Omartian, the session scene has all but dried up: "I've played one session this year," says Michael. "That was for Bill Schnee who was doing The Imperials. Other than that, I've been working at my house cutting tracks with my MIDI rig and some live guitar. I've hardly seen any of the studio musicians that I used to work with. Every once in a while, I'll run into some of the woodwind and violin players I used to see, and their only outlets are film and TV. It's kind of a drought. It's nice to play live, but it seems that every one is getting locked into this computer crazy stuff. It's unfortunate in one sense, but at least you get things sounding like *you* want them to."

How has MIDI changed the way Omartian works? "I love writing this way," he says. "I'm able to put together a MIDI track in a couple of hours that perfectly expresses what I'm trying to do. That's one advantage. I've got a console that is set up with my Yamaha KX-88, which controls my racks of MIDI gear, my computer, and drum pads which are built into the console, so I can sit in one place and do everything. I'll bring in Dann Huff for guitar and Larry Williams for sax overdubs. It seems that everyone has a home recording studio these days and works the way I do."

LARRY WILLIAMS

Larry Williams is doubly in demand. Since he plays woodwinds and keyboards with equal facility, he is able to lead a dual existence as a first-call sax and wind player and a first-call synth and keyboard player. An original member of the group Seawind (and its famed Seawind horns), Williams has since gone on to achieve considerable success as a studio musician and arranger. His past credits include: Michael Jackson, George Benson, Manhattan Transfer, Earl Klugh, Eric Clapton and Greg Phillinganes.

He recently finished albums with Jon Anderson, The Crusaders, Siedah Garrett, Boz Scaggs and Brazilian composer/artist Ivan Lins. As we talked, Williams was at work on the *Arthur II* soundtrack with Burt Bacharach, tracks for Sheena Easton, the Jacksons, and U2 and was writing a song for Miles Davis. He was also in the process of installing an Otari 24-track and a 62-

input Speck console at his home studio.

Where does Williams find the time? "You just make the time," he says. "I enjoy the mix of things I'm doing, I don't have any hobbies, I have a family and I take vacations. Now that I have the studio, I won't have to cart my gear around as much, and I can focus more on my writing.

"As far as session work," Williams explains, "I don't do movies or jingles—I concentrate mainly on record work. And they want players who are good at building tracks from the ground up. That's what I like to do, and no matter what anyone says, that's like producing as far as I'm concerned, even if you don't get credit for it. It is real creative but it also can be demanding, depending on who you're working for. I'm working for Richard Perry right now; he's very brilliant, but also very demanding.

"Rod Temperton is a guy that likes to check out all of the options. With him, it doesn't have to be good—it has to be great! I like being pushed like that. I also like creative guys who like to work on the fly and not overthink it, like Stewart Levine. It can be frustrating sometimes, but building tracks is the logical growth step for me musically and I really enjoy doing it."

ERIK PERSING

Erik Persing is a relative newcomer to the session game. He started as a salesman for a music store, developed into an incredibly creative synthesizer programmer and became a product specialist for Roland Corp.-U.S., a company for which he still serves as a consultant.

One of his achievements while at Roland was developing the factory patches for the ubiquitous D-50 synthesizer and portions of the sound library for the S-50 sampler—sounds that are used in many commercials, movies and records. Because of his skill with synthesizers, Persing soon found himself pulled into the recording scene by producers who became familiar with his talents at clinics and NAMM shows. His credits include Michel Colombier, Deniece Williams, Night Ranger and REO Speedwagon.

"I'm kind of unusual in many ways," he admits. "I didn't come into the session scene in the normal way, so I guess it was kind of a fluke. Most studio musicians got their starts in great bands or because their fathers were established studio players, so there



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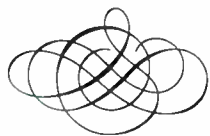


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Erik Persing

was kind of a musical legacy. When I was a salesman, it was pretty dead [at the store] and I was able to spend a lot of time learning the equipment. When I got into programming, I assumed that part of playing a synthesizer was knowing how to program it. Since that wasn't the case, I was able to get into the studio thing through the back door, so to speak.

"What I do from day to day varies with the project," Persing explains. "For Michel Colombier, I go in and create his entire orchestra sounds that he uses just for that project. He always wants things to be new and creative. When I do programming work for other keyboard players, I don't have to bring any gear. It is kind of a luxury for them, but they really like it because it allows them to concentrate on their playing and arranging. Lately, I've been doing a lot more sequencing and building tracks from the ground up. That seems to be a trend that is becoming really popular. A lot of people are beginning to realize their own limitations, despite the technology, and they are learning

that if they hire someone to play or program, it is going to sound better. On projects like Night Ranger and R.E.O. Speedwagon, I actually get to play. It's really tough to create a great sound and watch someone else play it!"

ROBBIE BUCHANAN

Any time you listen to a great ballad with a sparkling electric piano, check the credits. You just may be listening to Robbie Buchanan. That sound has become his signature and has been used to great effect on such classics as "Never Gonna Let You Go" by Sergio Mendes, and "Saving All My Love for You," "All at Once" and "Didn't We Almost Have it All" by Whitney Houston. Besides having tasty ballad chops, Buchanan has also worked on projects by a wide variety of artists, including Michael Jackson, Jeff Lorber, Chaka Kahn, Bunny DeBarge, Natalie Cole, The Imperials, Michel Colombier and Amy Grant.

Buchanan is equally adept at composing, producing, arranging, programming and playing—attributes that

have made him a studio staple for several years. In the past year or so, he has built a home recording studio to house his growing MIDI and effects arsenal. His studio has become the focal point of many of his projects. At the time we talked, Robbie was co-producing Bill Medley with Dennis Lambert and Barry Mann.

"I think, as far as keyboard players are concerned, there are fewer record dates to go around than there ever have been," he says. "I've been fortunate enough to carry on with records, because that is really what I like to do. I think that's because sequencers have become so popular and writing has taken on a completely different flavor. There is much more sonic involvement. People now have the ability to take a great sound and write a song around it. Anybody can take a \$250 sequencer and become a great keyboard player overnight. Of course, there are some things a keyboard player can do that a sequencer will never be able to do, and thank God for that. Because of that, writing has become much more of an attitude.

"Some of the demos you get nowadays are so elaborate that the producer

will get the writer to do the track. Happily, there is still enough left for me to do. I'm only doing 85 to 90% of what I used to, but that's good for me because I hate to turn down dates and I need the time to write. Most of the session guys I used to work with are doing movie soundtracks. It is definitely a keyboard player's show. I work on a project more than anybody besides the producer, engineer and artist. As far as sessions go, keyboard players are going to continue to be the mainstay."

RHETT LAWRENCE

A Rhett Lawrence track is decidedly deceptive. Just when you think you are listening to a real band, you take a look at the liner notes, and one name flashes before your eyes: Rhett Lawrence. When he was just 20 years old, Lawrence took the money he made from writing jingles and poured it into the then new and revolutionary Fairlight CMI Series I. "Around the time I bought the CMI," he remembers, "I got appendicitis, so there was nothing to do while I was recovering except sample and build up a library." He has since upgraded the original Fairlight CMI to a Series II-X and added a Series



PHOTO: NANCY ANDREWS

Rhett Lawrence

III to his collection, as well as an assortment of MIDI gear.

With his pair of Fairlight CMIs and rack of MIDI gear, Lawrence has worked his musical magic for a diverse roster of artists, including Earth, Wind & Fire, Belinda Carlisle, Neil Diamond, Julio Iglesias, Michael Jackson, Barbra Streisand, Amy Grant, Van Halen, Richard Marx and Chicago. Recently, he contributed to the latest Boz Scaggs album and a duet by Phillip Bailey and Little Richard called "Sweat." Lawrence has recently moved into writing and producing—planned projects include



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the next Phillip Bailey album, and song for *Caddyshack II* by Earth, Wind & Fire.

"I really enjoy playing and I think that there will always be room for great players," Lawrence says. "But for me, I have found myself arranging tracks constantly and artists began asking me to co-produce with them. The home studio trend has also become a big factor. Michael Landau [the session guitarist] lives a few blocks away, and a lot of times we'll do a track at my house and then take the tape over to his house and do guitar overdubs.

"MIDI has also had quite an impact. I remember that a few months before MIDI came out, I almost had Jim Cooper [president of J.L. Cooper Electronics, and himself an accomplished musician] design and build an interface to make my Fairlight 'talk' to my Rhodes Chroma. That would have been an incredibly expensive proposition. Thankfully, though, MIDI did come out making that unnecessary. MIDI has encouraged other musicians to get into electronics because it gives you such flexibility and power.

"The fidelity of the CMI is so high that it can sample higher than you record on tape. Even drummers like Stewart Copeland can get involved in writing film scores with the help of instruments like the Fairlight. I think the technology is headed toward the workstation—one unit that will allow you to sample, sequence and record direct to disk."

ALAN PASQUA

Alan Pasqua is a closet jazz player who began his career on the road and moved into the studio. He was a session and road keyboard player with Eddie Money, the Tony Williams Lifetime, Bob Dylan and Carlos Santana. When he returned to L.A., he moved into the studio and worked with Keith Olsen on Pat Benatar, Rick Springfield and Sammy Hagar albums. He still plays jazz trio gigs around L.A. with such illustrious musicians as Vinnie Coliuta, Chuck DeMonaco and John Pattitucci. Pasqua recently put together a band with fellow session player Dann Huff on guitar, and is negotiating a label deal. His credits include Barry Manilow, Deniece Williams, Larry Carlton, Night Ranger, Lalo Schiffrin and the CBS network news theme. These days, he spends most of his time on film dates, though his record dates are on the rise.



Alan Pasqua

"I am seeing fewer and fewer full blown synthesizer scores, which I'm glad of," Pasqua observes. "Orchestral scores are coming back. However, the writer's strike has put a crimp in film work. Record dates had slacked off for a while, but now it looks like they are coming back.

"I think L.A. is alive and well as far as session dates are concerned. I don't see synthesizers as predominant anymore. They are just like drum machines. They came in, they did their thing and they found their home. Of course, some keyboard players will take an artist and pre-produce them at home with their computers and sequencers, and then go into the studio and cut the tracks.

"I'm not a big fan of those kind of records," he admits. "I like bodies in the studio; musicians playing together. I'm not a fan of sequencing. I'm not a fan of computers. I like to use computers to keep track of financial data, not musical notes. I have a sequencer, but it doesn't sound the same to me. If there is a problem, your focus moves away from the music to fixing a technical problem, which can take hours. I find them tedious and not really the essence of music. I've become known as a 'feel' guy. I don't play perfect solos, but they feel 'right.' It may not be a technically perfect event, but it has soul. And that's something that you can't get out of a sequencer." ■

Tony Thomas is managing director of Target Communications International, a full service ad agency, broadcast production firm and MIDI-based recording studio based in Southern California.

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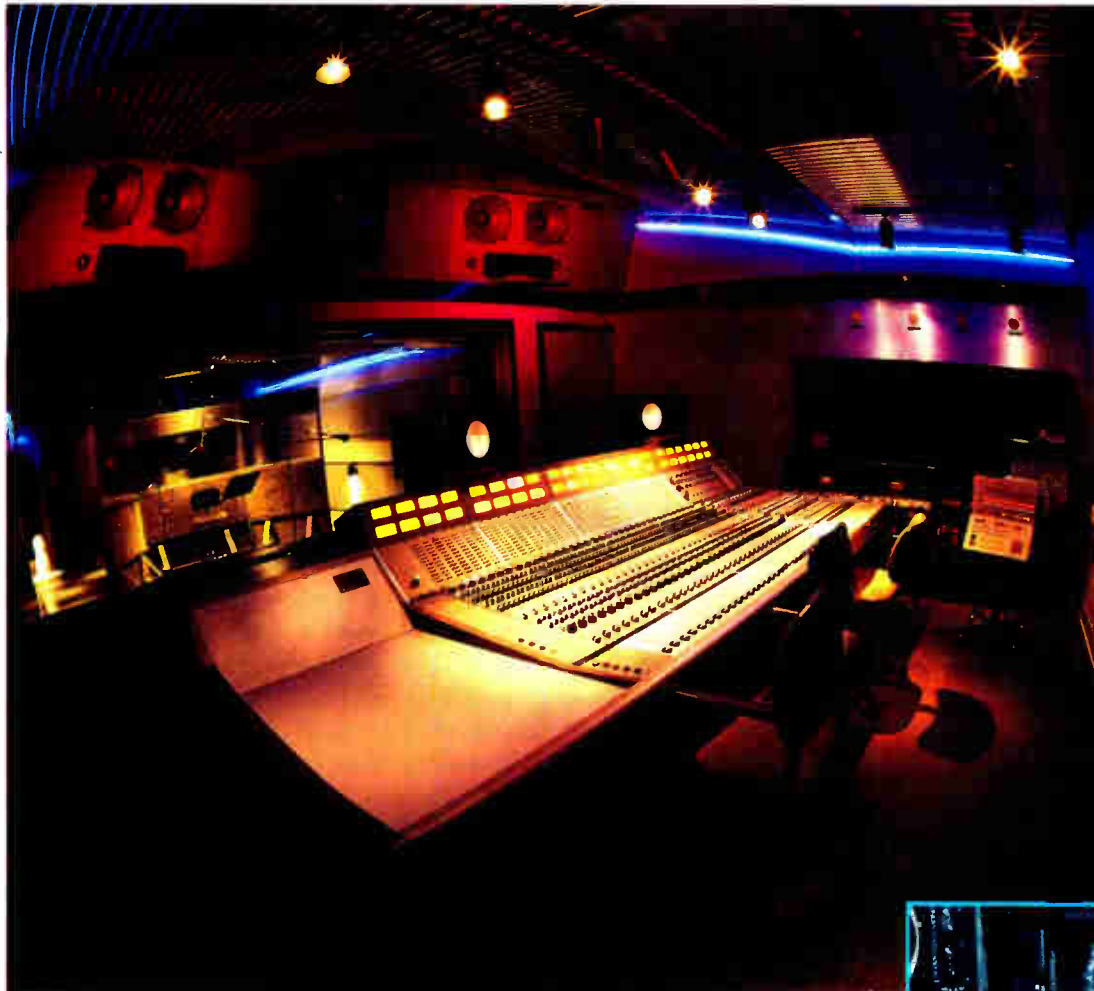
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(Left) Studio 3's control room at Cherokee is equipped with a 36-input Trident A-Range console, Otari MTR-90 24-track and MTR-12 mastering machines. Audio-for-video sessions are accommodated with a TimeLine Lynx SMPTE time code system.

Cherokee's co-owner Dee Robb at the SSL console in Studio 2.



FACILITY SPOTLIGHT:

CHEROKEE

S T U D I O S

by Robyn Flans

Cherokee Studios is considered by many engineers and producers to be a California recording institution. What began life in 1970 as a demo studio for the band The Robbs (known later as Cherokee) out on Cherokee Ranch in Chatsworth (a San Fernando Valley suburb, above L.A.) has become one of the area's leading facilities.

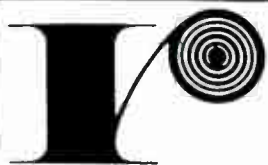
For The Robbs, Midwestern transplants, there was never any doubt that

they would set up shop in California. "We moved to California in 1966 when we were doing 'Where The Action Is.' We loved California," recalls Dee Robb. "My brothers and I were raised on a farm, so we loved the [Chatsworth] ranch and the horses. The whole industry was right here and we felt very comfortable.

"We tried living in New York in 1968, and hated it," Robb continues. "We had to go there because we had signed with Atlantic; at that time, the label

hardly had an L.A. office. We ended up spending a year there, recording and producing some other acts for the label, but we didn't like the atmosphere in New York. That's why we left Atlantic, so we could return to Los Angeles."

The group was signed to ABC/Dunhill Records when it started building what was, by 1970 standards, very unusual: a home studio. "In those days there wasn't any semi-professional recording equipment available," Robb



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Larry Brown

This multifaceted engineer/producer/musician was born and raised in Los Angeles, and for the past 40 years has never strayed far from the Southern California music scene. "Looking back, I always think how lucky I was to grow up here," he comments, "surrounded by all the L.A. players and the studios. It definitely helped me break into the business."

Having cut his teeth playing in a succession of local bands, first as a keyboardist and then a drummer, Brown also started engineering records at the tender age of 16. "I was inspired by Thorn Nogar—I went to school with his son—who'd engineered a lot of the early Elvis sessions, and who also owned Radio Recorders [one of L.A.'s oldest facilities, and now the site of the new Record Plant]," he recalls. "Thorn was one of the first people I knew who had a studio in his house, and that got me interested."

"My first engineering credit was cutting a record with Frank Waring when I was 16, and then I started mixing with another friend, Mike Lietz, who was at Moonglow [now the Sunset Sound Factory]," he continues. "I ended up becoming first engineer for an early Harry Nilsson record, totally by chance. That's one of the great things about the L.A. scene back then—there was so much going on, and you'd never know what you might fall into."

In fact, despite becoming a successful studio musician and working with the likes of Andy Williams, the Fifth Dimension and Jose Feliciano, Brown fell more and more into engineering and producing and, in the late '70s, decided to quit playing professionally altogether in favor of concentrating on engineering/producing.

"I think the turning point was when I got involved with Doug Saks at The Mastering Lab," he says, "where

I did all the original direct-to-disc recordings.

"Since then, I've engineered and/or produced and co-produced Al Jarreau, Olivia Newton-John, Jennifer Warnes, Ted Nugent, Eddie Money and Tower of Power, among others, as well as all of George Harrison's music for *Shanghai Surprise*—a pretty eclectic bunch.

"Another bonus of being based in L.A. is that I did two years of live broadcast for the Prime Ticket *Summer Concert Series* from the Forum," Brown adds, "and, of course, there's all the TV and film work out here." (Brown has scored nine movies, a season of *The Tracey Ullman Show*, and is about to do a 14-show series for Paramount TV.)

Brown, who built Producers Workshop studio in 1970 and Pasha Studios in 1978, now has his own 24-track home studio.

"That's another advantage of the Southern California scene," he reflects. "Having your own home facility is a dream that can become a reality here, unlike, say, in Manhattan [where real estate and operating costs are dramatically higher]. But, of course, it also means that there are more engineers and studios here than *anywhere* else.

"And that's a major problem if you're trying to break in the scene here," he continues. "There are so many people coming into town, and the competition is extremely tough. The fact is, it's an overcrowded profession; but there are a lot of hackers out there and there's always room for talent. You've just got to be prepared to stick at it."

Commenting on trends in the Southern California studio business, Brown points out that "all the electronic/computerized hardware is now so cost-effective that every home studio is incredibly well-equipped—that's a *big* plus for scoring TV shows and movies. On the other hand, I also think that there's a move away from electronic sounds back to real live musicians, which is healthy.

"Today's engineers have to be more technically proficient than ever before, because of all the new equipment. I had to learn all about MIDI and computers. But I think it's also very important for the new guys to learn and know the old tricks like how to mic a drum set, or set up for a string session.

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Joe Chiccarelli

Joe Chiccarelli grew up in Boston and played around the local club scene before moving into engineering and building his own 24-track studio.

"I was pretty successful, too," he recalls, "but I always felt like a big fish in a small pond and I knew that, sooner or later, I'd have to make the move to L.A. and 'the big leagues.'"

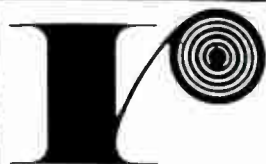
"I was always attracted to the scene out here. I actually came out in 1972 looking for work, but CBS had just laid off 30 engineers, so my timing was bad. In 1976 I took another shot and luckily landed a gig at Cherokee Studios as a staff assistant engineer. It was a great opportunity, 'cause the studio was really hot at the time, and I worked with a lot of big artists like the Bee Gees, Journey and Rod Stewart. But it was also somewhat frustrating, as I was used to doing all my own engineering."

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says, "so it was either full-on professional studio stuff or just a tape recorder and microphone. We began to acquire professional equipment, starting with a 4-track setup. In the early '70s, 24-track was brand new and 16-track was the main format. We ended up buying out a small production studio in Santa Barbara for something like \$11,000. We chose a barn on the ranch that wasn't being used, and converted it into a studio by adding a control room.

"Because of all our years in the business as artists, the band had many friends and acquaintances who would come out to the ranch to visit and ride horses. A lot of these people were artists. The next thing we knew, someone wanted to make a demo. People like Del Shannon, Brian Hyland and some older artists we had toured with came to the ranch. I believe Del Shannon was the first case in which a demo we recorded was released as a single.

"At that point, we realized there was some commercial potential here," smiles Robb. "We were doing less and less touring and, with one thing leading to another, we expanded to 16-

track. I believe we were the first studio in California equipped with MCI consoles and multi-track. We started doing some Little Richard records, and a few medium-sized acts.

"Then a friend of ours who was an engineer at ABC Studios called and said he was recording Steely Dan. They were just starting the *Pretzel Logic* album and wanted to come out and see the studio. They liked it and said they would do the album at the ranch if we put in a 24-track machine with dbx noise reduction. We did, and *Pretzel Logic* was our first gold and platinum album. Our first platinum single was Disco Tex's 'Get Dancing,' produced by Bob Crewe."

In late 1974, however, the local zoning department shut down the ranch operation while the brothers were engaged in various other projects. They scrambled for a few months, taking acts such as Rick Nelson and Wolfman Jack to other local studios until they discovered that MGM (on Fairfax Ave. in Hollywood) was up for sale.

"We negotiated and took over the studio right after New Year's in 1975," Dec Robb recalls. "MGM was a 16-

Cherokee Studio 1's control room is equipped with a custom console based on Trident A-Range modules. Forty-eight mic/line input channels, 24 monitors and eight dedicated effects returns provide a total of 80 line-level inputs for mixdown, each with ten auxiliary sends per channel. The recording area is 32 x 52, with a 15-ft. ceiling height.



"I don't know how anyone can operate a studio who doesn't actually record in the rooms themselves."



track complex and all our projects then were on 24. So, one Saturday we went into one of the studios and just blitzed over the weekend, rewiring for 24-track, and by Monday morning we were up. Rick Nelson was the first act to record in the new studio."

Although every family member is involved in all aspects of studio business, each has his particular function: Father David is the president of the company; eldest brother Dee is chief executive officer, and takes care of day-to-day operations; middle brother Joe leads the engineering and plant operations departments; and younger brother Bruce looks after special projects and independent ventures (including tour bus rebuilding, a marine boat business and an electronics manufacturing company).

"We've always felt it is important," notes Dee Robb, "that at least one of us is working in the rooms at Cherokee at any given time, because it's impossible to have a good technical grasp of the studio operation unless one of us uses it ourselves."

"An independent client can come in and won't notice little changes that we'll notice *right* away. Small changes usually tell you that you're going to have to face a big change if you don't do something about it. I don't know how anybody can operate a studio who doesn't actually record in the rooms themselves. It is of the utmost importance to our operation here. At Cherokee, we go for that personal, hands-on approach." ■

Robyn Flans is a Los Angeles-based freelance writer. The author of three books on rock music, she also contributes to Mix, Modern Drummer, Pulse, Words & Music and other publications.

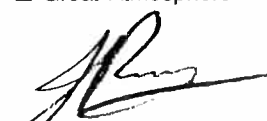


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MAKING IT

IN THE CALIFORNIA RECORDING BUSINESS

by Iain Blair

You're a new engineer or producer in town; young, full of energy and amply endowed with talent, not to mention a great pair of ears. You've studied hard, and you're determined to succeed in the Southern California recording business.

Just how do you go about breaking into what is arguably the most rewarding—and most competitive and overcrowded—part of this profession?

After talking to four top-flight talents who've made it, and made it big—producer Dennis Lambert, engineer/producer Larry Brown, plus engineers Joe Chiccarelli and Ed Thacker—the answer appears to be: any way you can!

"There's no structure, no rules," says Chiccarelli, whose credits include The Bangles, Pat Benatar and Frank Zappa. "Do anything—even sweep studio floors—to get that initial break."

"That break is all-important," Brown agrees, "but you also have to know your stuff, otherwise it's a wasted opportunity. Everyone needs luck, but at the end of the day, success is a mixture of hard work, perseverance and talent. There's no short cut!"

Dennis Lambert

Originally from New York, this well-known songwriter/performer-turned-producer has been based in L.A. since 1968, when he relocated along with famed arranger/producer Don Costa.

"During the '60s," he reports, "I'd performed and written a lot of songs for groups like Freddie & The Dreamers and the Nashville Teens, before becoming a staff producer at Mercury and later working with Don.

"The move to Southern California kicked my career into a higher gear, because I also started getting involved with soundtrack and TV work [Lambert scored *Billy Jack*] and working with top bands like Steely Dan and Seals & Croft."

After working at ABC-Dunhill from 1971 through '75, Lambert formed his

own label, Haven Records, and produced and recorded for the company until the late '70s when he joined CBS Records. Since then, he has operated as an independent producer and writer, and is currently working on projects with Dionne Warwick, Natalie Cole and Jermaine Jackson.

"The great thing about being based in Southern California is that there's so much musical talent concentrated out here—and I don't just mean the artists," he explains. "All the best session players are here, so you can record anything you want; you're *never* short of players.

"The other huge advantage from a production point of view is the sheer number and high standard of studios and personnel in the area," he continues. "There are some great rooms back East, but L.A. has more consistently great-sounding studios than anywhere else in the world; that, in turn, attracts the best engineers and maintenance people.

"My favorite studios? Soundcastle, Ocean Way, Bill Schnee's place, and the Music Grinder—they're all great for live tracking. I've also been doing a lot of work at Summa Music Group's hot, new SSL-equipped studio. And I rate mix rooms like Can Am and Robbie Buchanan's home studio."

According to Lambert, home-use studios are another big plus in the Southern California area. "They're incredibly well-equipped," he considers, "and can often specialize in just one field. I'm currently building my own, which will be equipped with a digital 32-track Mitsubishi X850 and a 24-track analog.

"There's now so much great equipment available that anyone with talent can make a good-sounding demo. The home studio with an 8-track, or even 4-track, is the way to start.

"Compared to the time I first started in the business, today even demos sound like masters. So, if you've got good ears and ideas, at least you can get those ideas down on tape. The technical revolution over the past few years has opened up recording to far more people."

But Lambert sounds a warning about the widespread use of computer and MIDI technology. "Today's producers and engineers have to be *extremely* well-versed with all this technology, and especially the outboard gear. I think there's a big danger, however, of new guys skipping over the rudiments of recording.

"The temptation is to spend time learning all the latest MIDI applications and how to sample, etc., and in doing so, forget how to even mic up a snare drum.

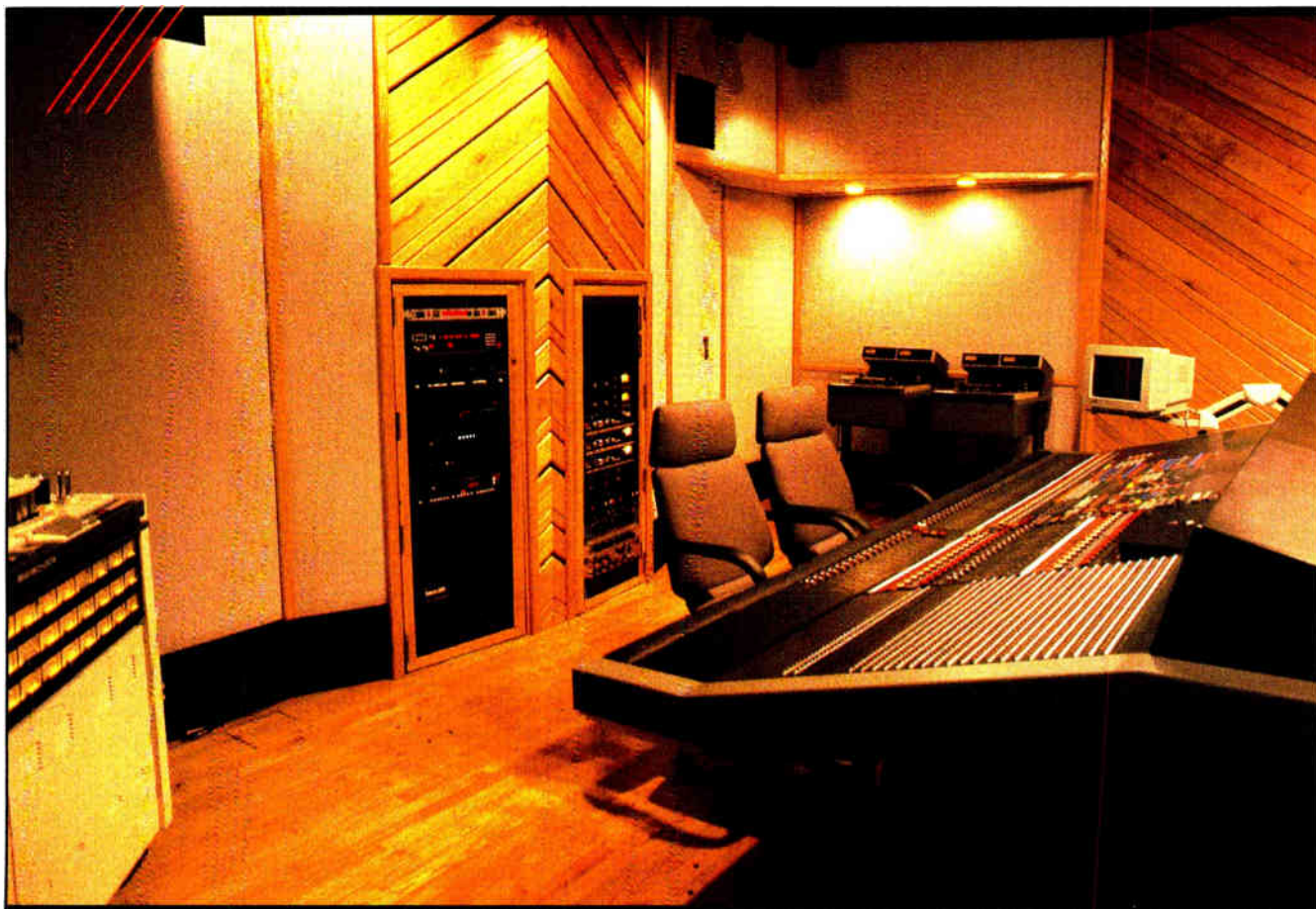
"Obviously you need the latest technology, but my advice to people trying to break in is cover *all* the bases.

"You should know how a live snare sounds, even if you're not using it all the time. It's so competitive in L.A. that *any* edge you can give yourself as an engineer or producer will ultimately pay off."



Dennis Lambert

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Larry Brown

This multifaceted engineer/producer/musician was born and raised in Los Angeles, and for the past 40 years has never strayed far from the Southern California music scene. "Looking back, I always think how lucky I was to grow up here," he comments, "surrounded by all the L.A. players and the studios. It definitely helped me break into the business."

Having cut his teeth playing in a succession of local bands, first as a keyboardist and then a drummer, Brown also started engineering records at the tender age of 16. "I was inspired by Thorn Nogar—I went to school with his son—who'd engineered a lot of the early Elvis sessions, and who also owned Radio Recorders [one of L.A.'s oldest facilities, and now the site of the new Record Plant]," he recalls. "Thorn was one of the first people I knew who had a studio in his house, and that got me interested."

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In fact, despite becoming a successful studio musician and working with the likes of Andy Williams, the Fifth Dimension and Jose Feliciano, Brown fell more and more into engineering and producing and, in the late '70s, decided to quit playing professionally altogether in favor of concentrating on engineering/producing.

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of-mouth.

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"It used to be the norm that you'd mix [at a rate of one] track a day, but now it's fairly common to spend two, three, even four days getting the perfect mix. Of course, the new technology available has been a *big* factor. First off, computer recall on today's boards [of front-panel settings] gives you an incredible amount of control that just wasn't there before for an engineer.

"Then there's sampling, which has proved to be even more revolutionary. A lot of the time, people are replacing sounds in the mix, especially drum sounds and vocals. And then mixing to DAT is also becoming *very* popular now; I'm doing a lot of sessions like that."

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"From a specifically engineering perspective, I also feel that, at last, record companies are beginning to realize the difference between a good record and a *great* record; a difference that can translate into the gap between a million seller and a 5- or 6-million seller. And that difference can be solely attributed to the extra time taken on the mix.

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Ed Thacker

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"In my opinion, there are only really three places in the world where you can make pop records and become involved in films, soundtracks and TV, and those are Los Angeles, New York and London. That's where *all* the main studios are located, where the players

and where the majority of artists are based. It's also where the cutting edge of technology first appears in studios.

"Of course there's a thriving recording industry in every major city but, personally, you can't beat the scene here in Southern California. It's certainly been good to me, and I wouldn't really consider basing myself anywhere else, although I've worked all over the world and recorded in five continents.

"How do you break into the scene? Any way you can, and I mean *any way*! I started off at A&M [Records] in the advertising department, because I fig-

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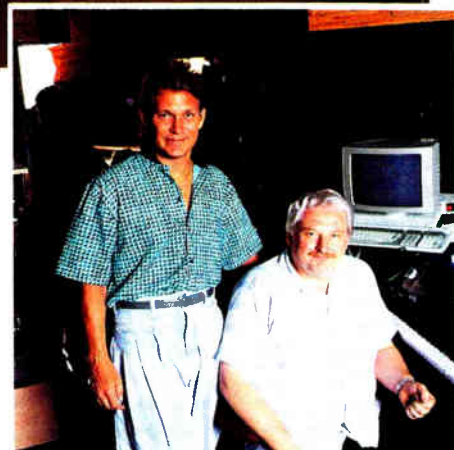
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FACILITY SPOTLIGHT



(Above) Lion Share's Studio A control room features a 56/48 Neve Model 8108 equipped with a GML moving-fader automation system, two Studer A800 analog 24-tracks, Studer A80 1/4- and 1/2-inch analog 2-tracks, a BTX/Cipher Digital time code synchronizer, and a custom JBL/Augsburger monitoring system with Bryston amps. (Right) Lion Share Studios' co-owners Terry Williams (left) and Jay Antista.



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A relatively new recording haven, and one that's taken off like a rocket, is Lion Share. Purchased in 1981 by Kenny Rogers, the facility's current owners are Terry Williams and director of engineering Jay Antista, who bought the three-room complex from Rogers in 1986. Williams says it's a wonder that Lion Share ever got off the ground.

"I was doing an album, *Share Your Love*, with Kenny and Lionel [Richie]," he recalls. "And Kenny would come into the date and had just bought a huge boat or another plane. So I said, 'I gotta be honest with you. I don't understand why you don't own a studio. You put out all these production dollars to another facility; why don't

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"Concord was a nice facility, but antiquated," continues Williams. "It had old API desks, and one room was equipped with a Harrison board. The studio's cash flow when Kenny bought it was insignificant. They really had no clients to speak of, and with those they did have, the studio owners were

of mouth.

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ured at least I'd be there on the lot and in regular contact with the recording aspects."

Thacker was right. After a year, he was hired as a trainee engineer and began the slow climb up the ladder. "Trainee engineer means moving pianos, setting up machines and sweeping floors, but it's a foot in the door. In this business you learn by observation and perseverance," he stresses. "You work and learn and wait for that break."

For Thacker, the "break" came in the unexpected shape of Supertramp. "They came to A&M to record *Crisis, What Crisis?* with Ken Scott, whom I'd

always admired because of his work with Bowie, and I landed the assistant engineering job," he reports. "That was my first break and, from there, I went on to do albums with The Tubes and Stanley Clarke. Because Ken gradually gave me more control and responsibility, it was an incredible learning experience."

In 1977, Thacker decided to go independent. "I was getting a lot of offers, and I really wanted to become a first engineer and run my own ship," he says. "So I began by doing more work with Stanley Clarke, and then gradually branched out more into production as well in the early '80s." During this peri-



od, Thacker produced two albums for Tommy Tutone and worked extensively with Cyndi Lauper, producing her *Goonies* soundtrack material.

"But about four years ago, I decided to concentrate on engineering again," he states. "I decided I was more effective that way, and I enjoyed it more." Since then, Thacker has been much in demand, working with such varied acts as Loverboy, Manhattan Transfer and Pat Benatar. At the time of our interview, he was at Ocean Way Studios working on a new XTC album.

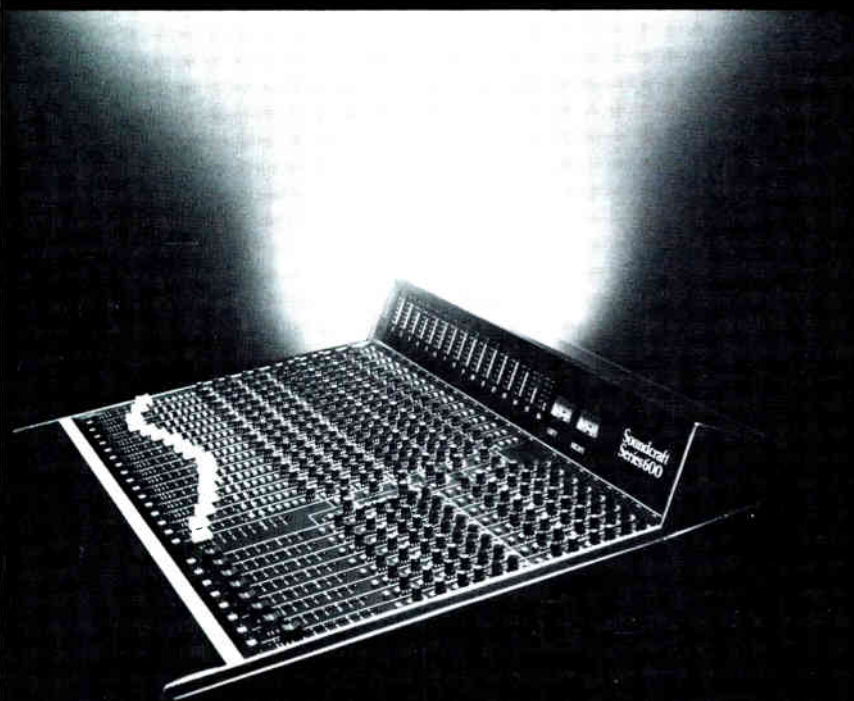
"The great thing about being based in Southern California is that there's always so much going on here, and it's so eclectic," he says. "People, particularly back East, tend to typecast the L.A. scene as 'the laidback sound,' but that's so far from the truth today.

"The studios out here are consistently the best-equipped and best-stocked studios in the world, and I've been everywhere. I also think they're more service-oriented—maintenance is a high priority, and that's a big consideration when you're an engineer. And, because of that, there has been a definite boom in the Southern California recording industry in recent years—this is where it's happening!

"As for general trends in engineering, it's obviously so much more technical today because of all the equipment advances. It's actually a full-time job just keeping up with all the latest gear. I spend my life reading new manuals, because you *have* to understand the new tools of your trade."

Iain Blair is a widely published freelance writer based in Los Angeles.

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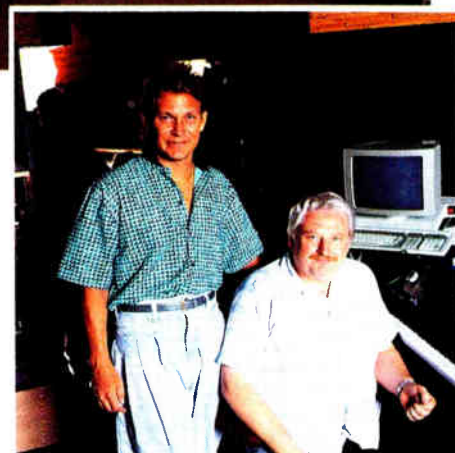
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LION SHARE STUDIOS

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spending more money on collecting it than receiving it.

"The first thing Kenny said to me was, 'Terry, I want you to make this place better than any other.' I told him I could do it, but he'd have to spend a lot of money. Well, I got the money from him, and that was basically the extent of Kenny's involvement in Lion Share.

"Having been in the music industry most of my life [Williams was a member, with Kenny Rogers, of that seminal group, The First Edition], most of my friends are big producers, like David Foster and Michael Omartian. But I couldn't call on them, no matter how good of friends they were, to come to a studio that was antiquated."

Studio A was gutted and redesigned by Lakeside Associates, and business picked up quickly. "I think the first hit out of that room was 'She Works Hard For The Money,' by Donna Summer," Williams recalls. "From there, we reached the stage where everybody from Rod Stewart to Kenny Loggins to Barbra Streisand's *Yentl*, *Broadway* and all of *Chicago XVI*, *XVII* and *XVIII* were recorded and/or mixed here.

"But the studio's most successful sessions," Williams notes, "were for the *We Are The World* project. Kenny was very involved in the dates with Michael [Jackson] and Lionel [Richie], and Kenny and Lionel loved the room. Everything was donated for the project, and Kenny asked me if it was feasible for Lion Share to donate studio time. I said, 'Of course!'

"We handled virtually everything except the video taped at A&M. We couldn't handle that because there were too many people to fit into our studios—what with the 150 artists, plus about 500 people in the entourages. But all the tracking, overdubs, solos and mixing were done here [with engineer Humberto Gatica and producer Quincy Jones]."

The "World" sessions benefited from what Williams considers "a gutsy move" made by Lion Share in 1983: becoming the first facility on the West Coast to purchase a Mitsubishi X800 digital 32-track. More recently, GML moving fader automation systems were added to the Neve 8128 in Studio B and the large Neve 8108 in Studio A.

The studio's latest acquisition, Jay Antista reports, is a fully loaded NED Synclavier system with Direct-to-Disk recording. Lion Share's system, housed in Studio C, offers 8-track capability

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with up to 13 minutes of audio recording per track—a total of 104 track minutes in all.

"The Direct-to-Disk system has proved extremely popular for record sessions," Antista says. "Obviously, the Synclavier has already found great acceptance amongst musicians, composers and, more recently, post houses for use in editing, ADR [automatic dialog replacement] and Foley applications. We consider ourselves to be one of the first recording facilities routinely using the Synclavier exclusively for music sessions.

"During the past months we've used the Synclavier Direct-to-Disk system on dates for Julio Iglesias, Randy Newman, Santa Fe, Marc Beeson, June Pointer and John Brannen, working with producer David Malloy. All those sessions—and others—were coordi-

nated by our in-house Synclavier operator and programmer, Kevin Maloney, a very talented guy."

The feature that Lion Share finds particularly attractive about the NED system, says Antista, is its "speed of operation—it reaches a cue point in zero time. That feature alone is extremely useful while recording vocals: we can get back to a drop-in point for another take in milliseconds, before the vocalist loses the flow of what's going down, and maybe forgets how they can cut a better take. The speed is breathtaking! No more tape rewind!"

Adds Williams, "The system is also extremely flexible for editing and for moving around sections of a take to produce repeats. Or even to give a totally different feel. And the 100 kHz sampling frequency is stunning; we cannot tell playback from the real thing, it's so good.

"All in all, the Synclavier and Direct-to-Disk have revolutionized the way we record here—I like to think that Lion Share is leading the Los Angeles recording community in providing producers and artists with the latest recording tools that let them get the job done more quickly and efficiently." ■

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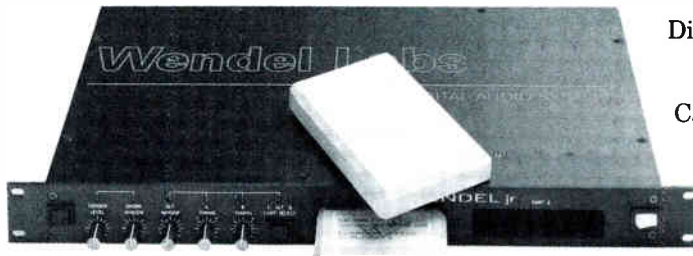
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THE VILLAGE RECORDER

CHRONOLOGY

by Robyn Flans

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Village Studio B

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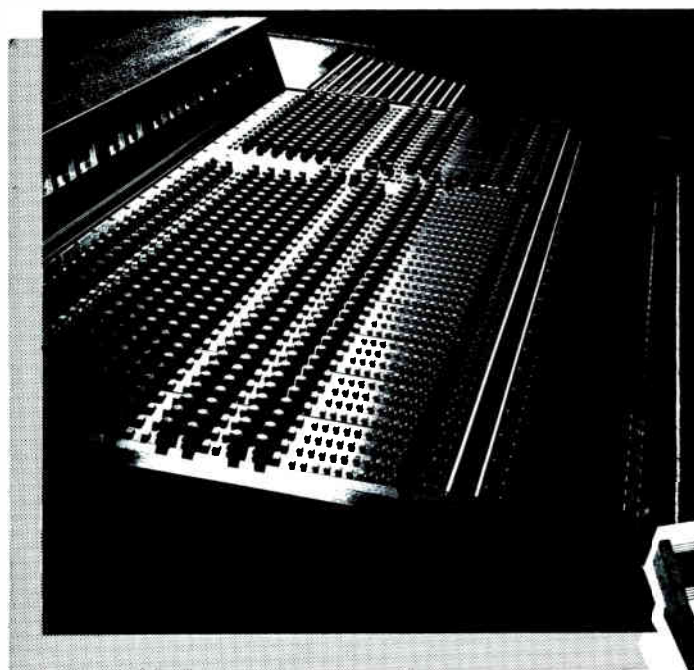
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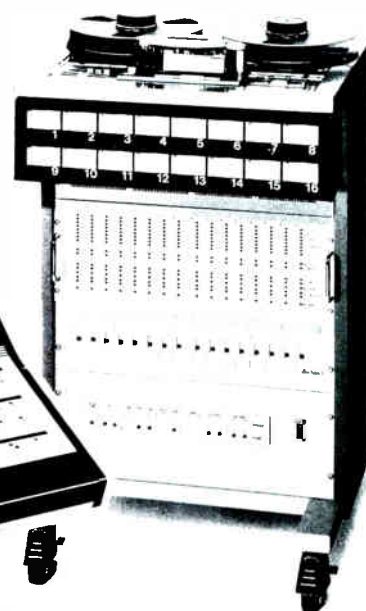
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1971

The classic mural called "The Isle of California" is painted on the outside wall by the L.A. Fine Arts Squad, depicting the day California falls into the



Village Studio B

ocean. It's faded considerably since '71, but they say it looks spectacular when it rains.

Clients include The Ventures, John Lee Hooker and Joni Mitchell.

1972

Village Studio D ▶

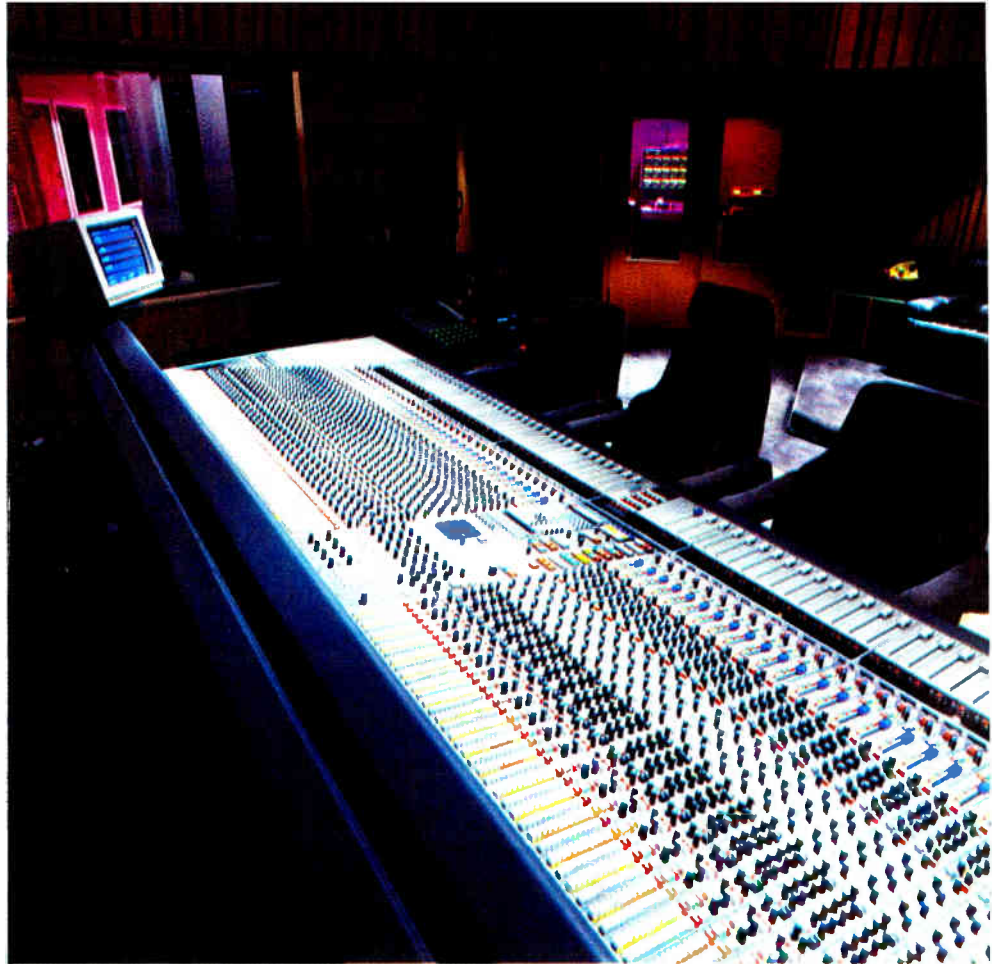
Drummer Jeff Porcaro remembers: "I was about 18 at the time, working there with Joe Shermie, the bass player from Three Dog Night. He was working on a solo album, and we were there for maybe six months straight, day and night. Once we heard the most incredible echo delay-type guitar going on, so we went through these tiny back hallways that connect the studios, through this little tape locker, into a little hallway where there was a window. Inside was Steely Dan, and it was the first time any of us had ever seen who these guys were. Denny Dias was at the mixing console mixing the song 'King Of The World,' and [David] Paich and I sat in this little room for two hours, staring into this tiny corner of the window in awe."

Former studio manager Dick LaPalm recalls: "When Steely Dan first came to the studio, I came in one morning when they had made all these wonderful drawings on the console, little caricatures of people. They had been using some kind of pen so that, when you turned on the fluorescent lights, all these great designs on the board would glow. We got kind of upset and said, 'You just can't do this; this is a console that costs \$200,000. Look, why don't we give you a door and if you want to paint, paint on that.' They painted that door in one night, and the second night they painted a door that we didn't want them to paint."

Other clients in the studio this year include Kenny Rogers and The New Christy Minstrels.

1973

Using the studio are Mike Bloomfield, Roberta Flack, Jeff Beck, Minnie Rip-



perton, Lou Rawls, Rick Derringer (with Edgar & Johnny Winter) and The Rolling Stones, who are in for only six or seven days mixing *Goat's Head Soup*, but could have caused pandemonium if not for Dick LaPalm's clever idea: "What they were looking for as far as security was just unbeliev-



Village Post Studio "F"

able. Very often, people can glance over tape boxes and see who is recording, so in the case of the Rolling Stones we marked all the boxes 'Muddy Waters.' I had been with Chess for many years and they had been to Chess to record, and I knew their love

Steely Dan
were "artists"
in many ways.
Bob Dylan hid
his tapes in
the telephone
room. Fleet-
wood Mac's
Tusk cost
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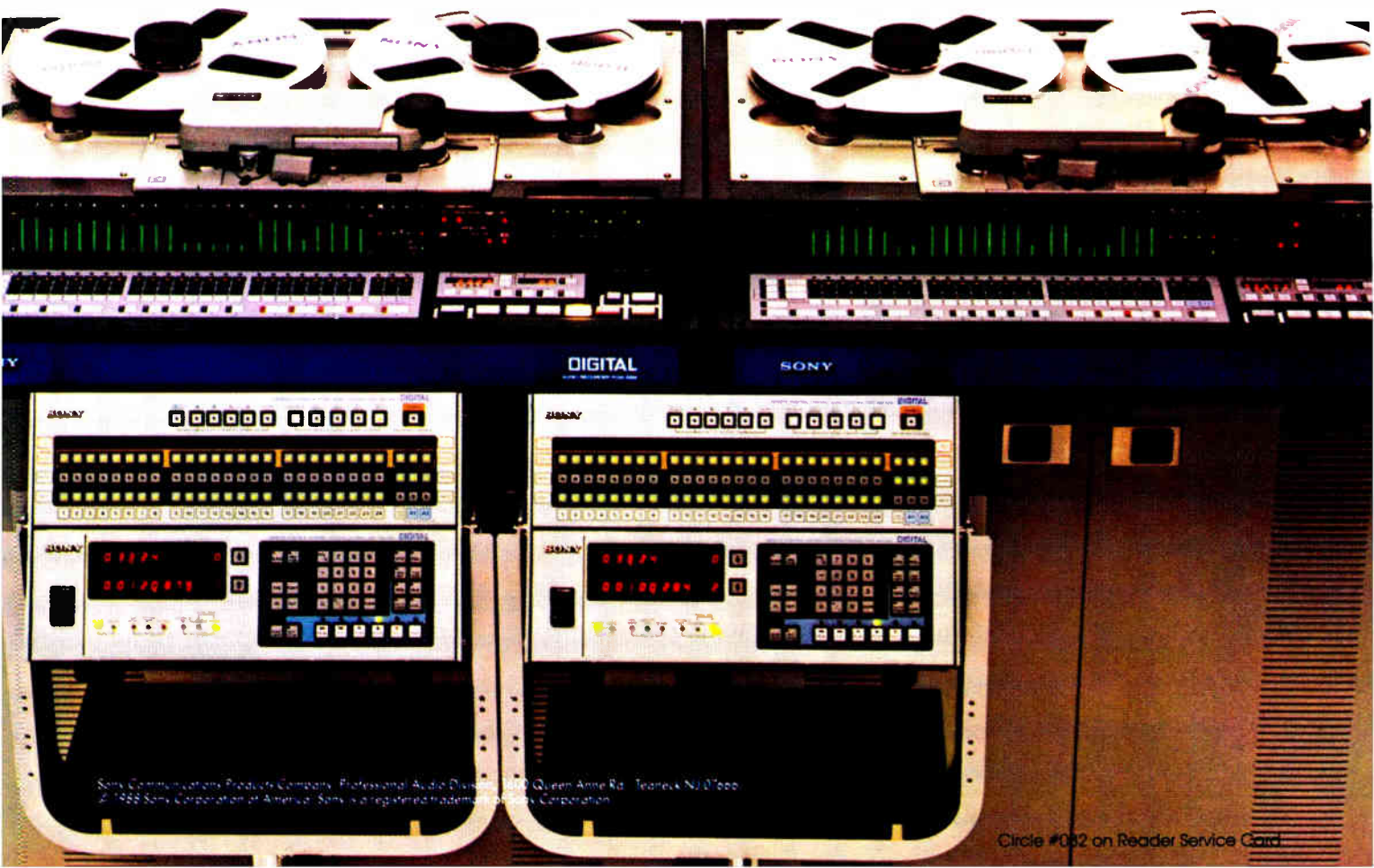
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for Muddy and the blues. People came in and looked at the boxes, saying, 'Muddy Waters is here—that's great.' But no one said, 'Let's break in the studio to see what he's doing.' "

LaPalm remembers Bob Dylan's similar visit to the studio, recording *Planet Waves* with The Band: "The first night when they were leaving, I saw Bob walking out of the studio carrying this 2-inch tape. I didn't think much of it, but a couple of nights later I saw him coming out with three tapes, and 2-inch tapes are heavy. I asked the second engineer, 'Why is he removing the tapes?' He said, 'He doesn't trust anyone.' So I went to Dylan and said, 'Look, you don't have to do that. We keep our tapes under lock and key.' I showed him the room and he asked, 'How many people have keys to it?' I said all of the second engineers. That wasn't good. So I took

"You knew it was going to be a good Steely Dan session if Donald was sitting at the piano playing cocktail lounge music," Jeff Harris laughs. Dick LaPalm remembers: "Steely Dan was in the middle of tracking one day, and one of the speakers kept cutting out. The maintenance man monkeyed with it a couple of times, but the same thing kept happening. So finally Gary Katz, the producer, got upset and said, 'Tell you what, let me try this.' He picked up a can of Coca-Cola and threw it at the speaker, and the speaker worked from that point on. So whenever there was a problem after that,

Walter [Becker] or Donald [Fagen] would say, 'Well, what do we have around here that we can throw at it?' "

1977

Jeff Harris reports: "Studios A & B had their first serious updates with Harrison consoles. In its day it was a very important, modern, in-line console, but it didn't sound as good as the old consoles. It lasted awhile because Supertramp's *Breakfast In America* and Steely Dan's stuff was cut on that board, and it brought with it a whole new age of clients like The Band."

Other clients of the studio are

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him upstairs to the second floor and said, 'You can keep the tapes right in this room.' He said, 'Who has a key?' I said, 'This is our telephone room. Just one other person and the telephone people.' So he kept the tapes in the friggin' telephone room."

1974

The client list this year includes Gato Barbieri, Jimmy Haskell, Woody Herman, Keith Jarrett, Kiss, Rufus, Milton Nascimento, Wayne Shorter and The Nitty Gritty Dirt Band.

1976

Among those using the studio are Jeff Bridges, Neil Young, Joe Cocker, George Harrison, Crosby & Nash, Art Garfunkel, Herbie Hancock, The Pointer Sisters, Neil Sedaka, Santana and Steely Dan.

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Cheech & Chong and B.B. King.

1978

Fleetwood Mac producer Ken Caillat recalls that Studio D came about as a bit of a fluke: "The Beach Boys had decided to rebuild their studio, and they said, 'Why don't you come in and design it for us and then you can do your next album there? It'll be just the way you want it, and we'll have a new studio.' It seemed straight-ahead, so we started in on it. We met with Neve, ordered a console and then when we met to finalize the deal, the Beach Boys wanted something like half-a-million dollars up front for us to use it, because they said, 'We're not going to build the studio for you and have you decide after two weeks that you don't want to work there.' Since I had done a couple of projects over at Geordie Hormel's, I said to Geordie, 'Look, we've already designed this great console. Are you interested in doing the same thing?' He said, 'It sounds wonderful to me.' Geordie oversaw it, and all of Fleetwood got involved. Christine [McVie] even helped pick out some of the furniture. It ended up being a pretty good deal because Geordie paid \$1.2 million, and we spent \$1.4 million making *Tusk*."

Other clients at Village are Debby Boone, the Beach Boys, Dan Fogelberg, Walter Egan, Poco, Frank Zappa and Supertramp.

1979

At Village are the Four Tops, Herbie Hancock, Donna Summer, George Burns, Jean-Luc Ponty and Barry Manilow, who was producing Dionne Warwick.

"Barry Manilow liked one particular piano chair so much that he said, 'Where can I get this?' So we put a little name plaque on the back and gave it to him the day he left," Harris recalls.

Hoyt Axton likes the place so much he buys the 16-track machine in Studio C.

Harris recalls an example of Geordie's philosophy: "Eddie Rabbitt was in, and Geordie came by one day to say hello. Eddie said, 'Geordie, we really love your studio,' and Geordie said, 'It's not *my* studio, it's *your* studio.'"

1980

They start completely regutting and

rebuilding Studio B, with a Neve 8108 console, one of the first. It's still in there, but it's "very much a Village console now," says Harris.

"It was about this time that Geordie got involved with Fairlight and became the owner of the U.S. distribution company. I remember the night we had a Fairlight brochure and Geordie said, 'I knew this was going to happen. Call Australia.' So we got the owner on the phone and Geordie said, 'I'll buy as many of these as you can make,' and that's how we became a distributor.

"At the same time, Roger Linn was inventing the LinnDrum, and at the first AES Convention we attended in New York City, Roger shared a booth with us. We still have serial #16 of the original drum machine."

Artists at Village include Marty Balin, the Bus Boys, Phil Collins, Jermaine Jackson, Buddy Miles, The Jacksons, Jan Berry, Christine McVie, Poco and Charlton Heston (doing a voice-over for the Olympics).

1981

A Neve 8058 is installed in the control room of Studio A.

Recording at the studio are Jimmy Buffett, Neil Diamond, Elton John and Linda Ronstadt.

1982

Jeff Harris builds a video edit bay because they are doing more post work. "The first major project was the US Festival footage for cable," Harris recalls. "We did all the off-line for a year, although it never was sold. We did things for David Letterman and all kinds of in-house projects, including Fairlight promotional material because Geordie was always interested in video and film."

At the studio at this time are Van Morrison, Tom Petty, the *Fame* TV show and Robbie Robertson, who is producing the soundtrack for *The King of Comedy*.

1983

The Carpenters, Natalie Cole, The Commodores, Shelley Duvall, Sammy Hagar, Engelbert Humperdinck, Bonnie Raitt, Rufus, Barbra Streisand and Ratt are working at Village.

Laughs engineer Jim Faraci, "When we first started out with Ratt, they would all come to work all scrunched up in one car. Later, we couldn't fit all their sports cars in the same lot."

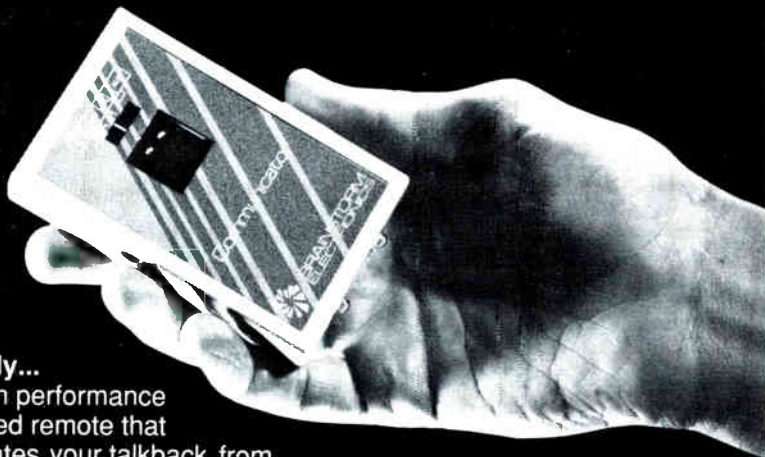
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1984

Village gets into digital recording in a big way, buying three Sony 3324 machines, the Mitsubishi 32-track machine, a Sony 1610 and two Mitsubishi MS80s.

Muhammad Ali uses the studio for what Jeff Harris describes as a "rap record for hunger."

"It was called 'Wars On Hunger,' and because of his religious beliefs, Ali had certain hours of prayer that were very strict, so we had to record at odd times, like 5 a.m."

Other artists at the studio include Placido Domingo, Alice Cooper, Marvin Gaye, Manhattan Transfer, Jean-Luc Ponty, Rick Springfield, Sarah Vaughan, Dionne Warwick, Pia Zadora, Julie Andrews and Menudo.

Harris laughs: "The studio has always been very private in the 11 years I've been here, since it's in West L.A., which is out of Hollywood and away from the beaten track. A lot of artists have come here because it is private. Fleetwood Mac was here for over a year, parking their model cars outside with no one knowing who they were."

1985

Studio B is revised, keeping the same console, but changing the acoustics of the control room and moving its tape machines to a separate machine room.

"The thrust to do that was from Jimmy Iovine and Shelly Yakus, who were doing Tom Petty and the Eurythmics. They had that room for over a year before they went to A&M," states Harris.

At the same time, Vincent Van Haaff does the same kind of treatment to Studio A and installs an SSL console.

Others recording that year are Manhattan Transfer, Talking Heads and Tina Turner.

1986

Robbie Robertson moves into old Studio C and sets up a private office with a 16-track studio. He begins recording a project there that took 16 months. Engineer Jim Scott recalls, "We didn't originally start Robbie's album in the studio. We were at Village having meetings and looking around, and behind the maintenance shop is a huge room just full of chairs and boxes and junk, with ceilings 30 feet high. It is a great big room, way upstairs, three floors away from the recording studios, and we said, 'This would be a great place to record, wouldn't it?'"

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"So they worked all weekend cleaning the room out, drilling holes in the wall, running cables up and down the stairs, with video cameras everywhere so we could use the console in Studio A and set the musicians up in this warehouse-type atmosphere. We didn't do an incredible amount of the record up there; we were there for a couple of weeks, but a couple of things went the distance—'American Roulette' and 'Fallen Angel'—although they were worked on in other studios subsequently.

"Three or four times during the course of the project, we would retreat to his production office, and we'd rent tape recorders and consoles and drag things upstairs to a makeshift recording studio, trying to get something a little more special on the tape. Upstairs is where it clicked. It was shoulder-to-shoulder often, and we had people sitting on couches, with guitars and amps stacked on desks, but it was really a lot of fun. The bulk of the vocals were done up there, and almost all the solos and a lot of the guitar parts toward the end of the project. And after we decided to actually go more or less full-time up there with the 16-track we bought, it really became the clubhouse, and it was great fun. We didn't have all the usual outboard gear, and I think one thing that made the record good is that the performances had to be really spectacular, because there was no flattery from effects and no place to hide anything. The Bodeans showed up and sang for us on a couple of songs, and there we all were, with no headphone systems and no way to balance the tracks. We had home speakers hanging in the corners of the room with little tape recorders everywhere.

"As we were cutting the tracks, we turned the heat up in the studio because if everything is comfortable and perfect, you play comfortable and perfect. It was great seeing Robbie singing during the live tracks all day long, screaming and dripping sweat and working really hard. There was never any, 'Let's stop now, I'd like to have a little more of this or a little more of that.' It was, 'Take your guitar and let's go, and if it doesn't mean anything at that point, then it's not a rock and roll record.' "

Also in the studio are Rod Stewart, Bernie Taupin, Huey Lewis & The News, Fiona, Fee Waybill, Berlin and Ratt.

1987

Harris says, "I had been doing a few film projects, like *Creepshow*, all the music for *The King of Comedy* and sound effects for Disney's *TRON*, so I decided it was time to get more into the post-production business. I built a small studio, which used to be the Fairlight production room, creating a 24-track post-production facility for voice-overs, film and TV work. That has a Trident console in it."

Luther Vandross, Kenny Loggins, Mr. Mister, Pink Floyd, Manhattan Transfer, Weird Al Yankovic and Tom Petty are in the studio, the music for the film *Dirty Dancing* is being recorded here and TSOL is terrorizing the studio.

Says Jim Faraci, "Nick Smerigan (executive director of Village) was in the lobby one day when two of the guys came in. Nick immediately wanted to know who these guys were, because they looked like they were looking for trouble. Kathy Konop (studio manager) happened to be standing right there and said, 'It's okay, they're in one of Jim's bands.' When there are Harleys in the parking lot, they're my band."

1988

The control room of Studio D is rebuilt with a Neve V Series console, and the tape machines are taken out of the room.

Lita Ford, Stryper, Robert Cray, Stanley Jordan, Honeymoon Suite and Gregory Hines are working at Village, as is Paul Young.

Says Jim Scott in the midst of the Young project: "The hours are tough because we have a rigid deadline. It's not, 'Gee, I wonder what that would sound like,' but it's been, 'Let's get it on the tape. Let's go.' Paul performed at the Freedom Fest from Wembley Stadium, left the stage, got on the plane, flew 12 hours, walked into Village and said, 'Sounds great, boys, where's the microphone, I feel like singing.' I looked at this guy and said, 'Man, where have you been all my life?' "

Robyn Flans is a Los Angeles-based 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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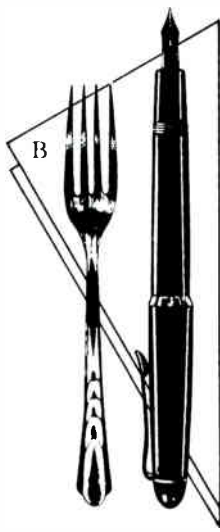
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by Mr. Bonzai

GEORDIE HORMEL

THE VISION OF THE VILLAGE



A seven-foot Amazon butler packed into a pink Spandex tuxedo led the way to the medieval dining hall of the fabulously wealthy heir to the Hormel meat fortune and owner of The Village. Geordie Hormel, or "Spam the Man," as he is known at the stock exchange, hushed the string quartet and bade us sit down. He tossed back his shoulder-length silver tresses and lifted a gilded garbage can lid to reveal our lunch—a rack of Spam, roasted Hawaiian style with slices of canned pineapple.

No, just kidding. Let's start again.

I've been to The Village many times—one special occasion was for a lunching with Robbie Robertson and a

chance to see the artist at work in his personal recording lab. The Village has a big bad history of Rolling Stones, Eurythmics, Fleetwood Macs. But Geordie was never present during my forays. He keeps a low profile, and his absence promotes reclusive rumors.

Lunching with Geordie was urged on me from many corners, but I resisted when I learned that an hour could easily lead to a lost weekend. One story is that he had worked at home for a year on a new recording of "The Star Spangled Banner"—with all the missing verses. Finally, my vanity got the best of me when it was mentioned that only Mr. Bonzai could do this guy justice. I was flattered, even though it



Geordie Hormel

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LUNCHING · WITH · BONZAI

seemed like no one else would touch this one with a ten-foot pole. I made a special request for our beloved founder and world-class explorer, David M. "Indiana" Schwartz, to join me on yet another *Mix* magazine search for truth and insight into the very core of the modern recording industry.

Join us now at a private estate off Sunset Boulevard, down near the sea where the little houses have been left way behind. The massive gates open automatically, silently, and we gaze on acres of overgrown jungle with birds of paradise flowers standing 20 feet high. Old cars and motorcycles lie where they last sputtered. The Olympic swimming pool is half filled with dirt and weeds. "He's growing corn," I had heard.

Geordie came out of his log cabin mansion to greet us, wearing faded denim and sheepskin moccasins. There was a herd of dogs, ranging in size from mastiff to terrier. He welcomed us into his kitchen and then to the breakfast nook, where a meal of fresh cold cuts and deli dishes had been laid out.



Geordie Hormel (right) and Fairlight co-founder and inventor Peter Vogel check out the first Fairlight brought into the U.S.

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Your guess is as good as mine. I realized all I really knew about this guy was from his lengthy BMI royalty statements for such shows as *The Fugitive*, *Huckleberry Hound*, *Lassie*, *Naked City*, *Rin Tin Tin*, *Wanted Dead or Alive*, *Ozzie & Harriet*, *The Untouchables*—I better quit before I run out of commas. Trust me, if you lived in the '50s and '60s, you were submerged in Geordie's music.

He uncorked a bottle of red wine and we sat down to chat about his studio, etc.

Hormel: The only thing I did for The Village was to put in the money, predict the future and stay in the office for ten years. My goal all along was to have this studio at home. When I tried to do that, though, the bankers said it had to be a business. So I opened a studio.

Bonzai: You had recorded in a lot of studios before then, hadn't you?

Hormel: No, not really. A few of the big ones. I recorded at Capitol and Radio Recorders out here and at a couple of studios in New York.

Bonzai: I've seen your royalty statements from BMI. You were a composer associated with scores of television shows of the '50s and '60s. . .

Hormel: Yes, I had cue music on about half of all the filmed TV shows—that's a rough guess. And I probably did the themes for a half-dozen shows. *Playhouse 90* was the first show that used my music.

Here's how it happened: I was on active duty with the Coast Guard in the '50s and I had written the music to a movie, but nothing ever happened with the project. I had orchestrated and scored it, but I had no formal music education other than what I taught myself. So, this score had been sitting around and a friend of mine was going over to the Netherlands in the mid-'50s to record the Concertgebouw Orchestra. He asked if I had anything I wanted recorded, and I gave him my score.

They didn't know what the hell to make of it, because there was no notation and accents about how it was to be played. So, they played it every way they could think of, and when I got the recordings I had a helluva cue library. Someone doing music editing for the *Playhouse 90* television show heard me auditioning the tapes. There weren't many libraries around at the time. There was a market for it, and I sold some of the music to the show. I

was congratulating myself on what a good deal I had made when they came to me the next week and wanted to buy it again, which was a surprise. That's the way it proceeded—accident by accident.

Bonzai: Did you start writing music and then recording in America?

Hormel: No, my whole library was done in the Netherlands—we made many more trips. I had professional arrangers check my scores later on, but I never got anything as good as the first recordings where they did it every way possible.

Bonzai: Did you watch the shows and compose for specific cues?

Hormel: No, I didn't watch television at the time. Once in a while now, I watch and recognize some of my music in the old shows.

Bonzai: Well, there goes a whole bunch of questions. I wanted to ask about your personal involvement with Bugs Bunny, since your music was used in cartoons.

Hormel: I do have a personal involvement with Bugs Bunny. Mel Blanc [the voice of Bugs] is a neighbor just up the street. He is my daughter's godfather.

Bonzai: I guess you must have accumulated quite a bit of wealth from all the TV work.

Hormel: No. You see, I had started a record company at the time—Zephyr Records. I would have had a hit album if it hadn't been for a lawsuit coming from another record company because I had mentioned the name of one of their contract players on the liner notes. I had to take the album off the market because this musician was under contract to another label. But for a short while it was such a hit that Dick Clark had listed it on his Top Ten for *American Bandstand*. The list was for singles, but he put the album on the chart. It was called *Scooby-Doo*, produced by Leiber & Stoller. Disc jockeys all over the country were using tracks for their theme songs, so it was getting incredible airplay. After the lawsuit, I couldn't recover from the loss. I didn't start getting income from my music library for another year, and the money I made went to cover the record company losses.

Bonzai: So what was the next chapter in your life?

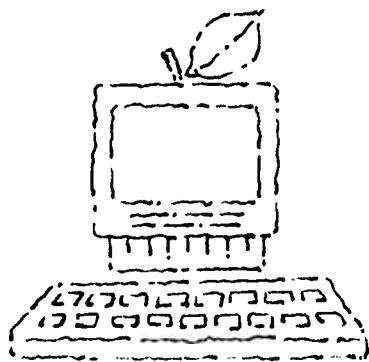
Hormel: My ambition was to make it as a performer. I spent the next couple of years on the road as a singer,

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doing jazz-oriented pop music in clubs and concerts. The night before I opened my big show in New York City, I fired the band because they were all strung out.

Bonzai: Geordie, your life sounds like a loony comedy.

Hormel: Well, I had to put a band together quickly, and I remembered a piano player I had heard at a party years before. I knew that someday he was going to be great, so I tracked him down and he was playing with Gerry Mulligan. Gerry told me if I got him another player, I could have him. It was Roger Kellaway, and with no rehearsals we sounded great on the opening night—at a club called The Most. It was the best show I had ever done. I was booked for two weeks in 1962 and stayed for a year without a day off.

I was looking for a record contract with either Columbia or RCA, and I got both. John Hammond would have been assigned to me, but he told me Columbia was pushing another pop singer, John Gary, so I signed with RCA.

Bonzai: Did you have any musical training as a child?

Hormel: Well, I taught myself a little piano, but I was supposed to be a butcher.

Bonzai: Were you rebellious with your family?

Hormel: Not in the sense that people are rebellious today. In those days, the slightest thought of rebellion was grand treason.

Bonzai: The name Hormel conjures up an image of the gigantic meat-packing family. How did they relate to your musical career—did they support your efforts?

Hormel: No, they didn't like the idea very much. They didn't help out.

Bonzai: How did you survive through the lean times? And pardon the pun.

Hormel: I always worked. I put myself through college—well, I quit after one year, but I paid all the bills. I always managed to support myself. I had a hard time believing it wasn't possible for anybody to find work. You can shine somebody's doorknob if you have to.

Bonzai: Well, how did you get to The Village?

Hormel: I started doing some motion picture music after New York closed in on me. I bought my masters

back from RCA and gave up the singing career. Then I helped start a group called "Brazil '66." I had a small office with a studio across the street from Paramount, and the group used the studio for rehearsals and some recording. Sergio Mendes put the group together there, and during that time I wanted to do my movie to music. I did the music with Roger Kellaway, and it ended up being an hour-and-a-half long. I also had a documentary motion picture company.

Schwartz: Did you make any money from Brazil '66?

Hormel: No.

Bonzai: We still haven't found out how you got the money.

Hormel: Well, by this time I was getting money from the music library. And while I was performing I was making between \$1,500 and \$2,000 a week. In 1968, I moved my little studio to West Los Angeles and called it The Village. I had looked at the building for a year and figured it was more than I could handle, but I managed to buy it for no money down and a total price of \$125,000. The real estate company had lost the plans for the building, which cost me a bundle to have redone for the earthquake code and various reconstructions. I've spent \$6 or \$7 million in building since then.

Bonzai: The Village has consistently maintained a position of technical leadership—how have you managed that?

Hormel: That's one of the things that I'm good at. I think it's just common sense to see what's coming. It was easy to see 24-track coming. In fact, we were 24-track when we opened. But it was a little early and everybody still wanted to record 16-track. I knew Dolby sound was coming, and we were the first in the world to have 24-track Dolby.

Bonzai: Didn't you bring Fairlight to America?

Hormel: Yes. Herbie Hancock and I once discussed what the perfect keyboard machine would be and decided it would be one that could sample sounds, used a computer, etc. Every time we saw each other we'd ask if anyone had come up with it. Finally, he told me there was a group in Australia that was on to something. I read their literature and called the company. They arranged for a prototype demo at Herbie's house. He wanted to wait for the next generation, but I said

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I would buy all they could make. For a year I did that and sold a few. Then I ran out of customers and ended up with a lot of Fairlights and deep trouble. I had 27 of them in my house. What I liked about Fairlight was that it was upgradeable.

Bonzai: How did you manage such an inventory?

Hormel: We had a sale. I asked Robert Moog if he would come and demonstrate the Fairlight. He said he wouldn't make an endorsement, but during the demonstration he said it was a device that wouldn't go out of date in one year, even five years. He was very convincing, and we spent more money advertising and started selling again. Three or four years passed and we were back-ordered.

Bonzai: What's the background on your family?

Hormel: French Huguenot, chicken shits who escaped from France.

Bonzai: Great family pride—

Hormel: I have no pride in a family that kills billions of pigs. No pride in being a human being with the history that our race has.

Bonzai: I wanted to ask you about some of the people who have come through The Village through the years. Were you at Jim Morrison's famous birthday party at the studio?

Hormel: No. I don't know if it's shyness, but when someone rents the studio, I feel that it is theirs, not mine. I don't go walking in their door and disturbing them. They own it, lock, stock and barrel—that's what they're paying for. I never met Jim—I haven't met 90% of the clients.

Bonzai: How about Robbie Robertson—he has his own place at the studio.

Hormel: I see Robbie from time to time. He convinced me to work on a couple of my own songs.

Bonzai: Steely Dan?

Hormel: I don't know of anyone else who was as meticulous in their recording. I remember an instance where they spent about three days on two bars of music.

Bonzai: What do you see in the future?

Hormel: First, take a look back. Royalties were not made a part of the blank tape purchase price. If the tape is used to copy other people's performances, you should pay a royalty. That wasn't provided for, so it will go on being a

bone of contention until we get to the point where there won't be any tape at all. People will have computers, and you'll be able to get on the line and call up a central data bank that stores any performance—TV, film, records. It will be zapped immediately into the brain of your computer, and you'll be charged a nominal fee.

Bonzai: What's going to happen at The Village in the future?

Hormel: Well, there will always be recording, performances, video. Those things will always be transcribed in some way. I don't think we'll ever get to the point where there is no need for professional transcribers.

It used to be that rock and roll was a lucrative business. Now it is the least lucrative. Advertising used to be the least lucrative and is now the most, because they have a budget for what they are doing and expect to spend it. It calls for only a few hours at a time, but it's better than a lockout of a studio where someone pays for 12 hours and effectively has the studio tied up for 24 hours.

Bonzai: When did you feel that the facility had really arrived as a successful business?

Hormel: It happened when I hired Dick LaPalm as a sales manager. He said we would succeed by getting a gold record up on the wall. He set out to get gold records and it seemed to be true. He was right—we started getting so many gold records that we didn't have anyplace to put them.

Bonzai: Do you still make the decisions at The Village?

Hormel: Nope. I try not to, anyway. I've delegated everything to Nick Smerigan. If it was up to me, I wouldn't have gone along with the last remodeling. I've just spent another bundle.

Bonzai: You're still making music, aren't you?

Hormel: Yes. That's where my interests were when I started The Village. The studio was a side trip that the bank made me do, because they wouldn't give me the money without me showing them a business plan. I set it up with a lot of ideas, systems, forms that have become universally adopted by studios.

Bonzai: What is The Village especially good at?

Hormel: Making the artist feel at home in a good, positive atmosphere. It has a lot to do with our success.

Before I built Studio B, I spent hours sitting there, imagining myself as every possible person who could enter the room.

Bonzai: Something that sets The Village apart for me is the resident artist program you have—Robbie's got his place, Mark Hudson. . .

Hormel: Is that unusual? Well, Robbie, Mark, you're going to have to get out.

Bonzai: Why were they drawn to have a home base at your studio?

Hormel: Because I can't say no. Robbie, for example, came on the premise that he would use his rooms to put his material together. He'll bring people into the studio who are influential and encouraging to business, and eventually record his end product in the studio. From the standpoint that I can listen to his album, which is a work of genius, and feel that I had something to do with getting it created, I'm pleased. ■

Editor-at-Large Mr. Bonzai is a novelist who raises miniature porpoises as a hobby. His Studio Life—The Other Side of the Tracks (Mix Publications) is in development as a television sitcom, expected to air in late '89 or early '93.

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DONALD FAGEN REMEMBERS VILLAGE

by Iain Blair

Some eight years after Steely Dan quietly self-destructed, its sophisticated musical shadow still looms large over principal vocalist and keyboardist Donald Fagen. Along with his ex-partner, Walter Becker, Fagen has pursued a successful, if somewhat leisurely, solo career—1982's *The Nightfly* remains his only album release as a solo artist to date. But it's the series of classic Steely Dan records that remains most firmly lodged in the musical memory.

Throughout the '70s, the aural sheen and increasing polish of albums like *Can't Buy A Thrill*, *Countdown To Ecstasy*, *Pretzel Logic*, *Katy Lied*, *The Royal Scam*, *Aja* and *Gaucho* defined a cool, irony-laden and unlikely marriage between jazz and rock that provided a

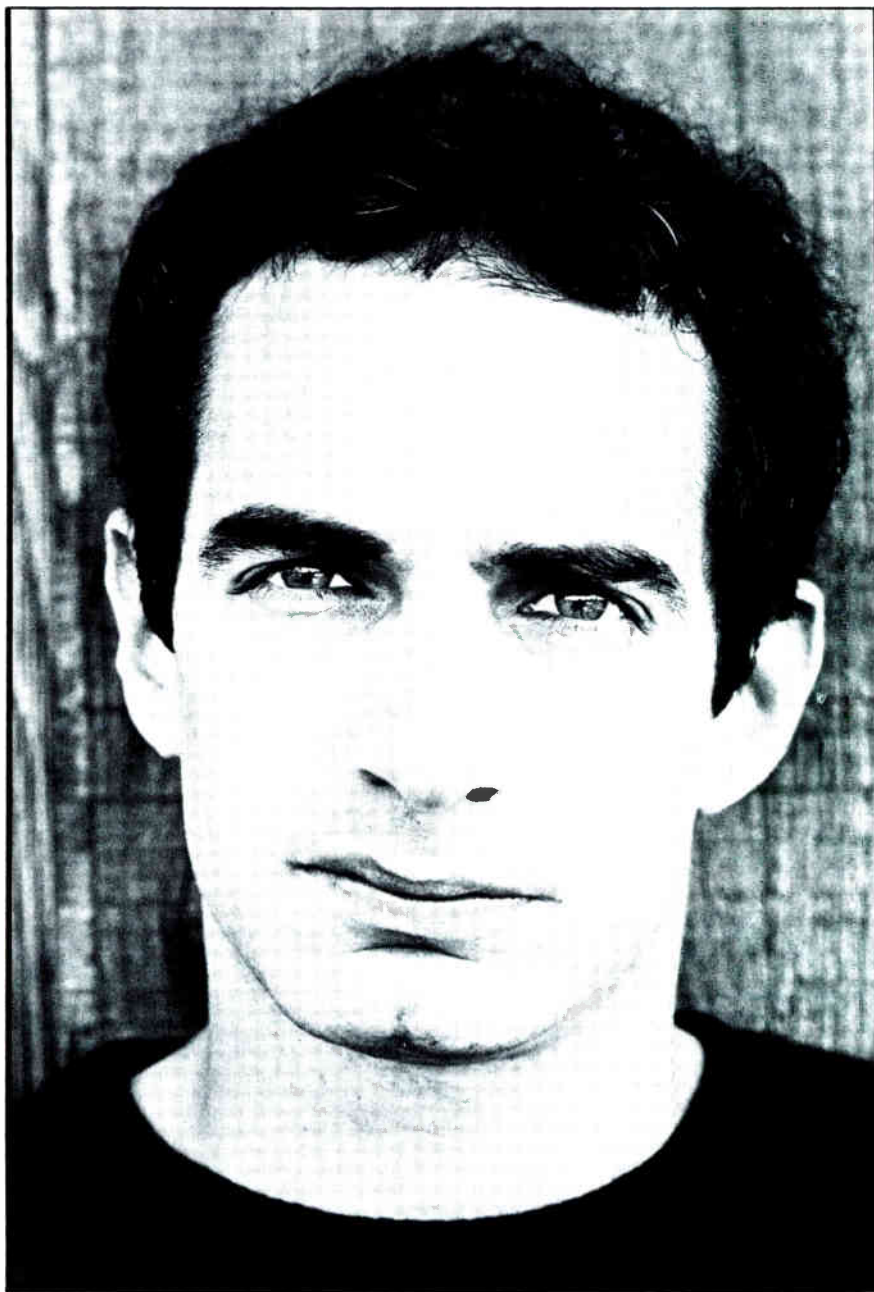


PHOTO: WATKINS/HAMILTON

WALTER BECKER:

Back at Village

by Iain Blair

Not much has been heard from Walter Becker, the other half of Steely Dan, in the years since the duo decided to call it quits. But *Mix* caught up with the reclusive musician/producer recently, appropriately enough at The Village Re-

corder, where Becker has been putting the finishing touches on a new album he's been producing for China Crisis.

What was the appeal of Village in the old days?

We'd heard about it through various people, especially jazz musicians, so when we moved out to L.A. we came over to check it out and really liked the way it looked and felt. It was also the first studio to have 24-track Dolby, so it was state-of-the-

—CONTINUED ON PAGE 118

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“We actually worked fairly quickly in the beginning, believe it or not, but the recording process gradually took longer and longer as we went on.”

soundtrack for a whole generation.

For this special *Mix* supplement, the normally reclusive Fagen talks about the early days of recording with Steely Dan, and what made The Village Recorder one of the band's favorite studios.

Do you have fond memories of work-

ing at The Village Recorder?

Oh yeah, we had a great time back then, perhaps because there wasn't so much pressure to keep topping ourselves. The sessions were always pretty relaxed, and the people were real nice to us, too.

How many Steely Dan albums were recorded there?

That's a tough one to answer because we'd do parts of albums there, or lay down the basic tracks, and then perhaps finish the song somewhere else. To be honest, it's hard remembering what was done where, but I think our first three albums, *Can't Buy A Thrill*, *Countdown To Ecstasy* and *Pretzel Logic*, were largely recorded at Village.

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In the early days, our favorite studios were Village, ABC's old studios and Cherokee, which at that time was just a small place out in the Valley, in Chatsworth. We'd pretty much do everything at those places.

Why did you like working at Village so much?

Basically because it had this great sounding room, and the people there let us have a lot of freedom as far as letting us have the time we needed to do things. We actually worked fairly quickly in the beginning, believe it or not, but the recording process gradually took longer and longer as we went on, and the Village staff were very understanding. I think the studio was also just getting going then, or it hadn't been around that long, so it was kind of good for both of us in that way—we sort of grew together.

Which was your favorite room?

We used to record mostly in A, or whatever A was in those days, but it was a lot different than the way it looks today. I remember it had a lot of mirrors in it, a great piano and a great, clean, bright sound, which suited us perfectly, the sound we were after. It was definitely one of the best studios in town, no question.

How did you hook up with producer Gary Katz?

He was working in-house at ABC when they originally signed Walter and me as "staff writers." The trouble was, our songs were considered so bizarre that no one else wanted to cover them. I think the only artists that actually recorded any of our tunes were Barbra Streisand, and John Kay of Steppenwolf. Now, *that's* bizarre to me! Anyway, Gary took us under his wing, and that's how we kind of slid into becoming artists ourselves.

When did you start working with engineer Roger Nichols?

He worked with us from the very first album and did all the albums like *Pretzel Logic* at Village. When we met him, he was just a staff engineer at ABC, but as soon as we realized what he could do for us—not just in terms of engineering the board, but in terms of innovative electronics, we grabbed him. He was much more than just a sound engineer. There was a lot of experimentation going on, and new ideas which we gradually refined over the years—not that it speeded up the recording process. [Laughs] Once we got in that studio, we just seemed to stay there.

When was the last time you recorded at Village?

It was for my *Nightfly* album. We did most of the tracking there, if I remember correctly, and we worked in the big new room, C.

How was the new room?

Oh, great. It's very easy to get a good sound in there, and it was nice to be

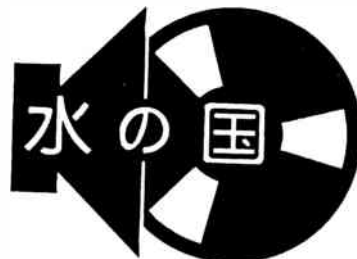
"We used to record mostly in Studio A. It had a lot of mirrors in it, a great piano and a clean, bright sound."

back for me. I think the engineer on those sessions was Elliot Sheiner, who worked on some of the old albums like *The Royal Scam*. And with Gary producing, it was like old times again.

Those Village sessions also represented your and Gary's long-awaited use of digital technology. Were they as successful as you expected?

I think so. You know, we'd always planned to cut *Gaucho* on digital, but there were still too many problems to be ironed out, mainly maintenance ones. But by this point, Roger [Nichols] had gone to a course at 3M's place in Minnesota, and although there were some headaches with the equipment at the beginning, it was smooth sailing by the end. [Laughs] It must have been OK 'cause we almost finished the album on schedule.

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—FROM PAGE 114

art. And, of course, they treated you really well. What more could you want?

It was also a bit off the beaten track?

You're right. All the studios were in Hollywood, and I think part of the appeal was that it *was* outside the mainstream. It was also nice to get away from the ABC offices and studio where there was a lot of real bland pop stuff going on. Not that we thought we were jazz, but just that we felt we *were* different enough, and working here would help distinguish us.

Did you guys have a favorite room?

Like Donald said, we used "A" for all the Steely Dan stuff with the exception of *Gaucho*, which was mixed in "D"—which didn't even exist when we started here, by the way.

Have you worked much here since Steely Dan days?

No. In fact, this is the first time I've been back since 1978, apart from once when Gary Katz was doing something here.

So what brings you back now?

I've been producing China Crisis in Hawaii, where I live, but we flew back here to do some percussion overdubs and use some musicians who aren't available over there. It was more economical to come here and record than fly everyone in. We're using "D" because I'd talked to Dick La Palm about this room, and he told me it'd been completely refurbished and sounded great, and he's right. It's a very comfortable place for me, 'cause I feel like I grew up here. Not only is the sound excellent, but it's a very light, airy room, and everything functions flawlessly.

How do you perceive Village today?

I think the qualities of the place that originally attracted us, and which kept us coming back here for so many years, are still very much here, and it's great to be back. It's interesting to note that some of the same people are here that were working here back in 1972. There aren't many studios where that's the case, and they're great people. I'm looking forward to doing a lot more recording here in the future. ■

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ROBBIE ROBERTSON

AT HOME AT VILLAGE

by Iain Blair

The figure of Robbie Robertson stands tall on the musical landscape of the past two decades, from his contributions to the first Band album, 1968's *Music From Big Pink*, through to his long-awaited and inspired first solo

album of last year. In between, the singer/guitarist/songwriter worked with Bob Dylan on such classics as *Planet Waves* and the *Basement Tapes*, scored such films as *Raging Bull*, *Carney* and *The King of Comedy*, and functioned as creative consultant for

Chuck Berry's *Hail, Hail, Rock 'n' Roll* feature tribute.

Over the years, much of Robertson's work has been done at Village, where he now maintains a permanent office-cum-studio. For this special supplement, Robertson talks about his rela-

Robbie Robertson (L) and Paul Young (R) get together with engineer Jim Scott at the Village Recorder in Los Angeles.



tionship with the studio over the years, the appeal of the studio and his current experimental recording methods.

When did you start recording at Village?

The first thing I did here was an album with Bob Dylan and The Band called *Planet Waves* back in 1973. It was an experimental album that we recorded extremely quickly: in about four days. And I think from that point on I felt, "This studio has a great atmosphere and it's conducive to working fast," so I kept coming back. That was really my introduction to Village, and I remember we recorded in the old Studio B. I think they had a Quad board in there, and it was a real solid sounding room. You could find a great sound real fast.

What else appealed to you?

[Laughs] It was real convenient 'cause I was living in Malibu, and as time went on, they kept upgrading it and making it more flexible, until it just became my studio of choice automatically.

Did you have a favorite room?

Well they kept changing them. Where my office is now used to be the old Studio C, which I believe was the first studio in the building, and there's an incredible list of people who've recorded there. So now I'm based out of here, which works great, because there's the isolation, and I can come here and really concentrate. In fact, I've always looked at this place like a think tank where I can write in peace. Plus, if I need to put ideas down on tape, it's all here. If I get stuck, I just call downstairs for whatever equipment I need. It was a smart move setting up here.

What other projects have you done at Village over the years?

I did the recording and mixing for *The Last Waltz*, recording the studio tracks and mixing the whole project, and I also did the music for *Raging Bull* and *The King of Comedy*, among other film projects. And I produced Neil Diamond's *Beautiful Noise* album and stuff for Tom Petty. The thing is, I also worked a lot out of Shangri-La studios up in Malibu, which the Village actually put together. All the equipment came from here originally.

So the Village people were always very helpful?

Yeah, Geordie Hormel's been tremendously supportive over the years, whether I was working in this studio

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PREVIEW

zero and restart the timer, as well as mute the control room speakers or the speakers in one or two connected studios.

The AIR-790's stereo-line input module with dual-logic circuitry also supports two tape machines, with control logic following A/B input selection. The AIR-790's "next" function can act as a sequencer, assisting the operator in firing multiple carts or other source machines. Discrete mute programmability on the A/B input select, along with an APL/audition system, let the operator preview program material without sending it to the main program bus.

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ters. Absolute noise level at the output is better than -90 dBm, and since the signal path doesn't use coupling capacitors, lower distortion and greater transparency are achieved.

Available with various modified filters to meet specialized needs (such as room and system tuning, or applications requiring low-frequency band duplication), the 642B lists at \$995.

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Carvin Graphic EQ

Sound reinforcement and recording can now be enhanced by the new EQ2029 1/3-octave graphic equalizer from Carvin (Escondido, CA). Its

IL3632 and IL2824 in-line production desks—are available with 48 channels (104 inputs in remix), 36 channels (80 inputs in remix) or 28 channels, with 32 or 24 buses. Manufacturer specs indicate a mix noise (when 32 channels are assigned) of better than -82 dB on the masters and groups, and inter-channel line crosstalk and inter-monitor crosstalk at 10 kHz are stated at better than -85 dB.

Designed primarily for tracking and basic mixing, the new consoles feature dual line inputs, 4-band parametric EQ that can be assigned or split between the monitor or the channel, high-res LED bar-

Spatial Sound SP-1 Sound Spatializer

The SP-1 from Spatial Sound (Mill Valley, CA) is a new kind of device designed to process sound spatialization (the simulation of spatial movements of sounds). This real-time MIDI processor handles sound localization (define perceived locations of sounds), sound movement simulation, spatial pattern generation (generate and scale, translate, rotate, record and playback elaborate spatial patterns), multi-dimensional spatialization (create sound movement patterns in one, two or three dimensions) and a wide range of special sound effects.

The SP-1 accepts up to four independent audio sources and handles two to eight speakers. Able to process any live or recorded audio signal, it can be used live or pre-programmed for automated playback under tape or MIDI control. Its extensive MIDI implementation includes dynamic MIDI control for direct, programmable interaction of MIDI keyboards and spatialization. Inputs/outputs are 1/4-inch jacks, along with MIDI In, Out and Thru, with a memory capacity of 30 spatialization programs and 30 sequences, each up to 99 steps.

The unit lists for \$2,895

—CONTINUED ON NEXT PAGE



Orban EQ/Notch Filter

Orban of San Francisco has improved its 622 series, and the result is the 642B parametric EQ/notch filter, featuring dual 4-band/mono 8-band configurations, with noise/distortion specs said to be comparable to 18-bit digital. Each band covers a 20:1 frequency range, with broad overlaps between bands. The filters' "constant-Q" design provides +16dB boost and -45dB cut in each band, providing full notch filtering capability with no interaction between parameters. Bandwidth is continuously variable (from 0.29 to 5) and the 642B also includes 18dB/octave high-pass and 12dB/octave low-pass fil-

smooth band-pass filtering provides "ultra-low distortion and transparent, low-noise operation," according to the company. The 29 bands are centered on standard ISO frequencies. Switchable ultrasonic and subsonic filters eliminate ultrasonic noise, oscillation, stage rumble, wind noise, etc. Enclosed in a two-unit, rack-mount chassis, the EQ2029 lists for \$595 and is available factory direct for \$299, complete with one-year warranty. For more info, and a free 84-page catalog, call Carvin toll-free at (800) 854-2235.

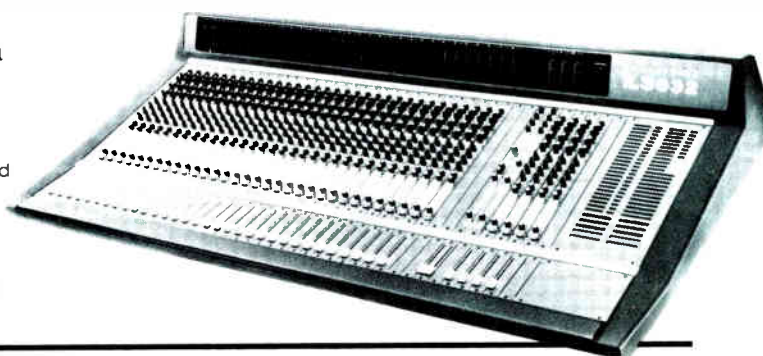
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Soundtracs II Series Consoles

The newest consoles from Soundtracs—the IL4832,

graph meters and a comprehensive patch bay. Each channel has a mic input, eight aux sends, six mono sends and a stereo bus. Monitoring can be PFL or in-place solo, and the monitor fader can be assigned as a subgroup fader. Master muting facilitates pre-programming of two channel mute groups. Options include stereo inputs and eight effects returns.

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or that studio. He's a great guy for coming to the rescue.

What about your solo album?

I did about 70% of it here. We also did some very experimental things with it. There's an area upstairs—above my room, actually—called "The Graveyard," which is like an old soundstage for movies from years ago. We wanted to try recording some things there, so we cleared it all out—it was just being used for storage—and ran cables and video lines down to Studio A so that we could use A's control room. We recorded quite a few of the tracks in The Graveyard—"American Roulette," "Fallen Angel" and "Broken Arrow"—and then used Studio B a lot, too,

like I was saying, it's the perfect place for me to do it. I've started making some basic demos of ideas, which I put down either on cassette or this old 3M 16-track machine I've got and which I like to use 'cause I love the sound. You've got more room on a 16-track tape, so you can smash the sound onto it, and it's got really nice transient qualities to it. It's the same setup I used on the last album, with the 16-track acting as the slave for the 24-track machine instead of the usual 24 and 24 setup. So this room is organized for both writing and recording, with amps and guitars and keyboards and drum machines. In fact, I did a whole lot of the last album recording

**"The Graveyard is all wood,
so we got a real warm
sound instead of that cold,
hard, cement sound a lot of
studios have today."**

'cause we wanted no ambience whatsoever. B isn't even like a room for recording in, and we had amps set up in the bathrooms and drums in the piano room, and the bass player and guitarist in the control room itself. It was just a different style of recording, and we got so we liked it a lot. It gave us a very immediate sound.

The results certainly don't sound like most albums today.

No, and that's because everyone's into recording in these huge hangar-type places, but producer Daniel Lanois and I wanted a sound that just hits you smack in the face, and we created a different sound that's more like a cannon than a drum. And The Graveyard is all wood, so we got a real warm sound instead of that cold, hard, cement sound a lot of studios have today.

What about your current project?

Right now I'm coming in here and writing songs for the next album, and

up here as well, after we'd cut the basic tracks in The Graveyard. I did most of the vocals, most of the guitar solos, a lot of overdubbing.

How has Village changed over the years since you started working here? And what keeps bringing you back?

What's really great here is the working atmosphere. That's a big plus, and it's also a studio that has kept on the cutting edge of technology, but which hasn't left behind its character. It's also incredibly flexible and you can do just about anything here because of all the different rooms. They've just renovated D, which now has a great feel, but it's totally different from A or B. And it's a huge benefit to have rooms with Neve in them and rooms with SSL, as Neve rooms are great for recording in and SSL is great for mixing. So with that flexibility, and a great staff, you can't beat it for my money. ■

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THE HAL BLAINE STORY

by Hal Blaine with David Goggin



The clean-cut kids
from Hawthorne, California.

My first session with the Beach Boys was in early '63. We did a record called "Olly, Olly, Oxen Free." Brian Wilson was just a skinny young kid who sat at the piano and played chords. He didn't seem to be able to play melodies the way most jazzers were playing piano, comping with the left hand and playing melodies and ad lib lines with the right. Brian was comping with both hands and singing the melody, humming as he played, because the words weren't written yet. I didn't realize that his two-handed comping with all ten fingers was fanning the chord structure for his vocals that would follow.

This was the beginning of Brian's rise to success and since most of us were just starting out as regular session musicians, we became a team to back him. We wanted to be the number one musicians in the studios and we didn't question the arranger/composer. We were getting steady work and when I

MAKING WAVES WITH THE BEACH BOYS

got a call from a new leader it was another notch on my drumsticks.

Surfing was the rage and the whole world was looking to California for the music of summer. What better name for a group than the Beach Boys? They symbolized every teenage dream of freedom, fun, romance and sunshine.

The sessions were a lot of fun. We worked at Gold Star first, where I had done all the Spector dates. Later we moved to United Western, then to Brian's house and even later to their Brothers Studio in Santa Monica. Glen Campbell, as well as Jan & Dean, sang on the records (the Beach Boys used to sing on Jan & Dean's records too). There was a great feeling of camaraderie in the early days of rock and roll. It was common for various acts to join in on other artists' records.

When we did the first Beach Boys dates at Gold Star, it was no different from working for Phil Spector or Herb Alpert. It was another date at the magical studio that was putting out hit after

Brian Wilson and Hal work out a part on the piano.

hit. The Beach Boys were starting to make some noise on the charts and these sessions were some of the many the Wrecking Crew was called in for.

Brian was playful, and always had a smile on his face, but there was nothing wishy-washy about the way he worked. He was very serious when he sat down at the piano. There was no searching around. He would play exactly what he wanted and there was no experimentation.

Part of the Wrecking Crew was always with Brian in the studio—usually Carol Kaye or Ray Pohlman on bass, Tommy Tedesco on guitar along with Bill Pitman and Glen Campbell. Oftentimes Billy Strange and Lyle Ritz were also there. At Gold Star, Stan Ross handled the knobs in the booth and at Western it was always Chuck Britz. We had Don Randi on piano and Steve Douglas with his mighty tenor sax sitting next to Jay Migliori. Brian usually had a chord chart and we all made our own parts. When copying machines started coming on the market, Brian brought in his chart and sent it to the

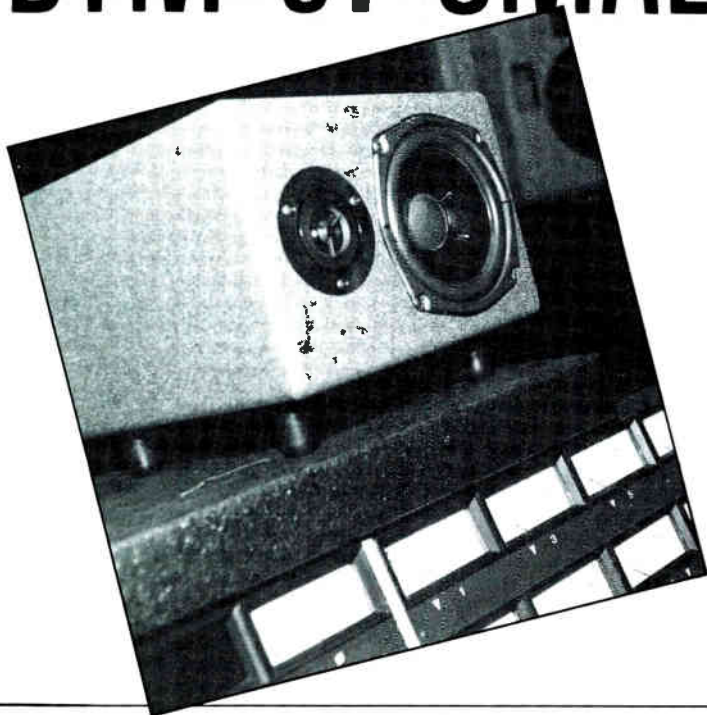


office for more copies. They were simple chord charts and we all filled in what Brian wanted. We'd run it down a few times, make a few minor adjustments and the old 2-track would be punched up. In a couple of takes we'd have it.

Brian didn't believe in a lot of takes, but he did believe in a lot of sessions. We often did small segments of a song and that was it after just a few takes. But other times we'd rehearse for hours

while Brian got the sound he wanted in the booth. "Good Vibrations" took many, many sessions with many segments recorded and re-recorded. He was a fanatic about having everything perfect. He wanted spontaneity but he wanted a perfect take. That's one of the big things you learn in the studios. It's the sign of a great actor or artist of any kind—making it sound like it just came off of the top of your head after you've been rehearsing it for hours,

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days or even months.

In the early sessions, we had no idea what the finished product would sound like. We recorded basic tracks, bits and pieces, and that was that. Sometimes we heard rough vocals in the studio, but the Beach Boys didn't really want anybody around when they did the finished vocals. Then we started hearing the records on the radio and realized what was going on. The combination of Brian's vision and the painstaking work on the songs created something that took pop music to a new level.

My particular sound for Brian was

The Beach Boys
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I thought Brian
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other singers.

basically the Phil Spector sound with a few minor changes. For Spector the snare sound had to be very high and tight to cut through the "Wall of Sound" and do all of the craziness that happened on the fades. The toms were left mid-range and I always played the snare and the floor tom in unison to strengthen the back beat sound. I rarely used cymbals or played hi-hat eighths. For Brian I modified the snare to a lower sound combined with the floor tom and he loved it.

Afterwards, I would overdub percussion effects. I was invited to experiment and I don't ever remember Brian telling me not to play anything I thought might work. He wanted a good back beat and beyond that whatever I wanted to do was okay. Percussionists have had little toys around for years, but you never used claves or shakers unless it was a Latin tune, for example. I started using effects on the sessions and they usually ended up on the records.

Brian's father Murray Wilson was often at the dates and his presence caused a few clashes. Brian knew exactly what he was going for, but Murray was usually thinking in opposite terms. After a while Brian barred his dad from his sessions, and then everything was smooth sailing. But Murray came on the scene again, this time with his own group, The Sunrays. He was determined to show Brian he could do it. Murray was quite a colorful character. Before each session with The Rays he said a prayer and then passed out \$2 bills to all of us for good luck. But The Sunrays never really happened.

I am often asked what Dennis Wilson's feelings were about me playing the drums. After all, he was the group's drummer. Dennis and I were good friends. He admired and respected my technique, and Dennis was no fool. The popularity of the Beach Boys was paying for all of his whims—motorcycles, boats, women and fast cars. He was living the good life and I don't think that he really wanted to be in the studios as much as in the early days. But in later years Dennis became very involved in the Brothers Studio complex. He even hired me to play on his solo album for Warner Bros. Dennis also played great piano, maybe better than drums. But don't get me wrong: he could never really be replaced by anyone else. He was the consummate Beach Boy. He was the only real surfer of the group, and it showed. He had all

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of the women going crazy while he pounded the drums on stage. (I was part of one of their Hawaiian shows and saw how the audience reacted to Dennis. The Hawaiians obviously loved all the Beach Boys, but Dennis in particular.)

I think the least known Beach Boy, Bruce Johnston, was probably the most talented of the gang, along with Brian of course. Bruce (who came along later and isn't related to the others) and I first met when he was playing the organ on a session. I couldn't get over his incredible touch. He was a real unknown to the Wrecking Crew but you could hear this mountain of talent pouring out of the Hammond B3. I knew it wouldn't be long before he would be a star in his own right. I always thought that if Bruce had gone out on his own instead of joining the Beach Boys he would have hit solo stardom.

Mike Love and Al Jardine were Beach Boys from the start. They had their squabbles like every other family, but they were always respectful of the musicians making their records. They weren't around as much as Brian, but their distinctive voices were



an irreplaceable part of that Beach Boys sound.

Mike Love was the on-stage comedian of the group and the kids loved him. Brother Carl Wilson was usually at all of the sessions playing bass or guitar, and helping to arrange and compose. Carl was a very quiet and determined youngster. Everything he did

was well thought out, and when he made a suggestion it usually worked perfectly. Carl also had some good musical training, and it showed.

The Beach Boys didn't really impress me at first. I had done sessions with the Hi-Lo's, the Four Freshmen and the Four Preps, among others, and I thought Brian was copying these other singers. Boy, was I wrong! Brian's roots were the Hi-Lo's and the Freshmen, but the Beach Boys were so intense in their vocal structures that within weeks I realized their sound was something very different. The Beach Boys were taking what were then simple rock and roll chords and making them much more sophisticated. And who could have imagined there would be hit songs about surfing and hot rods? No one had done what the Beach Boys were doing, and the fans loved it. So did the Wrecking Crew. We knew we were making some history.

I felt good about being part of their music. It's what I had been working for all my life. A lot of the older Hollywood studio musicians said they wouldn't play that stuff. They packed their bags, and a lot of guys left the business forever. But some of them got smart. Players who had been bad-mouthing the Wrecking Crew started hanging around to find out what was going on. I'd hear things like, "Hey, I thought it was just a stupid rock and roll thing, a fad—I had no idea."

Brian was a thinker, a creator, and with the bucks the Beach Boys were making, the sky was the limit. One time we were in the middle of a session and Brian called me in to listen to a playback. A business manager was also in the booth trying to talk to him about the excess money that was sitting in Brian's Sea of Tunes publishing company and how something had to be done with it. Brian kept telling this guy to shut up and finally yelled, "Just do whatever you have to do and leave us alone!" This man wrote out a check for a half-million bucks and Brian signed it. He was glued to the playback. His eyes and ears were on the studio speakers and he just signed the check like he was off on another planet.

Brian never did a playback without calling me into the booth for a listen. He wanted to know if the track was in perfect tempo and steady. Phil Spector used to call me in all the time as well—it became a regular request with producers, because the basic tracks were the foundation on which the rest of

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the material was built. Every hit record was an investment in my career, and if I had missed a beat it would be hard to live down.

The sessions for *Pet Sounds* were especially entertaining. It was really a big, long party recorded in the larger Studio Two at Western, so there was enough room for all the friends and relatives. People were singing along and clapping and I think the tape machine was left on most of the time to catch the spontaneity. The sessions weren't exactly free-form, because there was an organizational concept, but there was a lot of room for surprises.

After Brian married Marilyn they moved into the Bellagio house in Bel-Air. Everything seemed great. Brian immediately had the house painted purple and the wrath of the community came down on him—there was an ordinance that houses could not be changed from their original color. Brian had to have the entire house repainted. That was two paint jobs in a matter of days. And we're not talking about a small A-frame house down the block. This was an estate in Bel-Air.

The next move seemed to be logical. Brian had a magnificent den with a beautiful rock fireplace. It soon became the new Beach Boys studio. He spent a fortune having a booth put in upstairs overlooking the den. I think it was 1967. From then on it seemed like everything started going downhill for the Beach Boys. As with most record acts, the fans were on to the next craze. The record buyers were growing up and going off in other directions to new groups and new sounds.

When we'd record at the house in Bel-Air, we'd go through the big iron gates and set up in the converted den that had become the new studio. A big piece of board covered up the fireplace so the sound wouldn't go up the chimney. The control room was above us, with small slits for the engineer to look through. It was an alienating environment, and stranger still when Brian disappeared from the scene. If we asked what was going on, we were told that Brian was elsewhere. It was all hush-hush and mysterious, but we continued recording. I don't think anything major came out of the sessions.

With every passing day Brian was having more mental problems, problems we knew nothing about. He got into meditation and I don't know what all. We'd catch a glimpse of him in

pajamas and he didn't recognize anyone. He gained about 100 pounds and was almost unrecognizable. His hair was shoulder length and his whiskers made him look like an old man, unkempt and in a general state of dishevelment. He reminded me of the old wrestler, "Man Mountain Dean." It was sad for all of us to watch.

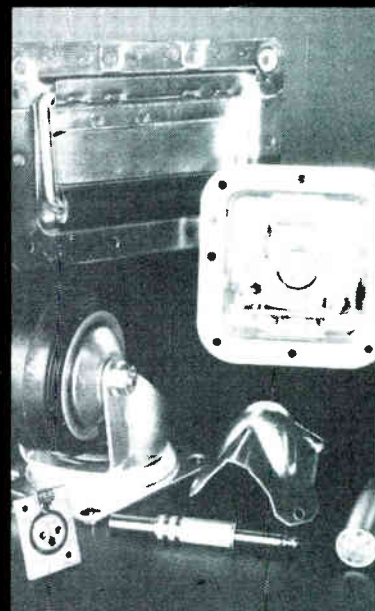
Several years later I got a call from Terry Melcher. He was going to do a date at RCA with Brian and wanted the old gang there. It was more therapeutic than creative, just to see how Brian would react. When Brian arrived he was even heavier and his hair was longer. He acted strange and kept shaking his head, as if a nervous tick had overtaken him. He entered this massive studio and walked to the piano and started comping the intro to "Good Vibrations." He kept looking over at me as if I were a stranger, muttering, "Do you know this song?" I almost cried, but I managed to keep my composure and said, "Sure Brian. One of my favorites." He kept looking around the room at other people. They were all old friends, but he was squinting at them as if they were strangers. He got up after a few minutes and walked out. We were all speechless. Brian had really hit bottom.

In 1982, I got a call from Chuck Britz: "Brian wants to record!" I entered Western Studio One expecting the worst. Brian walked in, shook hands with the old Wrecking Crew and we realized we were witnessing a miracle. He had lost what seemed like a couple of hundred pounds and was his old self. He gave everybody the chord charts and we started working. He stopped once in a while and gave note changes to the horns. We practically had tears in our eyes, we were so happy. He was the old Brian Wilson. We couldn't believe it. We did three sessions and it was like old times.

If there is a moral to all of this, I would say that the Beach Boys simply had too much too soon. You can't hand a kid a million bucks and expect him to act normal. Think back to when you were a kid—you always wanted to buy mommy and daddy a house. Well, the Beach Boys were buying houses, cars, furs and jewelry. I was in my 30s when they hit the top of the charts and I was old enough to appreciate the good fortune that came my way, but when you're just a kid and you have it all, what more do you have to look forward to?

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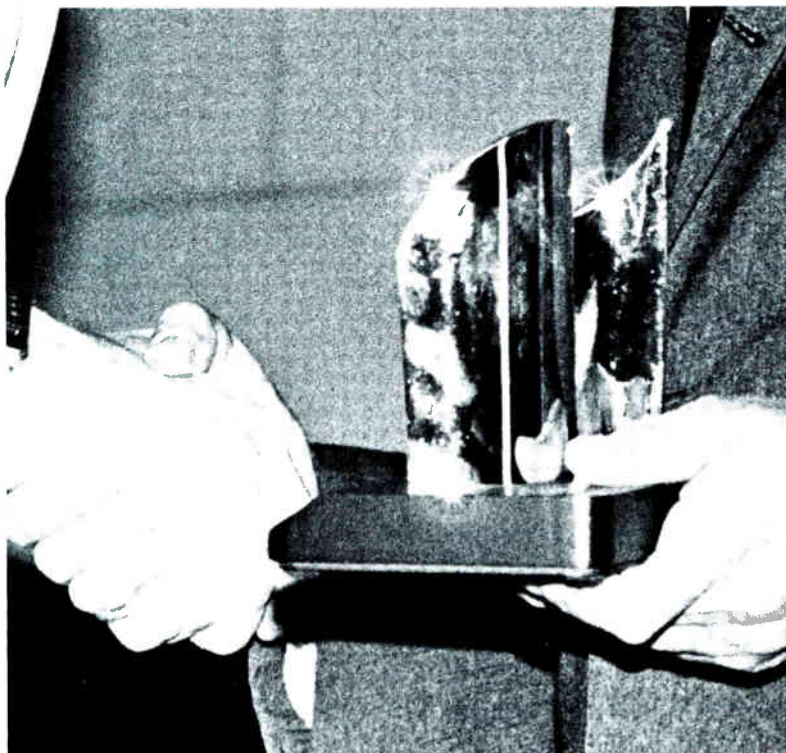
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Sony 3324A Digital Multi-Track

Sony has launched the PCM-3324A, a new version of the 3324 digital multi-track recorder with improved sound quality, enhanced error correction and superior VLSI technology. Along with new filters in the A-to-D and D-to-A stages, the new machine boasts 2X oversampling in both record and playback. Error correction has been increased from three to five digital words (which does not affect compatibility with other DASH-format recorders).

The new VLSI chips reduce the number of circuit boards from 45 to 28, lowering the machine's



weight and fan requirement, and providing a 25% reduction in overall power consumption. Operational improvements include two selectable channels of digital I/Os, both for PCM-1610/30 equipment and standard AES/EBU systems. Both allow direct digital transfers to other 2-channel digital devices and also can be used for selective track bouncing. A built-in video clock board facilitates working with film and video, and the proposed MADI digital interconnection will be available as a retrofit option.

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NEW PRODUCTS

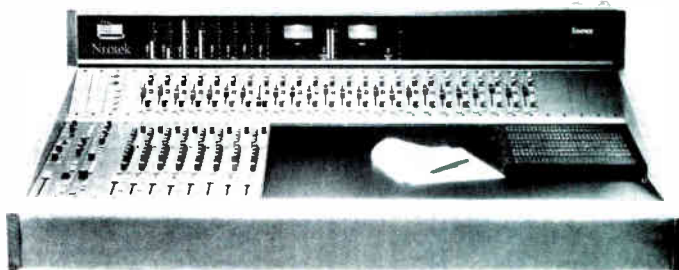
NEOTEK Essence Console →

Designed primarily for audio post work, the NEOTEK Essence facilitates multi-track effects layout, ADR and Foley recording. It provides 24 or 32 monitoring inputs (or more) for tape playback, 4 or 8 high-quality mic inputs with EQs and filters, a comprehensive communications system integrated with machine logic, complete patch bay and a compact physical layout with ample workspace (for cue sheets, synchronizer keyboard, etc.).

Each monitor module offers a 60mm fader, pan and logic mute to mix, flexible aux sends, signal presence meter and a "record ready" switch that interacts with the recorder or synchronizer. All mutes and mute groups can be controlled via GPI or automated with an internal or external MIDI/SMPTE sequencer. Each input module provides line trim and mic preamps with 48V power, 4-band parametric EQ and sweep high-pass and low-pass filters. The signal pans from a 100mm fader to four mix buses, a main stereo bus and a separate stereo bus that routes to multi-track recorder inputs. Like the monitor module, the input module has aux sends, mute logic and solo functions.

The master section holds monitoring, metering and control facilities, an improved, automatic talkback system, two alternate speaker switches

battery backup and individual disc load and unload. The PX-240 is optionally available in



(with provision for mono in one speaker), high-res LED meters and switchable VU meters. List prices start at \$21,690 for 24 monitor/4 input modules. Some of the many options available include MIDI direct/mute automation system, direct digital interface, overpress cue on input modules and P&G faders.

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Audioaccess 240 CD Changer

What's 17 inches wide, 16 inches deep, 7 inches high, holds up to 240 compact discs—and plays them all, in 81 random playback combinations? The new PX-240 CD Changer from Audioaccess (Foster City, CA) has a maximum delay of ten seconds between selections, and features 4 × oversampling, dual 16-bit D/A converters, RS-232 inputs and outputs for computer control and daisy-chain configurations,

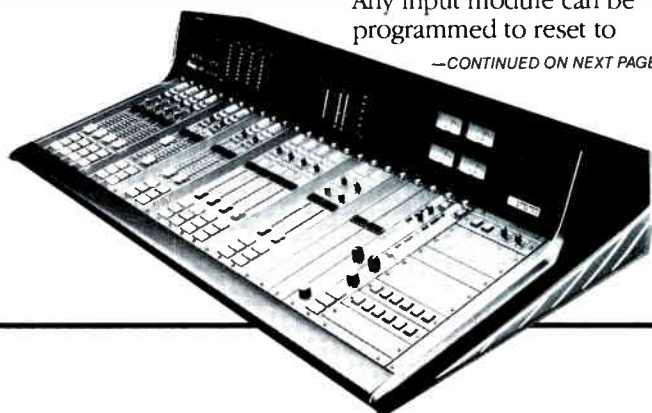
rack-mount form, and a version with two internal CD readers for crossfading, simultaneous play and faster access to sounds on two different discs is planned for release in the near future.

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Harrison AIR-790 Broadcast Console ↓

Nashville-based Harrison Systems has debuted their AIR-790 on-air broadcast production console, which they claim "has the lowest noise floor in the industry." Along with 104mm, P&G 3000 Series faders and CMOS switching for assignment buses, its features include two main stereo outputs, two separately derived, main mono outputs, an aux send with level trim and a clean-feed bus. The AIR-790 includes a clock module with extensive logic control for up-count or down-count and simple time-of-day setting in 12- or 24-hour format. Any input module can be programmed to reset to

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Carvin Graphic EQ

Sound reinforcement and recording can now be enhanced by the new EQ2029 1/3-octave graphic equalizer from Carvin (Escondido, CA). Its

IL3632 and IL2824 in-line production desks—are available with 48 channels (104 inputs in remix), 36 channels (80 inputs in remix) or 28 channels, with 32 or 24 buses. Manufacturer specs indicate a mix noise (when 32 channels are assigned) of better than -82 dB on the masters and groups, and inter-channel line crosstalk and inter-monitor crosstalk at 10 kHz are stated at better than -85 dB.

Designed primarily for tracking and basic mixing, the new consoles feature dual line inputs, 4-band parametric EQ that can be assigned or split between the monitor or the channel, high-res LED bar-

Spatial Sound SP-1 Sound Spatializer

The SP-1 from Spatial Sound (Mill Valley, CA) is a new kind of device designed to process sound spatialization (the simulation of spatial movements of sounds). This real-time MIDI processor handles sound localization (define perceived locations of sounds), sound movement simulation, spatial pattern generation (generate and scale, translate, rotate, record and playback elaborate spatial patterns), multi-dimensional spatialization (create sound movement patterns in one, two or three dimensions) and a wide range of special sound effects.

The SP-1 accepts up to four independent audio sources and handles two to eight speakers. Able to process any live or recorded audio signal, it can be used live or pre-programmed for automated playback under tape or MIDI control. Its extensive MIDI implementation includes dynamic MIDI control for direct, programmable interaction of MIDI keyboards and spatialization. Inputs/outputs are 1/4-inch jacks, along with MIDI In, Out and Thru, with a memory capacity of 30 spatialization programs and 30 sequences, each up to 99 steps.

The unit lists for \$2,895

—CONTINUED ON NEXT PAGE

Orban EQ/Notch Filter

Orban of San Francisco has improved its 622 series, and the result is the 642B parametric EQ/notch filter, featuring dual 4-band/mono 8-band configurations, with noise/distortion specs said to be comparable to 18-bit digital. Each band covers a 20:1 frequency range, with broad overlaps between bands. The filters' "constant-Q" design provides +16dB boost and -45dB cut in each band, providing full notch filtering capability with no interaction between parameters. Bandwidth is continuously variable (from 0.29 to 5) and the 642B also includes 18dB/octave high-pass and 12dB/octave low-pass fil-

smooth band-pass filtering provides "ultra-low distortion and transparent, low-noise operation," according to the company. The 29 bands are centered on standard ISO frequencies. Switchable ultrasonic and subsonic filters eliminate ultrasonic noise, oscillation, stage rumble, wind noise, etc. Enclosed in a two-unit, rack-mount chassis, the EQ2029 lists for \$595 and is available factory direct for \$299, complete with one-year warranty. For more info, and a free 84-page catalog, call Carvin toll-free at (800) 854-2235.

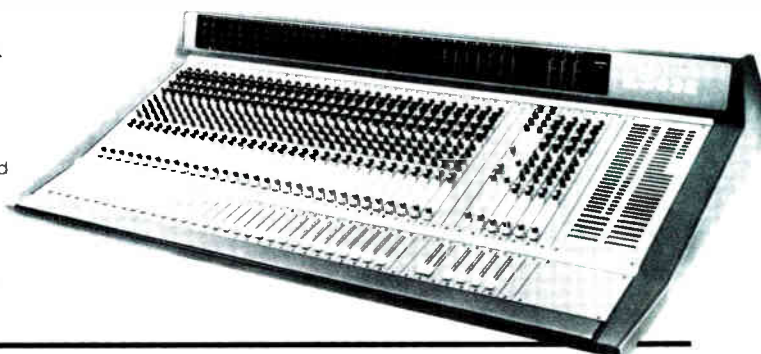
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Soundtracs II Series Consoles

The newest consoles from Soundtracs—the IL4832,

graph meters and a comprehensive patch bay. Each channel has a mic input, eight aux sends, six mono sends and a stereo bus. Monitoring can be PFL or in-place solo, and the monitor fader can be assigned as a subgroup fader. Master muting facilitates pre-programming of two channel mute groups. Options include stereo inputs and eight effects returns.

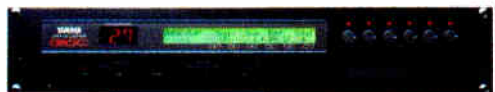
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off and hammer-on notes.

You can change styles in an instant, too. Because each of the 64 internal memories (and 64 cartridge memories) in the G10C contains a full

set of performance parameters such as individual string volume, capo position, tuning and controller assignments. Any one of which can be called up at the touch of a button.

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Circle #063 on Reader Service Card

and comes with a one-year warranty. Options include XLR connectors, expanded memory, parallel ins/outs and dual power configuration.

Circle #162 on Reader Service Card

the "spare" frequency band as an extra, full-range output. This lets the user drive a separate monitor or flying system directly from the FDS-310's input signal.

Each frequency band



BSS Audio Crossover



The FDS-310 sweepable frequency dividing system is a new, high-quality, low-cost crossover from BSS Audio (distributed in the U.S. by Edge Distribution of New York, NY). Utilizing 24dB/octave Linkwitz-Riley filters with four frequency bands, the FDS-310 can be used as a 2-way stereo or 3-way mono crossover. To increase flexibility in the 3-way mode, the FDS-310 automatically reconfigures

features level and frequency controls, polarity reverse switch, mute button and signal presence/peak LEDs. In 3-way mode, frequency scaling automatically changes to suit mid- and high-band operation (an internal, 6dB, HF boost switch is provided for use with constant-directivity horn systems). In 2-way mode, the FDS-310 provides two internal summing features to maximize bass capabilities. Both 1/4-inch TRS and XLR-type

input and output connectors (all balanced) are provided. Suggested list price is \$799.

Circle #075 on Reader Service Card

Toa 8-Track Cassette Recorder

From Toa Electronics (South San Francisco, CA) comes the MR-8T, an 8-track cassette recorder/mixer combination that records at 3 3/4 ips on standard, high-bias cassettes. The compact, rack-mountable unit is ideal for on-location, home and studio recording, and features include: remote punch-in and control capabilities;

dbx NR (defeatable for synching); record preamps with individual level controls; bus access for hook-up to an optional matrix assigner; playback insert for each track to add outboard effects; playback level and pan controls for each track; headphone jack; eight 12-step LED VU meters; $\pm 20\%$ pitch adjust; and memory preset.

The MR-8T handles remixing, overdubs and ping-ponging on its own, and can also be connected to an outboard mixer. Suggested retail price is \$2,149.

Circle #164 on Reader Service Card



HOT OFF THE SHELF

Solid Support Industries' TR-10 Tape Recorder Stand (\$325) is an all-steel floor stand for rack-mount tape decks, featuring a tilt control for edit or record positions. Casters are standard, and 8 rack spaces below the stand are provided for noise reduction or other gear. Call (818) 579-6063 or (800) 782-6377 for more info...

Canare's Flush-mount 75-ohm BNC Receptacles offer protection from physical damage to panel-mount connectors used in video, digital audio and instrumentation applications. Hole punch requirements are the same as that of a standard audio XLR-F panel jack. Call (818) 840-

0993 for more info...

Gold Line/Loft's HPA-1 and HPA-2 (\$489 and \$359.95) are rack-mount, six-channel headphone amps that can be fed from a single stereo source or individual inputs to each channel. The HPA-2 also has a talkback mic input. Call (203) 938-8740 for more info...

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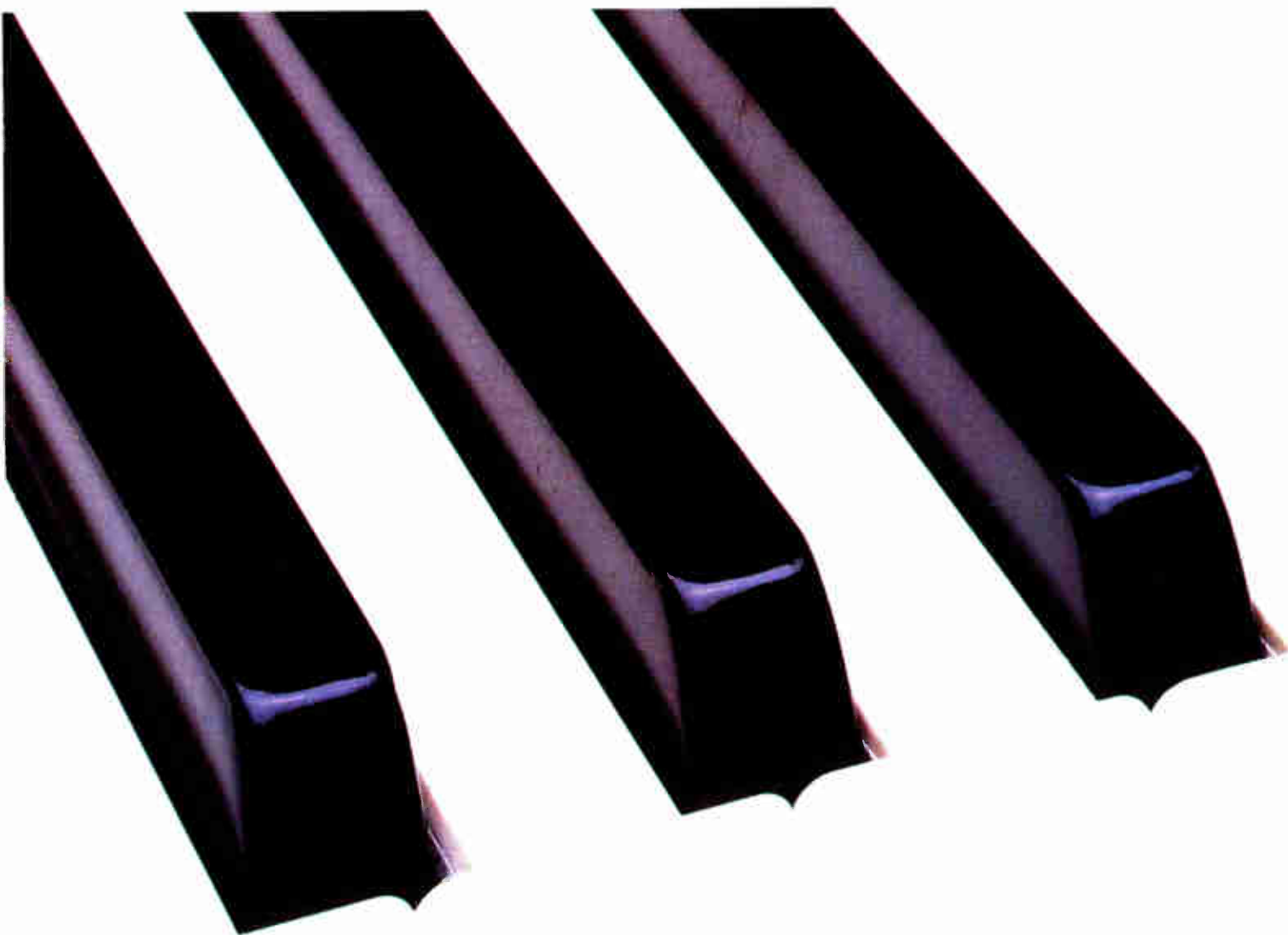
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MIDI 1.0 Detailed Specification, Document Version 4.0, is the latest addendum to the MIDI spec, including the sample dump standard, MIDI time code, parameter numbers, MIDI inquiry message, system exclusive ID numbers and more. The document is available to IMA members for \$25 and non-members for \$35. Call the International MIDI Association at (213) 649-6434 for more info...

Kurzweil's Updates include a 12 separate output kit for the Model 250 and 250RMX samplers, which can be retrofitted by an authorized Kurzweil

service center or ordered as an option on a new unit. New for the 1000 PX Professional Expander is a Sound Block (\$495) software upgrade that greatly increases the number of onboard sounds. Call your local Kurzweil service center or (617) 893-2733 for more info...

Words & Deeds' "Archie" (\$795) is a Macintosh-based studio management program offering client tracking, tracksheets, studio accounting, invoice and statement printing, studio performance analysis, employee files, form letters and more. A multi-user version is also available. Call (213) 255-2887 for more info...



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by Larry Oppenheimer

KLARK-TEKNIK

DN780 DIGITAL REVERBERATOR/PROCESSOR

The DN780 seems to be a survivor. Originally introduced way back in 1984, Klark-Teknik has aimed at revitalizing this unit with recent software and hardware updates and a massive price cut (version 2.11 now retails at \$2,595, including MIDI and full function remote). In an industry immersed in daily technological revolution and the attendant fashion trends that often erroneously equate a device's impact with its value, keeping a four-year-old digital processor alive is no mean feat. Ultimately, it is the sound and utility of a piece of audio gear that determine its usefulness and success. With this notion in mind, *Mix* examined today's DN780.

Physical Description

The DN780 takes up two units of rack space, but it is only a bit over 12 inches

To the right of the input section is the main parameter display window, which uses two- or three-character seven-segment displays for each of eight parameters. The panel legends name the parameters for the reverberation programs, which are typically the most used out of the DN780's arsenal. From left to right these are: Predelay, Reflections Pattern (density), Reflections Level, Reverb Decay (midband), LF decay scaling, HF decay scaling, Room Size and Memory (current program). Additionally, there is an LED for the Store function and three LEDs (a, b and c) indicating status of the remote and MIDI/RS-232 use. Below each of the displays in the window is a button for selecting that parameter for editing. Under the Memory display are the \pm increment buttons used to edit values. These last buttons have the



deep—less than many other processors—and weighs in at 16.5 pounds. The front panel features a ten-element, peak-reading LED headroom display, with the 0 dB indicator lighting 3 dB before clipping or math overflow. I always appreciate having a little headroom in a digital processor to save you from those unexpectedly high transients. Next to the headroom display are momentary buttons for input and reverb mutes and an input level pot. There is no onboard dry/wet mix control.

usual nudge, slow scroll and fast scroll functions.

To the right of the parameter section is a numeric data entry keypad, plus the Store and Sequence buttons. Finally, there is the power switch and the "Aide-Memoire," a continental name for a quick reference list of factory programs.

On the rear panel are the power receptacle (with fuse holder and spare fuse), cooling fan outlet, DB-15 connector for the remote control, MIDI or RS-232 connectors (if one of those op-

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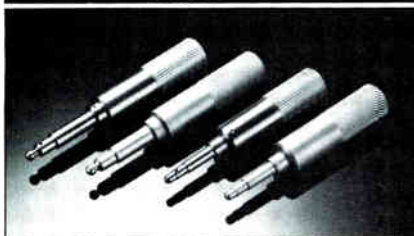
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FIELD · TEST

tions is installed), XLR-type connectors for the input and outputs, and two trim pots for output level.

The XLR-type connectors are wired pin 3 hot, in violation of the IEC specification. (It should be noted that Klark-Teknik is only one of many manufacturers not complying with this spec. It should also be noted that this discrepancy causes me endless hassles in the field and has become a pet peeve. How can an industry strive to create standard formats for the interchange of digital audio data when its members can't agree on how to wire a three-pin connector?) The outputs are fully floating, which, of course, means transformer-isolated.

The DN780's compact remote control consists of four sliders (each with active status LED indicators) for editing effects parameters, and two buttons:

The sound and utility of any audio device are its most important considerations, and the DN780 does well on these scores.

one activates the remote and toggles between two pages of functions, while the other button operates the sequence function. While not supplied with the unit I tested, an RS-232 Serial Board is available. This option allows the total external control of the unit and is retrofittable to any existing DN780.

Features and Operation

Spec-wise, the DN780 offers 16-bit A/D and D/A converters and 32-bit internal math, delivering a 12 kHz bandwidth and a typical dynamic range of 85 dB. Reverb and effects programs are both contained in the DN780, with the standard hall, plate, chamber, room, reverse or inverse, non-linear (gated), and infinite reverbs and standard de-

lay, ADT (chorus), and multi-tap delay effects. Additionally, there is a Sound on Sound program (a delay loop that adds new input to the existing material in the loop) and ****Alive****, a sort of very bright, present ambience/reverb program.

There are 39 factory presets (five each for the hall, plate, chamber and room programs, plus 19 presets containing the effects programs and some variations) and 50 registers for user presets. Recalling a preset from memory is accomplished by simply entering the number of the desired preset, and user presets may be stored by pressing the Store button and then the number of the target user memory. Erasing a register requires quite a few keystrokes, although it is possible to erase any number of adjacent registers with the same amount of keystrokes. It is also possible to protect registers so that they cannot be erased.

While most reverb applications use the same setting for an entire mix, it is often useful to be able to change presets quickly in the middle of a mix. The DN780's Sequence feature allows up to 16 presets to be prearranged in any desired order, then called up using the Sequence buttons on the unit or the remote, or using an external switch wired to the remote connector. Presets can also be recalled by remote through MIDI Program Change messages, and the contents of the user registers can be dumped to tape and loaded into any MIDI-equipped DN780. An on-board mapping facility allows the definition of arbitrary links between MIDI program numbers and the DN780.

Subjective Evaluation

The DN780 is extremely quick and easy to use. Its operation is almost completely self-evident: call up a program, select a parameter and edit it. In a high-pressure production environment or a live performance situation, this is a major consideration, often the primary one. There is certainly a place for devices that offer more detailed parameter control than the DN780, but these require more time and energy to deal with. However, I am not particularly enamored of operating systems that call a preset up as soon as the number is entered, because these leave no room for error or browsing; this is one case where I actually prefer to have one more keystroke to confirm the recall action.

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ACTUAL DIMENSIONS: 19"W x 9 1/4"D x 7"H

Actually, it's not even necessary that you have everything. Even if you have just a stereo keyboard, a sampler and a drum machine with separate voice outputs, you've already exhausted the capabilities of a conventional eight-channel mixer. And that's the reason behind the new M-160 and M-240 Line Mixers from Roland: modern electronic equipment demands modern mixers.

Never before have so many channels of control been produced in such convenient packages — perfect for the MIDI studio or the road. But it's the impeccable signal quality and low noise you'll appreciate once you put the M-160 or M-240 to work. The M-160 (16 channels) can be rack-mounted right in with your MIDI Modules and effects, while the sleek M-240 (24 channels) can be positioned in any electronic musician's set-up. M-160's and M-240's can even be ganged together for 32, 40 or 48 channels of control.

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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ACTUAL DIMENSIONS: 26"W x 11 1/4"D x 3 1/4"H

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The manual is concise and generally well laid out, although I did find a few instances where I thought it would have made sense to place a piece of information in a different part of the manual from where I found it; still the book is short enough that this isn't much of a problem. The descriptions of the parameters in the effects programs and the accompanying applications suggestions were good, but I do wish that a brief, general description of each program had been included. In all, however, my complaints about the manual were pretty trivial.

The lack of an onboard wet/dry mixer is of more concern in small studios and live performance, where console inputs are at a premium, and for such applications this omission is unfortunate. The display is also a bit limiting. While it is adequate for showing parameter values, the absence of alphabet characters means that user presets cannot be named. In an under-\$1,500 unit this might be expected, but at this price the ability to name

presets is expected.

However, as I pointed out above, the sound and utility of any audio device are its most important considerations, and the DN780 does well on these scores. I tried the DN780 on a variety of material, including vocals, electric guitar, drums, brass, single and double reed instruments, synthesizer and, of course, piano. The sound of the DN780's reverb is generally quite pleasing to my ears; I would not describe it as being the most "natural" sounding reverb I have heard, but "naturalness" is not always a desirable quality. In spite of the 12 kHz bandwidth, the reverb had a rather bright and perky sound. Combined with the fact that many of the factory presets use high levels of early reflections, things tended to sound very present and distinct in the mix.

Vocals, in particular, sounded very crisp, yet smooth with a medium hall program. Jeff Kliment, a Russian Hill Recording engineer and DN780 fan, has used this unit to great effect on records by The Bobs, a four-voice a capella group. The plate program is excellent—dense and sizzling—and

did wonderful things for kick drum. Jeff claims it's the closest he's heard a digital reverb come to an EMT plate. The chamber program added a warm presence to bassoon, and the room gave a crunch guitar that nice, hollow ambience. In fact, I didn't really find any of the reverb sounds that struck me as bad or substandard.

The effects programs were generally good, although not terribly exotic. The reverse reverb was probably the stand-out of the crowd. ****Alive**** was pretty cool, but I was more turned on by that hot plate sound. A variety of effects can also be made from the wide range of reverb parameters, such as the 990 milliseconds of predelay or the 90 meters of room size.

The DN780 is not the newest, most-hyped reverb/sampler/cigarette lighter on the block. It is, however, a solid-sounding digital processor with all of the essential reverb and effects programs. At its former price in the \$5,000+ range, it would not be a contender in today's market, but with the recent price cut to \$2,595, it is a reasonable investment to consider. ■

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KURZWEIL
Music Systems

by Craig Anderton

NAMM

REPORT FROM THE 1988 SUMMER SHOW, PART 1

The National Association of Music Merchants (NAMM) holds two shows each year where manufacturers show their stuff, dealers order what they think they can sell and the press tries to find out which products are real and which aren't. This time around, though, the news and gossip started even before the show's official opening on June 24 in Atlanta. Due to declining attendance at the summer show (the winter show in Anaheim has become *the* big show of the year), and since many exhibitors still remembered the near-disastrous summer '85 NAMM show held in New Orleans, quite a few manufacturers and dealers elected to bypass the show altogether. Furthermore, the summer show was cut back to three days from the traditional four.

Who didn't go? ADA, Akai, Beetle, E-mu, Ensoniq, Fender, Ibanez, J.L. Cooper, Korg, Kramer, Lexicon, Roland, Zeta and several others. This had a mixed effect. Although the absence of some industry giants put a damper on things, and also convinced quite a few dealers to stay away, overall there was a looser atmosphere with a bit less pressure and a greater degree of camaraderie. Even though manufacturers may not have signed up as many dealers as they would have liked, they at least got a chance to roam the show, see some other booths and compare notes with other exhibitors.

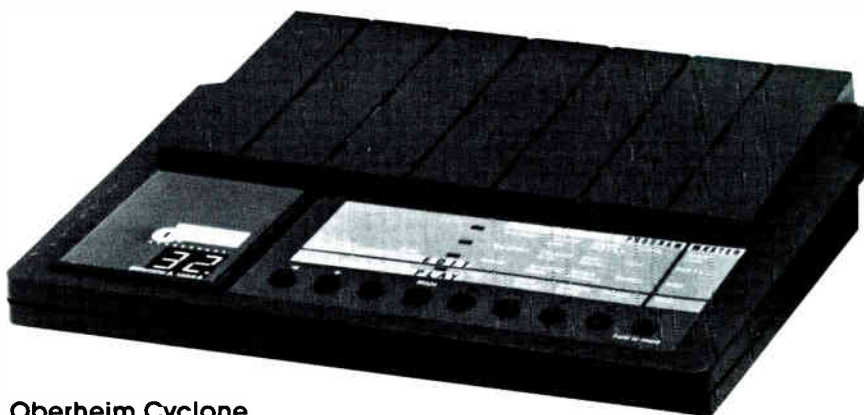
In this month's column, we'll look at trends, as reflected by particular products. Next month, we'll cover new products exclusively.

Yamaha's IBM-compatible C1 Music Computer features eight MIDI outputs and SMPTE in/out.



Real-Time Control

This is the show where people finally got fed up with entering data one digit at a time and opted for knobs to make life easier. For starters, Blue Sky Logic (Box 5372, Akron, OH 44313, tel. [216] 867-6027) showed the MIXI M-100 (\$995). This MIDI controller consists of 17 faders that generate MIDI data in real time. Although one application would be to program these faders to send MIDI volume control data to synths for mixing, it's also possible to



Oberheim Cyclone

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send program changes and other MIDI commands. This seems like it would be a good box for recording engineers who want to vary MIDI parameters during recording or mixdown.

Perhaps the most intriguing product of the show came from Filmsonix (1032 N. Sycamore, Hollywood, CA 90038, tel. [213] 653-0240). The Feel Factory, designed by Michael Stewart, uses eight faders to vary the *timing* of MIDI data, thus subtly altering the "feel" of sequenced music. While real-time operation is the unit's main attraction, the ability to use eight programmable "feel" algorithms or 48 algorithmic assignments is equally important. To top things off, the Feel Factory also includes a SMPTE time code reader/generator and Mac/MIDI interface.

Musically Intelligent Devices (6 Brian St., Commack, NY 11725, tel. [516] 864-1683) introduced the IFI-8, an eight-fader peripheral for real-time control of their *MegaMix* automated mixdown system (which is now available for PC, Mac and Atari computers). Even the software biz got into real time: Performance MIDI Systems (Box 864, Grand Forks, BC, Canada V0H 1H0, tel. [604] 442-8362) showed *Pro MIDI Player* (\$149), a non-editable Atari ST sequencer oriented for live performance—work out your tunes at home on your "big" sequencer, then dump them into Pro MIDI Player for instant live access to up to 26 songs stored in RAM.

Adding further momentum to the real-time bandwagon, Oberheim (2015 Davie Ave., City of Commerce, CA 90040-1704, tel. [213] 725-7870) introduced two units designed specifically for live performance. The Systemizer (\$249) stores 128 setups that define keyboard splits, floating splits, layers, crossfades, controller filtering, number

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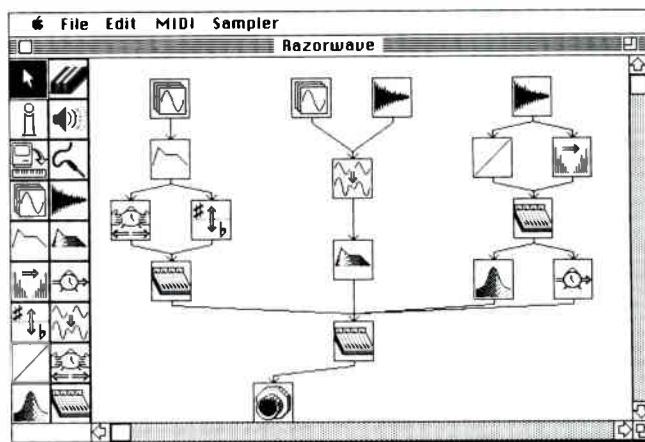
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of voices, etc.; Cyclone (\$249) is an outboard arpeggiator with a number of advanced features, including tempo tap and multiple live performance controls.

Computers

Computers were *very* hot at the show; Atari, Apple and Commodore all sponsored booths where a number of software manufacturers showed their wares. Commodore's entrance was particularly significant, as it indicates

Digidesign's TurboSynth program for the Mac allows users to create new sounds by manipulating on-screen synthesis "modules."



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that they're back on track in terms of getting the Amiga into the music and post-production market. But the show-stealer didn't come from one of the "Big Four" computer companies, but from Yamaha. Their C1 computer is a honey: the base unit, which lists for \$2,995, is an MS-DOS, 286-based computer with two MIDI inputs, eight MIDI outputs, SMPTE in and out (!), ROM-based music fonts (!!), high-resolution backlit display, 1 Meg of RAM (expandable), DMA controller and a whole lot more. If you have an extra grand lying around, \$3,995 buys you all of the above, except a 20-Meg high-density hard disk replaces one of the floppy drives. The price point may scare off some people, but this looks like an excellent machine for electronic musicians of the IBM persuasion.

Digital Signal Processing

Digital signal processing has come of age, from signal processors to software. The MultiVerb (\$575) from ART (215 Tremont St., Rochester, NY 14608, tel. [716] 436-2720) and QuadraVerb (\$449) from Alesis (Box 3908, Los Angeles, CA 90078, tel. [213] 467-8000) are multiple-effects devices in the tradition of the Yamaha SPX90 and DigiTech DSP-128. Yamaha (Box 6600, Buena Park, CA 90622-6600, tel. [714] 522-9011) showed the budget R100 Reverb Processor (\$295), a compact 16-bit digital reverb with 60 editable presets; the SPX50D Multi-Effects Processor (\$695), which is similar to an SPX90 but also includes digital fuzz effects; and the GEP50, which is similar to the SPX50D but optimized for guitar. My personal favorite, though, was the IPS-33 Smart Shift pitch transposer (\$799.95) from DigiTech (5639 South Riley Lane, Salt Lake City, UT 84107, tel. [801] 268-8400). The sound

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Patch-Chaining enables the MX-8 to send up to eight program changes with each setup.

MIDI Filters can be set on two separate inputs to remove any data from the MIDI stream.

Transpose up or down five octaves on an individual channel or globally.

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quality is exceptional—you have to hear it to believe it—and there's an intelligent harmonization option where you can enter a key signature along with one of 41 scale modes, and have the IPS-33 synthesize perfect harmony lines along with your single-note playing.

Perhaps the most novel use of DSP techniques, though, appeared in *TurboSynth* (\$349), a Mac program from Digidesign (1360 Willow Rd. Suite 101, Menlo Park, CA 94025, tel. [415] 327-8811). This software-based modular synthesizer lets you build sounds by "software patching" various "modules," as shown on-screen. These modules include tone generators based on either synthesized or sampled waveforms, and ten digital signal processing modules that perform traditional functions (e.g., filtering and enveloping) as well as more esoteric functions like time-stretching. Once you get the sound you want, you then transfer it to any of the 21 supported samplers, or via the MIDI Sample Dump specification. In keeping with the real-time theme of the show, Digidesign president Peter Gotcher mentioned that when their new Sound Accelerator card is finished, it will be possible to run TurboSynth in near-real time.

SCSI

In the quest for faster operation, SCSI (the Small Computer System Interface) is becoming very popular. Blank Software (Box 6561, San Francisco, CA 94101, tel. [415] 863-9224) was transferring samples between an Ensoniq EPS and *Alchemy*, their sample editing program, via SCSI; this eliminates the long waits normally associated with transferring sample data via MIDI. Optical Media International (485 Alberto Way, Los Gatos, CA 95032, tel. [408] 395-4332) also used SCSI to good advantage in their Professional Universal CD Player (\$1,795 to \$2,495, depending on options). This unit plays both CD-ROM and CD-Audio discs, with options for SCSI, RS-422 interface, handheld remote and digital outputs.

Enhanced MIDI

No one mentioned MIDI 2.0, or complained about MIDI's speed; they didn't have to. Many programs and interfaces now support multiple MIDI

outputs, each of which can contain 16 channels of information. This technique can increase the overall number of channels, or clean up the MIDI data stream by apportioning data-intensive signals to individual outputs. For example, Passport Designs (625 Miramontes St. Suite 103, Half Moon Bay, CA 94019, tel. [415] 726-0280) showed *Master Tracks Pro 3.0* (\$395, or update previous versions for \$45), which now supports both printer and modem port outputs. Following another trend—the industry-wide acceptance of SMPTE—MTP 3.0 also locks to SMPTE or MTC

and allows for cue lists.

Pretty good for a "dead" show, I'd say. But there's a lot more to cover, like the all-digital product blitz from Yamaha's Professional Audio division... so tune in next month, same place, same magazine, and we'll continue our tour of the summer '88 NAMM show. ■

Craig Anderton edits our sister publication, Electronic Musician, performs with the synth band Transmitter and is the author of MIDI For Musicians, as well as countless other books and articles for MIDI users.

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TONIO K. FINDS HOPE IN DARK TIMES

by Iain Blair

Visually, nothing much has changed. Sitting in a darkened office on the A&M lot, Tonio K. still wears dark glasses and is dressed mainly in black. And at a recent sold out show at L.A.'s Roxy, the singer (in black and shades, natch) still snarled and spat out a mixture of old favorites and cuts from his latest album, *Notes from the Lost Civilization*, as if he'd just

invented the term "angry young man."

But the truth is, Tonio K. isn't quite so angry these days. Just as intense, but not such an irate malcontent. Of course, he's still got a long way to go to reach the blissful state so caustically pictured in 1979's "H-A-T-R-E-D"—"Yes I wish I was as mellow as for instance Jackson Browne/But 'Fountain of Sorrow' my ass motherf-----/I hope you wind up in the ground." But he definitely seems, well, (it feels like sacrilege to even mention the word) "mellow."

"A little less cranky, a little bit more hopeful,"

allows Steve Krikorian, who assumed his pseudonym after delving into the works of Kafka and Thomas Mann. "Perhaps this album is a little more accessible, a little more polished in its sound, but I also view it as a natural successor to last year's *Romeo Unchained*, and to all my other albums going back to the first, *Life in the Foodchain*."

"People have been talking about a slight shift in my focus, but lyrically at least, I just don't see it," he continues. "Perhaps these songs aren't full of four-letter words, but the themes haven't changed much. It's true though that I'm older, and probably less angry now that I'm a functioning adult—or so they tell me. I've worked some of it out, and the fact is, you either grow up and work it out, or you die. Well, I'm still very much alive."

Ironically, *Notes from the Lost Civilization* was inspired by visions of extinct life—the cover art features the huge truck-stop dinosaur replicas at Cabazon, near Palm Springs. "After we began recording, I realized that the album was a sort of archaeological dig through our culture," comments Tonio K. "And the moment I had the title, I knew I had to use those dinosaurs. As a kid, I remember seeing them as steel skeletons as they built them, and they just seemed like the perfect images."

"The overall concept of the album was so clear to me that we didn't even demo any of the songs first," the singer continues.

—CONTINUED ON PAGE 158



MARK ISHAM'S CONCRÈTE DESIGNS

by Robin Tolleson

Mark Isham's music is full of striking combinations of tonal colors, from the most archaic to the most modern. His horns and synths painted aural landscapes with Art Lande's Rubisa Patrol and Van Morrison in the 1970s. By the time of the grand, syncopated, electric chamber orchestra sounds of Group 87 in 1980, Isham was also on top of electronics as an intricate but not overbearing part of his sound.

On a handful of film scores—*Never Cry Wolf*, *The Hitcher* and *The Moderns* among them—he's taken a bold, jazz-influenced improvisational approach and made it work. And on a new solo record, *Castalia*, Isham's aural arsenal includes such diverse elements as bass clarinet (Oregon's Paul McCandless), vocalist Gayle Moran, lap steel guitar and MIDI trumpet.



PHOTO: CHRIS CHAPMAN

"I've always been interested in the widest possible palette of sound colors," he says. "Having a classical background, I'm familiar with a lot of traditional instruments, and it's naturally come that I've used whatever I could get my hands on." He is, to say the least, a man of many approaches.

Before scoring *The Moderns*, director Alan Rudolph's arty evocation of Paris' Left Bank in the '20s, Isham checked into the music happening in that city in the early 1900s. "I did intellectually go over the different music of the time, what might be evocative of that era, drawing on everything from Ravel and Satie and the early Stravinsky work, to the early jazz," he says. "The jazz I pulled on was

more Django Reinhardt-ish jazz, although there's some Sidney Bechet in there."

On the new Windham Hill long-form video *Tibet*, there is no narration—only Isham's compositions to blend with the stunning visuals. "I did some experimenting and studying of Tibetan instruments," he says. "Although often when I deal with ethnomusicological stuff, I really act as an impressionist. I'd never bother to learn anything specifically. I occasionally use some of the sounds, or similar sounds, but I actually never go in and learn the nuts and bolts of the music."

As opposed to those film composers who work pen-to-paper, Isham prefers to get all his instruments around him while

—CONTINUED ON PAGE 160



JOE SATRIANI'S SPLASH WITH THE ALIEN

by Robin Tolleson

When he went into San Francisco's Hyde Street Studios last year to begin work on *Surfing With The Alien*, Joe Satriani had no idea that his second album of instrumental music on Relativity Records would turn into a Top 30 hit on the pop charts. "I really just wanted to make the most interesting record I could at the time, under the given circumstances, and get it out there so enough people would listen to it," he says.

"Eddie Van Halen eat your heart out!" one fan screamed following Satriani's "homecoming" concert at San Francisco's Fillmore (he lives in Berkeley), and many who heard the comment had to smile about this new guy challenging for the top spot on the guitar throne. He's got the combination

of technique, writing ability, depth and showmanship to make this reborn fusion crowd shout louder than they have since the heyday of Return To Forever or the Dixie Dregs on a hot night in Texas at their peak.

Born in New York and raised on Long Island, Satriani attended Carle Place High School a few years ahead of guitarist Steve Vai, of Zappa and David Lee Roth fame. In fact, Vai studied with Satriani for three years. "Steve is the consummate guitar showman," Satriani says. "He's got all the technique and solid musicianship to back up all the most bizarre stage moves that you've ever seen. I've seen him acting up like that for years." Vai returns the favor, saying, "Through Joe I saw what true musicality was. His playing never ceases to venture into unexplored realms. His attitude is totally professional, but there's always that unexpected element of surprise."

As a recent member of

—CONTINUED NEXT PAGE

THE FAR SIDE

By GARY LARSON

© 1988 Universal Press Syndicate



Aug. 11, 1957: Tito Puente loses the beat



Nov. 3, 1963: Ella Fitzgerald hits a flat note



Sept. 4, 1948: Dizzy Gillespie can't find Bb



July 14, 1974: Oscar Peterson forgets the chords to "Heart and Soul."

Infamous moments in jazz

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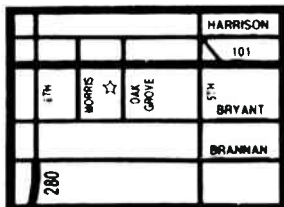
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MUSIC • NOTES

—SATRIANI, FROM PREVIOUS PAGE

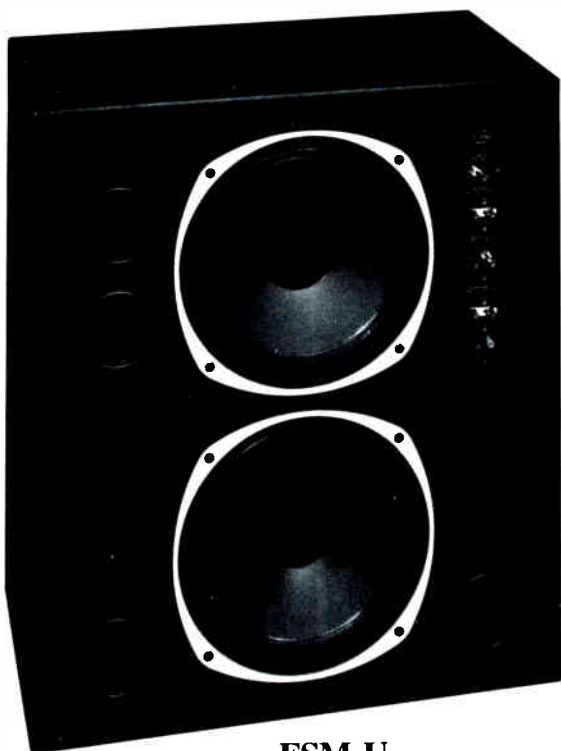
Mick Jagger's touring band, Satriani got to work with guitarist Jimmy Ripp, bassist Doug Wimbish, Phil Ashley on sax, singer Bernard Fowler, and jammed extensively at soundchecks with drummer Simon Phillips. "It's a big band, and we're all sort of crazy personalities out on tour. Mick has some sort of power that brings it all together. He's a unique personality, and then when you hit the stage the guy becomes magnified and he turns it on," Satriani says. "He's putting out an enormous amount. He really works hard. He comes back to the room with all of us after the show, and he's exhausted and elated just like everyone else.

"Mick keeps an eye on the arrangements and the attitude of the playing, because he's the one with the absolute vision of how the band should sound and how it should perform. But sometimes a few of us will feel like we need to play something a little more like the original record, and *he'll* be the one to say, 'No, do what *you* do; just go nuts here.'"

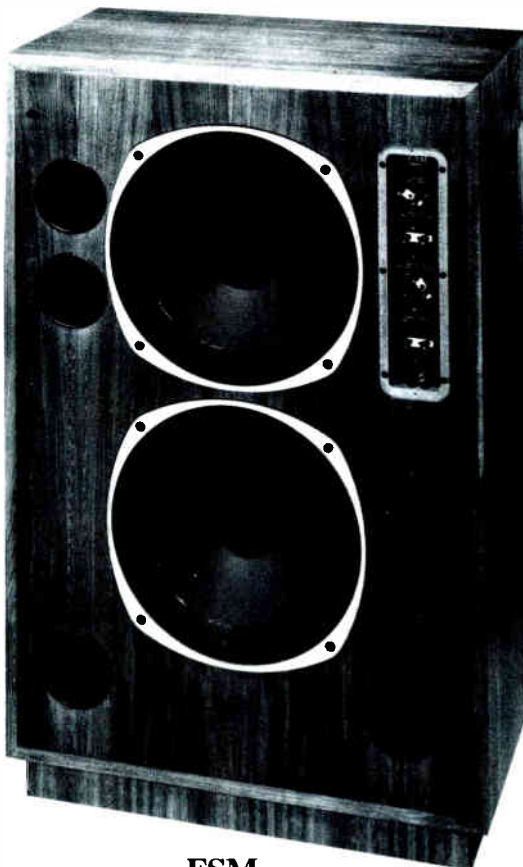
The guitarist took a similar approach in fielding his own bands for *Surfing With The Alien* and the supporting tour. Besides the various instruments Satriani recorded on *Alien*, Jeff Campitelli and Bongo Bob did drum tracks, co-producer John Cuniberti added percussion, and Jeff Kreeger worked on pre-production programming and sounds. "There would be times when I'd say, 'I want you to do what *you* think you should do here.' That's the way I like using other musicians. You give them a certain amount of direction, but then give them some freedom so that they can show their colors," says the guitarist.

Bongo Bob, who has worked on recent hits by Starship and Whitney Houston, did live percussion and programming on a number of songs. "I wanted a real drum attitude, but with something added, something a little different," says Satriani. "I didn't want to mimic the drums, I wanted it to be like a real drummer and percussionist getting hold of a machine and really taking it out. Bongo knows exactly what he's doing with all the equipment. But at the same time he can pick up a little paper cup, put some rice in it, and get the best shaker sound you've ever heard. He's got it

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MUSIC • NOTES

in his fingers, just the rhythm going through him.

"On 'Circles,' the combination of Bongo and Jeff is great; there's a little bit of machine, and John and I play some percussion samples. That song is packed with quite a few people, compared to most other songs on the record where I'm doing most of it. That's one of those songs where I've got a lot of people involved." Satriani plays guitars, bass, keyboards, percussion and does some drum programming on *Alien*.

Thanks to modern technology, even

an adventurous guitar blowout like "Ice 9" on the *Alien* record is quite playable for Satriani and his live trio. "I've been working with Ibanez and Marshall to get to that stage," he says. "And with the combination of what happens onstage and what Nigel Paul, my sound man, does back at the board, it's not really a problem. That song comes off more radical than what we actually had to go through to make it sound that way on the record. It's really just a pickup selection switch. Of course the third solo is backwards so it's a little bit hard, but I can emulate it pretty well. That's what the vibrato is for. Once that bar really starts mov-

ing it's hard to tell if it's forwards or backwards."

Satriani plays several Ibanez guitars, built following his own specs. "It's all pretty standard electric guitar stuff. I'm running my guitar into a few inexpensive effects and then going back to a rack that's got some more sophisticated stuff. But it's really not being used to do anything much but create a little ambience and some extra equalization. And then it just goes into two 100-watt Marshall half-stacks."

Although he's listened to a lot of Stones and Beatles, Johnny Winter, Clapton, Beck and others, Satriani claims Hendrix was his strongest influence. "His guitar sounds were different from song to song," Satriani says. "His records were different, and he seemed to always push it to the limit. And he made sure that the guitar served the song, and not the other way around."

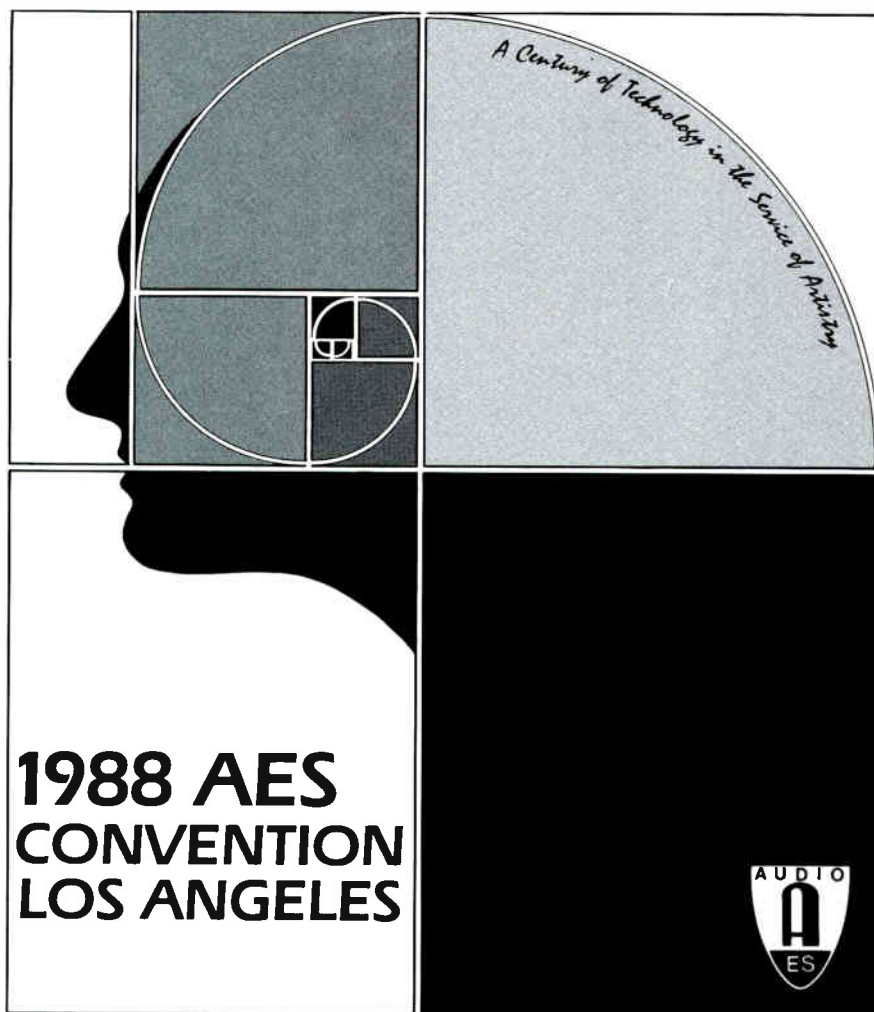
"I approach writing in a real child-like manner. It's usually some sort of feeling that I have, and I'll exaggerate and amplify it, and get that feeling to be all blown up, huge and ridiculous, whatever the feeling is. If it's a sad song, I'll dwell on that feeling of sorrow and make it really big. And then it becomes something that I use as my reference for whatever it is I'm doing in the song. On 'Surfing With The Alien,' I just manufactured a ridiculous scenario. Instead of recognizing an alien and getting very scientific or having a violent struggle, going the usual route of the science fiction stories, I figured it would be funny and ridiculous to recognize an alien among us and then take him to the beach to go surfing."

Satriani's imagination struck the right chord—his stock skyrocketed, and Marvel Comics' Silver Surfer was given a nice career boost, too.

"I keep that feeling going in my head. If I hold onto that thought while I'm playing rhythm, solo, bass parts, it seems to guide me. There are no lyrics, so I have to be very specific with the feeling and attitude of each part I play. That's really what I'm relating to as I'm laying down solos and other parts." ■

—TONIO K., FROM PAGE 154

"I just got together with T Bone Burnett, who executive produced and played guitar, and David Miner who played bass and co-produced with me, and we just rehearsed them a little, arranged them, and then put 'em



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down. It was fast, fun and painless. We started in June, and had the whole album finished by July. And that's how I like to record."

The album also features appearances by the likes of Charlie Sexton, Billy Vera, Peter Case, James Jamerson Jr. (son of the late, great Motown bassist), and organ legend Booker T. Jones. "Getting Booker to play on the album was particularly inspiring," Tonio says. "T Bone, David and I were just hanging out, talking about various ideas and how we were going to approach the material, and it gradually became obvious that urban surf music was the underlying theme of what we were aiming for. So we knew we wanted that great old Hammond sound, and we were bouncing various players' names around, when David suggested using the master himself, Booker T."

"I was amazed," he laughs. "I mean, I had no idea we could even get this guy, but not only did we book him, he turned out to be really incredible, both as a musician and a person. That session was definitely one of the highlights of my career."

The bulk of the recording was done at the Sound Factory, with "a little bit of overdubbing done at Mad Hatter, and some other stuff done at Ocean Way." And despite how little time was spent on either pre-production or the sessions themselves, the result is probably the artist's most appealing and commercial album yet.

For a start, there's the infectious first single, "Without Love," the R&B inflections of "I Can't Stop" and "I Can't Stand It," and the partially tongue-in-cheek "feminist manifesto" of "What Women Want" which even features a synthesizer.

Of course, no Tonio K. record could be all upbeat optimism, and tracks like "City Life," "The Executioner's Song" and "Children's Crusade" paint a darker picture. "'City Life' is actually about the view from my place in downtown L.A., and it's a pretty heavy one sometimes," he comments. "There's a lot of action there—choppers, winos, gun shots—it's just wild, a real 'E' ticket." The singer pauses thoughtfully before adding somewhat sheepishly, "It does freak me out a bit, 'cause I'm a real suburbanite at heart. I actually own a place out in Woodland Hills. But hey, you're not going to find much inspiration for songwriting out there."

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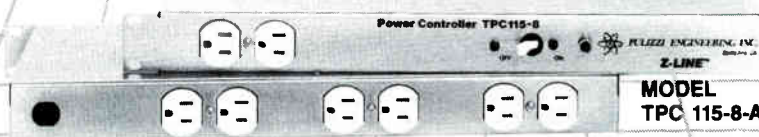
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MUSIC • NOTES

Tonio's well-publicized born-again Christian stance seems rather muted these days. "I just think that phrase, 'born-again,' is so unfortunate," he comments. "It carries such a load of negativity that I prefer not to use it. But yes, it still informs my music and outlook, and probably has done so ever since I was a teenager and began to suspect that there's more to life and death than meets the eye. I just don't like to get up on a soapbox and start preaching at people, like all those TV evangelists. What right have I to judge people? I'll just stick to music-making, thanks very much."

With a hot new album, a current tour spot opening for The Kinks—"it ruined my summer vacation" he half-jokes—and some strong radio response to the first single, 1988 could be the year that the singer finally breaks through from cult status to mainstream acceptance.

Will success spoil him? "Jesus, I hope not," he says earnestly. "If things get any busier than they are right now, I'll probably start getting cranky again." ■

—ISHAM, FROM PAGE 155

he's watching the rough cut, and let tape roll while he jams. "I generally work directly to picture all the time," he says. "In fact that's really the only way that I feel comfortable doing it, consequently I've made the investment in a studio of my own so that I can do that."

"I've never really trained in the traditional way of writing with timings and doing the math and everything. I'm used to a more unschooled, intuitive approach of just playing to picture and using whatever compositional technique fits the music. *The Moderns* is slightly more traditional; most of that stuff was written out. But the ideas came from playing along to picture. Then I'd go back and do some general timings and fit it all in. But a lot of things in *Never Cry Wolf* were much more concrete in nature. I would take a big sequence here, a loop there, and construct pieces. It would be almost impossible to actually notate how they came to be. They were just from an improvised, constructivist process."

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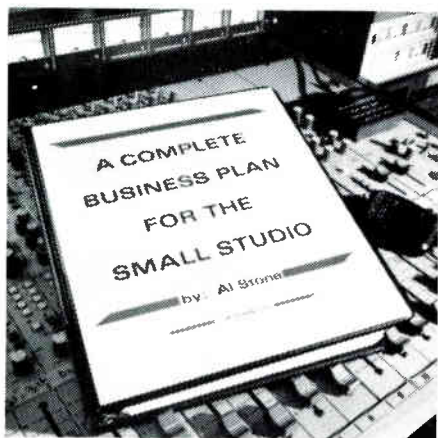
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splicing tape, running tape backwards. Using the tape machine as a compositional tool. Manipulating the tape as a physical object to create the music.

"In the age of computer music, *concrete* is taken to a whole new level," Isham says. "With the new technology, you put something in the sequencer and you can speed the sequence up, slow it down, fly it around backwards. There are infinite editing possibilities within the computer." Isham uses a Mac Plus with MIDI Paint software. "It's easy to work with and seems to lend itself very much to the way I think about putting music together."

Percussionist/programmer Bongo Bob worked on *The Hitcher* with Isham and found his improvisational approach to film scoring a big switch from what Bob was used to doing with Narada Michael Walden on projects by Whitney Houston, Lionel Richie and others. "He had prepared themes and attitudes, and we would respond to that and just blow, watching the film. With him you'd just play it, and then analyze it. Try to get the attitude, the whole spark, and then refine it."

"I would draw basic guidelines or click tracks, and then the percussionists would improvise within the parameters I set up for them," says Isham. Bongo Bob adds, "Mark is a master of using a digital delay, of setting up delay lines that repeat certain rhythms. The way they sit emphasizes a phrase much different than the sequencer does. That's where you find this floating nature in Mark's music. His digital delays move differently. They're not 100 percent exact."

Isham's principal delays are the Lexicon Prime Time II with full memory, a TC 1190, a Roland SD-3000, and several others. Isham likes digital but has a soft spot for analog sounds. "I still use a Prophet-5 and a Moog 12," he notes. "I haven't been using the ARP 2600 that much because the oscillator's been drifting too much. For sampling I use the Prophet-2000. Occasionally I'll borrow a PPG or the wave table synthesizer that Sequential makes, the VS."

Isham's MIDI-trumpet, built by Bill Perkins and J.L. Cooper, triggers some exotic wind instrument sounds on *Tibet*. He also uses it on *Castalia's* "Tales from the Maiden" to double some Harmon mute parts with a very high flute-like unison line—actually a Prophet-5 being triggered by the trum-

Before After

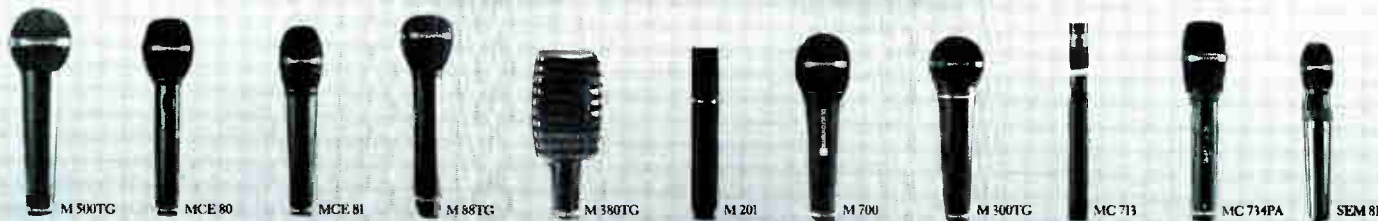
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MUSIC · NOTES

pet. "They've put magnetic switches in the bottom of the three valves so they don't interfere with the action of the horn at all," he says. "You actually get a completely glitch-free conversion to MIDI. It works quite well. I heard that in the later model they were going to also take a very highly sensitive pitch-to-voltage converter, and that would also be added in for pitch bends through your lip, which would make it as accurate as you'd want to get."

When Isham first began playing trumpet and listening religiously to Miles Davis, it was partly out of a sense of rebellion against his parents. "That music was probably the farthest away from what had been in my family household," he recalls. "The only music I'd ever really heard as a child growing up was classical. Both of my parents were violinists. Brass was very far away from their experience. It was an area that I was sort of allowed on my own, at that time. In an extremely musical household I managed to find an area which was totally unknown."

There's still music in the 37-year-old's home, but now the sounds waft from his home recording studio—

called Earle Tones—where he did a good bit of the work on *Castalia*: "I did all the keyboards there, the electronics, and a great deal of the trumpet. But when [guitarist David] Torn had to play loud we went to another place. And the acoustic instruments, the voice and the drums and everything, we did elsewhere. We did most of the bass there. The things that don't have to be too loud or can be direct, I can do at home."

Isham hasn't spent all of his time sequestered in studios, however. He's also been out on the road a fair amount in '88. He toured the U.S. and Europe as a featured player in David Sylvian's band, and this fall he's taking a group of his own out for a hefty tour. Among the players in his band are avant-garde-guitarist David Torn (who was also on the Sylvian tour) and Isham's one-time bandmate in Group 87, drummer Terry Bozzio. In fact, Isham has remained close to all his former Group 87 compatriots—Bozzio, Pete Maunu and Patrick O'Hearn all appear on *Castalia*. That album bears Group 87's trademark richness, but also shows how much Isham now has to stretch to reach his limits.

"I wanted to make a bigger record,

if that makes sense," he says. "I wanted to make a record that covered a wider scope, that had bigger sounds, a more aggressive sound. A record that would not be mistaken for new age music. *Castalia* is a pretty good representation of my style as a whole." ■

BILL BRUFORD THE NEW FACE OF BRITISH JAZZ

by Bruce C. Pilato

"Jazz is a terrible word," says drummer Bill Bruford, "but it is a word that encompasses a terrifically vital music. It is the earliest kind of music that I loved, and it will probably also be the last type of music that I love. But if I asked you to think of British jazz, you probably couldn't think of anybody; you'd think of silence."

But Bruford might change that. Years after emerging from the British progressive-rock stable, Bruford has essentially started over again. Early last year he assembled Earthworks, the most visible group to come out of the increasingly popular young British jazz scene.



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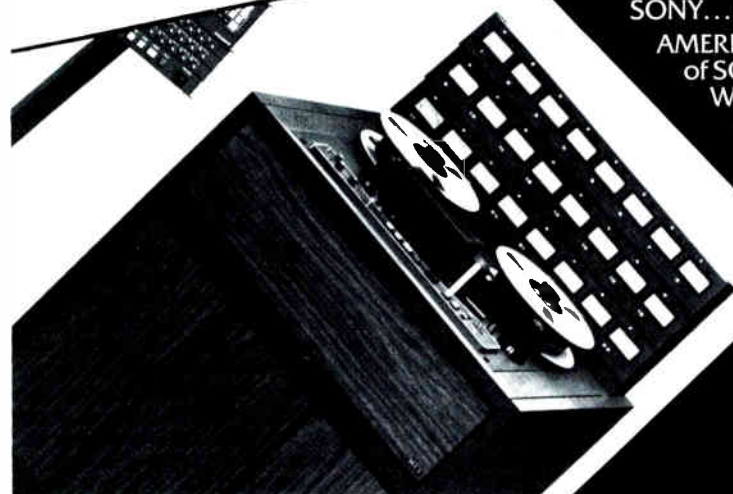
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Long respected as the premier British art rock drummer, Bruford has tried to juggle a jazz-tinged solo career with lucrative memberships in some of the biggest English rock groups. He is the only musician to have played with Yes, Genesis, U.K. and King Crimson, and is responsible for launching such jazz greats as Jeff Berlin and Allan Holdsworth. But according to Bruford it was not until Earthworks that he found true musical contentment.

The group's debut album is an exceptional grouping of diverse styles. From up-tempo bebop to pulsating percussion-laden riffs that are not unlike Crimson at its most demonic, the record never loses its grip. "It represents all sides," says Bruford. "It's joyful, as well as perverse. It really is a multisided figure."

Earthworks is driven by four outstanding musicians, three of them young and unknown. Along with Bruford, who plays both acoustic and electronic drums, Earthworks consists of Iain Bellamy on saxes, Django Bates on keyboards, E flat tenor horn and trumpet, and Mick Hutton on double bass.

"These new musicians are emulating no one," Bruford says. "It's totally new. The sources are wider. Of course they know who Miles is, and who Coltrane was, but they don't really care so much. These players are not bound by the same problems that previous jazz musicians have had, such as the fusion problem, which is a major issue here. That is where kids learn to play all these scales faster and faster and hence, put people to sleep."

"The point of Earthworks is that it is a *British* jazz group," says Bruford. "British jazz players have always considered themselves—and rightly so—inferior to the American jazz musicians who came to visit Europe after the War and up through the '80s, but then, suddenly, there appeared, for no good reason, a fairly large and very talented group of young jazz players."

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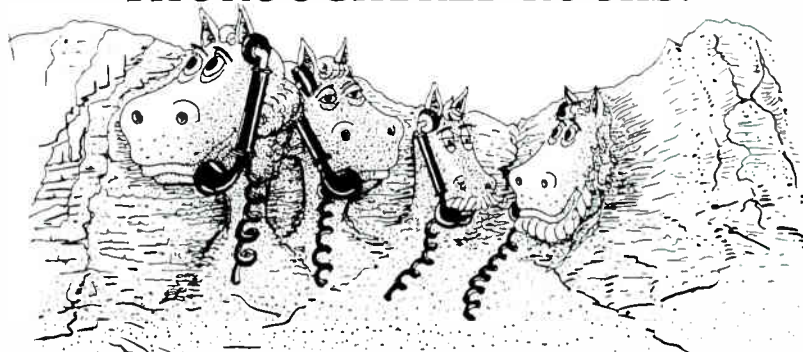
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MUSIC · NOTES

America gave us jazz. Nonetheless, they feel that jazz is now international property. Now, anyone can put his stamp on it. So, with great humility, we'd like to offer you another version of jazz.

"British jazz players need a bigger canvas. They need to go to Japan and America and have a higher profile. We need to get some of these young British jazz musicians to come out of the cupboard, their corner, this tiny island. What I'm trying to bring to the other members of Earthworks is to offer Japan, the U.S. and the rest of the world, as well as a major record deal. And, in return, I can draw on their very refreshing new feel towards jazz."

In addition to exposing the music to a much wider audience than it would normally have found had he not lent his name and reputation to the project, one of Bruford's goals with Earthworks is to bring the futuristic sound of electronic drums to what is essentially an acoustic art form.

In 1986, Simmons outfitted Bruford with a complex drum kit which he MIDI'd to a series of other instruments. "Things came pouring out right away," he says. "It became a composing tool. I wrote quite a bit of music, and then I headhunted for the young English guys I thought I would like to do this with.

"Most drummers have looked at electronic drums as some sort of toy for the last five years. They've been waiting for a sucker like me to come along and work at it and make it better. And it is getting better."

Earthworks is light years away from Bruford's work with Yes, Genesis and King Crimson. It is also quite different than the previous jazz-flavored solo albums Bruford has made since 1980. It may disappoint Bruford fans who are expecting more of what he has done in the past, but this is where Bill Bruford wants to be today. Earthworks toured the U.S. and Canada this spring and summer and is recording a second LP this fall.

"I did release a compilation album awhile ago called *Masterstrokes*," Bruford says. "That album really wrapped up that solo period. But the so-called Bruford solo fans—God bless them!—I think they respect me enough to accept whatever I do. I'm just trying not to stand still."

INSIDER · AUDIO

—FROM PAGE 19

form, ready for rewriting of new data.

Significantly, because the THOR-CD medium is changed physically by the creation of pits, the disc can be read by a conventional CD player. Likewise, a conventional prerecorded CD can be played in the recorder. Thus, the new technology is backward compatible.

However, a problem with this particular technology is that the layer can be erased only a few times, perhaps a hundred or fewer, before the recording layers become fatigued. While this may be acceptable for some applications, it certainly is not for others. That problem has already been solved by a competing optical technology, magneto-optical recording, which uses a combination of magnetic fields and laser heating. It may be erased and re-recorded as many as 10 billion times. Tandy's announcement is somewhat paradoxical because it is generally acknowledged that magneto-optics is a much further developed technology than dye-polymer.

Thus our attention turns toward magneto-optics. Wait a minute, what's this I hear? Readers saying, "Ken, sure this is all well and good, but the NED disc costs as much as a Porsche, CD-WO is just a tentative standard, Tandy is at least 18 months away, and I can't even pronounce magneto-optics. For now, I'll just stick with my tape recorder, thank you very much. Ken, wake up and smell the coffee—optical recording is just not a realistic alternative for us studio types."

Well, I can understand those arguments and that attitude. But what if I described a fully recordable/erasable optical disc drive, storing 1 gigabyte in a removable cartridge, available today, costing \$2,500? I'll bet that would interest you. But, oh ye of little faith, I think I'll wait until next month to tell you about it. That'll give me plenty of time to buy stock in this particular company. ■

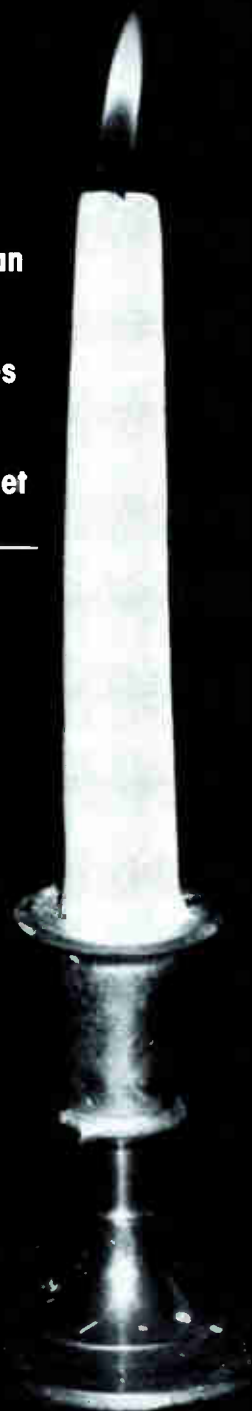
Ken Pohlmann is an author (Principles of Digital Audio, Compact Disc Handbook), educator (assistant professor of music, program director of music engineering at University of Miami), inventor (designed and built real-time computer music systems, aural lab testing devices) and quasimanical motorcyclist.

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Director Bertrand Tavernier with composer Ron Carter

by Nicholas Pasquariello

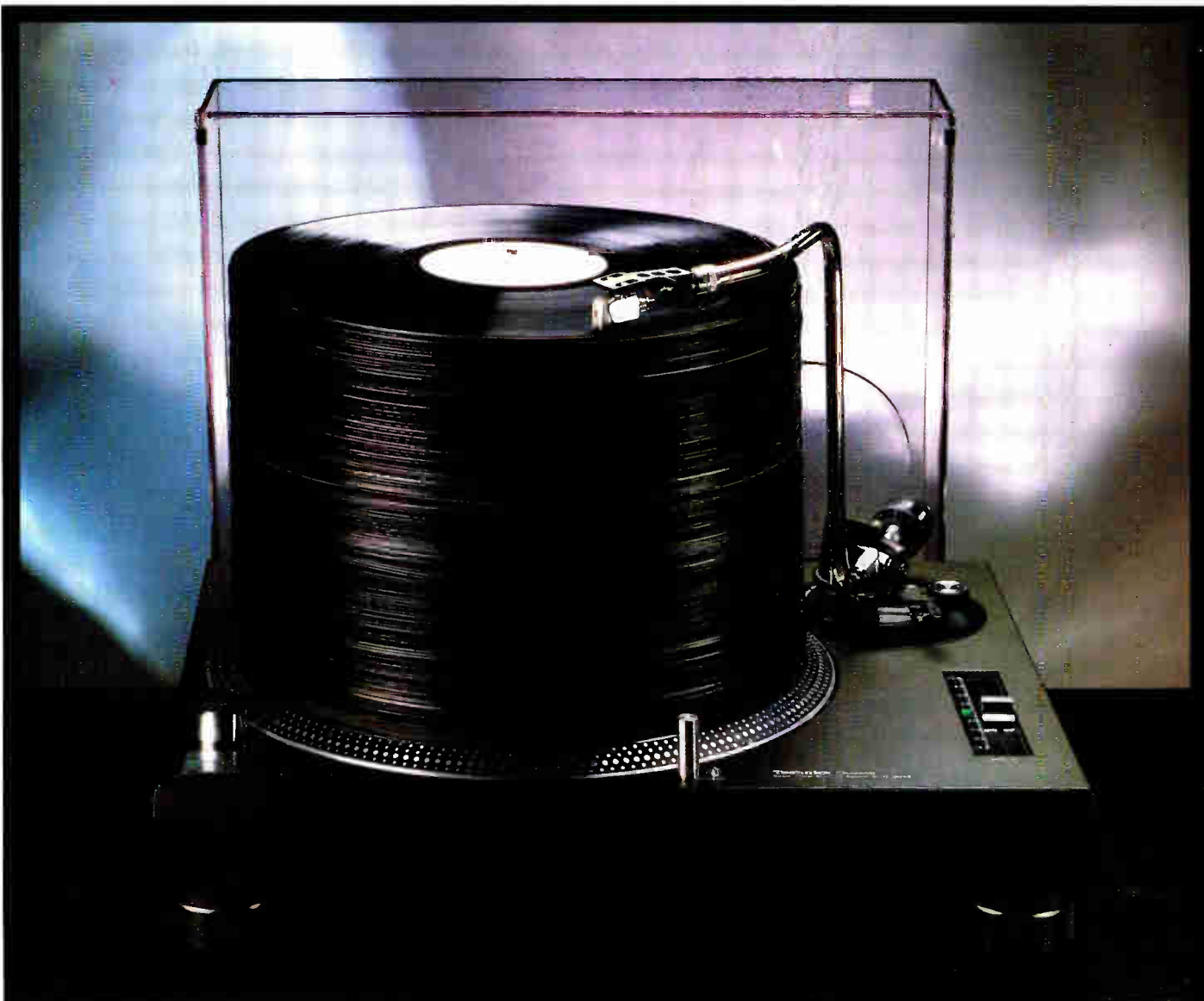
hough he is best known for his exquisite visual imagination and provocative film subjects, French director Bertrand Tavernier regards the creation of music tracks to be a vital part of the filmmaking process. As he showed in his beautiful, impressionistic *A Sunday in the Country* (1983) and his jazz homage *Round Midnight* (1985),

Tavernier has an acute sense of how to use music to color the moods of his films. As a rule, he starts to take notes on musical concepts for his films during the screenwriting phase of pre-production—well before the composer generally joins the creative team. “For me, the music is not an illustration of the film,” he says. “It’s dreaming around the film.”

Tavernier’s most recent film is *Beatrice*, a realistic tale of a mad, defeated medieval lord who tyrannizes his wife, son, daughter (Beatrice) and castle subjects. Because of its stark depictions of incest and generally bleak tone, *Beatrice* has stirred considerable controversy. Yet the film is never exploitative, and at its heart is a film about faith and spiritual crisis, not the rigors of life in the Middle Ages.

For the haunting, occasionally abstract music that accompanies the film’s striking visuals, Tavernier hired jazz bassist/composer Ron Carter, who had appeared as a musician in *Round Midnight*. To get a sense of the story, Carter (who has played music with everyone from Miles Davis to Wes Montgomery to Sonny Rollins) read an early draft of the script of *Beatrice*, “But I was a little embarrassed because it’s really kind of out there for me,” the soft-spoken musician says. “I’m a lot more conservative than that.” Next, he did a tremendous amount of book and interview research into commonly used musical instruments of the period (sackbutt, viele, hurdy-gurdy, recorders) so that he could use them throughout the 48 minutes of music





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the film needed. On top of that, he wrote some typically inspired music for the bass, and also used an early 20th-century art song by Lily Boulanger called "Pie Jesu" as a jumping-off point for some of his original music. (That song, a favorite of Tavernier's for years, also appears in the film.)

Mix spoke with both Tavernier and Carter about the film and its music.

Bertrand Tavernier: The Director's Vision

Mix: *Beatrice* is a very brutal film.

Tavernier: A lot of people find it that way. For me, it's a mystical film but it's brutal because the period is brutal. For the people of the time it's not brutal: when they see a woman [in the film] killing a baby in the snow, nobody reacts, because that was part of daily life. Maybe that's too difficult for a modern audience to get. An audience may need to have a go-between. But we wanted to get rid of something which is very bad in a lot of period and historical films: the fact that characters most of the time are speaking to explain things to a modern audience.

Mix: However, the music of *Beatrice* is modern music. Some of it reminded

me of Schoenberg. Were you attempting to make the period more accessible to the audience by using modern music?

Tavernier: No, because it's full of percussion. I think a lot of people don't find it easy; they find it violent. When you do a film about the 18th century, why use 18th-century music? Sometimes it's a little bit too arty or too easy. I wanted an interpretation of that kind of music. I wanted somebody who was going to dream around that music. If I'd been very, very faithful [to the Medieval period] I'd never have used Lily Boulanger, which was [composed in] 1918, and who composed something closer to [Gabriel] Faure than to the religious music of the period. It might have been more accessible if I had used the music of the time because it's a very lyrical, easy, beautiful music. I wanted music which was going to fit the feeling of the character and the theme. For me, the music is not an illustration of the film; it's dreaming around the film. I'm very, very proud of Ron's work. It's something which is quite new and interesting; which is again proving that the jazz musician can do things which are beyond his

range.

Mix: Is part of the purpose of the music to convey the spirituality of the Medieval period?

Tavernier: Yes, of course. And I don't know if Ron is religious; we never spoke of that. But I think he got that immediately in the movie, and he got the beauty of Beatrice.

Mix: Why did you use modern music to contrast with a very realistic, medieval story?

Tavernier: I don't know. I don't think the film is only a period film and maybe that's why I used that music. It's as if Ron was building a bridge and telling the audience that this is not only a story about a girl in the 14th century, it's a story about the human soul today.

Mix: How much of the music and dialog was recorded live?

Tavernier: Whenever you see musicians performing in the film, they were recorded live. I love to record live on the set because very often in a film you can see that the musicians, when they are dubbed or post-synched, don't play the note you're hearing. So whenever I have musicians in the image I always record live.

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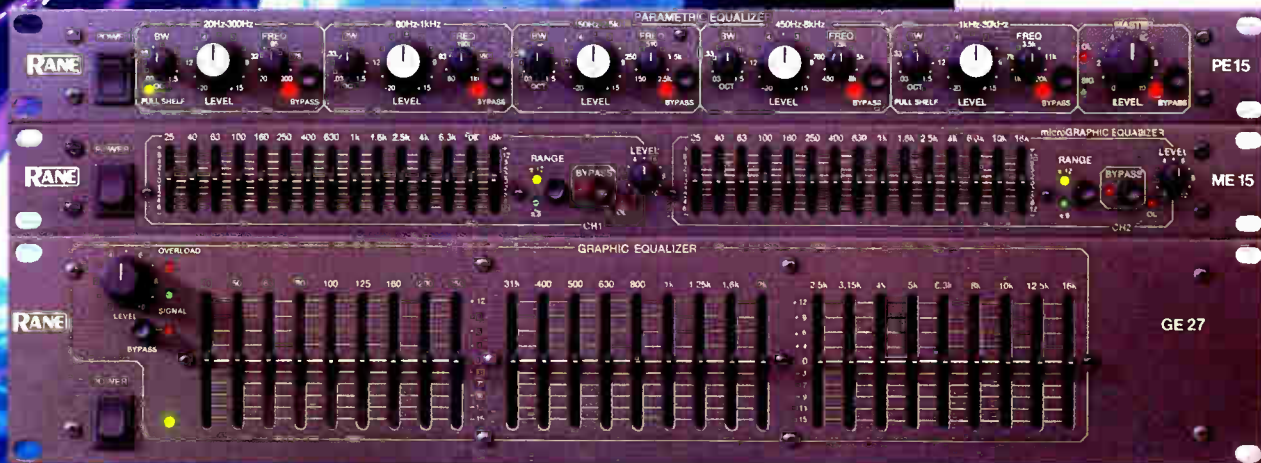


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ed live. In addition we added many effects. For instance, my sound engineer, Michel Desrois, got about 50 different kinds of winds in that castle where we were shooting. So we sometimes mixed different kinds of winds with the winds we had already on the live soundtrack. Desrois' god is Jim Webb, who worked with Robert Altman at Lion's Gate. He likes to record more than one track at a time while shooting on the set. It's as if he was mixing during the shooting. Desrois would love to have 18 tracks on the set at one time.

Mix: Was *Beatrice* mixed in Paris?

Tavernier: Yes, like *Round Midnight*.

I try to work a lot on the sound. I love to work on the sound—to get sound which is live, brutal and violent. We added a lot of things to the original soundtrack that's part of the 5% or 10% [not recorded during filming]: all of the birds and dogs. We were not pleased with the sounds of the dogs and birds that we had, which were recorded in France. We decided there were many more rapacious sounding birds during the Middle Ages; so we used all the bird sounds which we recorded when we were doing *Coup de Torchon* in Senegal. The African birds and dogs make much more violent sounds.

Ron Carter:

The Composer's Challenge

Mix: Did you participate in the recording of the score in Paris?

Carter: Yes. They wanted to receive the score before I got there, so I sent it a week before I arrived so the musicians could practice their parts. On the day I arrived in Paris, I got there at 9:30 in the morning and we started recording the music at 11:00. By 7:00 we had recorded all but three cues.

Mix: This was synched to the picture?

Carter: No, all timed. They put it to the picture after I left.

Mix: Was there any significant change from the time of your recording until the final mix?

Carter: I made some wild percussion sounds at random: two seconds of wind chimes, three seconds of wood block, five seconds of cymbals. Other than one change, the final score was just as Tavernier and I had discussed it at the viewing of the rough cut.

Mix: Did you participate in the mix?

Carter: No. When I left Paris, I left knowing I had recorded all the music I had written.



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Mix: How did you take notes during the screening of the rough cut?

Carter: I had a notebook, a very small flashlight and a stop watch. I would make notations: girl near tree, start the stop watch, and stop it where I thought the scene stopped, ten seconds. My notation would be: wind chimes and alto flute. And I would do that for each of the cues in the rough cut.

Mix: How did you decide which scenes you wanted to put music under?

Carter: Just how they struck me in the movie. Tavernier didn't suggest where the music should go. For example, the opening scene shows soldiers going

off to war: a very majestic scene, where a priest blesses the soldiers. So I indicated a sackbutt, alto recorder, percussion and string bass to give a full sound with this very open air and only four or five instruments. I make that decision then when I see the picture for the first time. I don't see it three or four times to come up with different points of view; I trust my instinct. My view is that the music was never intended to be the dominant element in the movie; the music was intended to always underpin or underscore or enhance in some form or fashion—perhaps in direct contrast to the image. When the

father's chasing the son. During that scene I used some sparse percussion. It could have been done a lot of ways, perhaps, but it seemed to me, given the open air and the various cuts from the horses and the riders and the son stumbling through the bush, some kind of sparse and varied percussion sound would enhance this level of anxiety and tension. So rather than use long notes I used some small percussive sounds to give this different texture to each image on the screen.

Mix: How did you distinguish between scenes that you felt needed music and others that you felt didn't need music?

Carter: This wasn't a romantic picture, per se. So right away I discount any kind of lush, multi-harmonic, emotional sound. That was totally out of the question based on the script I had read. So with the mentality of the 14th century and the limited instruments available to them at that time, I have to look for scenes that not only demand music but demand music with these limited instruments. These instruments couldn't play many notes because they were monochromatic: you couldn't play thirds and fourths at one time, because they weren't to that stage of development yet. I also didn't want to get involved in overdubbing, because that wasn't the sound of the time being portrayed in the movie. My challenge was to not think like a 1988 person but to think like a 1408 person.

Mix: How would you compare the task of composing for a jazz ensemble and composing for an ensemble of medieval musical instruments?

Carter: The difference is, with a jazz score you don't need to write so much because good jazz players have a sense of what you want. And because the language itself is so nebulous—it's hard to write a real jazz phrase because of inflections that are really difficult to notate rhythmically—most jazz players will sense what the phrase will sound like and will interpret it for you. It takes a lot of weight off the composer to write specifically what he wants, because guys will interpret for him what he wants.

Mix: Are you saying it's a lot easier to compose a jazz score?

Carter: Oh yeah, there's nothing to that, man. I do it every night when I make the gigs. ■

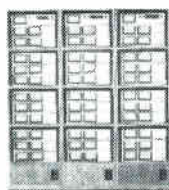
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by Mark Herman

SOUND REINFORCEMENT NEWS

A

ll the major sound reinforcement companies in the United States reported a strong summer touring season in North America and Europe, and most expect to be operating full steam ahead through the fall. Regional audio companies described the same picture: lots of work. From country acts at county fairs to the glitzy heavy metal bands on mega tours, the live audio industry is enjoying another busy year.

Maryland

Sound Industries has certainly become a major player in the national and international sound reinforcement tour field. According to **Ronnie Smith**, "MSI is very busy this summer; we've had 14 systems out at once. Last year was a banner year for us, and from the look of things we expect to exceed that this year." When asked about MSI's increased involvement in international tours, Smith replied, "The merger and usage of England's **Britannia Row Productions** with MSI has tremendously helped our international presence. Our P.A. systems have been in the UK four years now. People are becoming aware that we are capable of providing the exact same P.A. for touring both North America and Europe. Clients seem to like the consistency. The union of MSI/Britannia Row has been very

successful."

This is what MSI has been doing lately: **Whitney Houston** finished her tour of Europe. She is headed for the Orient and Australia, with a complete P.A. being sent by ship. . . **Pink Floyd** worked stadium shows in Europe and headed back to the U.S. for the final dates of their blockbuster world tour. After a show at Giants' Stadium, MSI transported the P.A. overnight to France via plane for a show the following day. While in France they performed at the famous **Versailles Palace** . . . **Daryl Hall & John Oates** (see "On the Road") are out on a tour of North America that started in June and runs through mid-September. The duo will then work Japan in October . . . **Patti LaBelle** was in Japan, while **Peter Allen** stayed in America. . . **Earth Wind & Fire** was a top act on

Aerosmith's setup, featuring Showco's Prism system at Reunion Arena in Dallas.



Budweiser's big Superfest tour. MSI supplied equipment and personnel for EW&F only. Virtuoso engineer **Mark Smith** mixed house. . . New account **Gloria Estefan & Miami Sound Machine** is on tour. . . Former Go-Go **Belinda Carlisle** started another tour, as did **Dan Fogelberg**. . . **Roberta Flack** played sporadic dates. . . **Crosby Stills & Nash** began touring in

early August for a couple of months . . . MSI provided the P.A. for the **Republican National Convention** held in August at the Superdome in New Orleans. A large **JBL Concert Series** P.A. was purchased by MSI for the event. **Best Audio** was responsible for the operation of the system . . . Recent equipment purchases include the addition of four new Ramsa

WR-S840 40x18 monitor consoles.

Electrotec had six sound systems out in America, with **Alabama**, **Randy Travis**, **Rod Stewart** (see "On the Road"), **Icehouse**, **Def Leppard** and **Barry Manilow**, and one in Europe with **Bros**—a hot new act doing well in England. Director of marketing **Mike Renault** said, "Basically we are booked up through the

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
Debbie Gibson Ultra Sound July-Sept U.S.	Gamble HC 40x16x2 --- TAC Scorpion 40x12 --- Meyer	32 Meyer MSL-3 --- 12 Meyer 650R2 Meyer UM-1, UPA, MSL-3	Crest 4001 --- Crest 4001 Crest 3001	Steve Botting (H) Matt Haasch (M) Jim Bochenek
D. Hall & J. Oates Maryland Sound Ind. June-Sept N. America October Japan	Yamaha PM3000 40x8x2 Yamaha PM3000 40x8x2 Ramsa RW-S840 40x18 --- MSI HS 301	24 MS-12 24 MS-12B 6 Meyer 650R2 MS 2x12, 2x15, MS SF	Ramsa WP9220 SAE P500 Crest 8001 Crest 3501	Randy Siegmeister (H) Jack McCue (M) Dave Callahan George Schwartz
Robert Palmer Showco September N. America	Yamaha PM3000 40x8x2 --- Harrison SM-5 32x16 --- Showco	32 Prism (8 Columns) --- 8 Prism Subwoofer Showco 100, 200, 300 & 400	Crown PSA2, MT1200 --- Crown MA2400 Crown MT1200	Bruce Jones (B,H) Randy Piotroski (M) David Conyers
Robert Plant Clair Brothers May-July N. America	Yamaha PM3000 32x8x2 Yamaha PM3000 32x8x2 Harrison SM-5 32x16 --- Clair Custom	56 Clair S-4 --- --- Clair Custom	Carver 2.0 --- --- Carver 2.0	Clive Franks (B,H) Dave Skaff (M) Joe Ravitch
Judas Priest Tasco July-Sept N. America	Midas Pro 40 split 60x12x2 & 20 ch Midas Soundcraft Series 4 40x16x2 --- SG Engineering	96 Harwell (32 stacks) --- 8 Meyer 650R2 Tasco Wedges 2x12, 2x15	Crown DCA, BGW 750 --- BGW 750 Crown DCA, BGW 750	Gordon Patterson (H) John Roden (M) Will Roberts Jeff Dunne Harry Netti
Rod Stewart Electrotec July-Nov N. America	Soundcraft Series 4 40x16x2 Yamaha PM1800 Soundcraft Series 4 40x16 Soundcraft 800B BSS 360	72 Lab Q --- --- Electrotec Floor Wedge	Crown MA 1200LX --- --- JBL 6233, UREI 6400	John Godenzi (H) Dave Bryson (M) Ted Leamy Chris East Russel Fischer
George Thorogood Schubert Systems Group July-August U.S.	Gamble HC 40x16x2 --- Gamble SC 32x16 --- SSG Custom	40 SSG Steradian --- 16 SSG Sub 218 Meyer UM-1 SSG Steradian	Crest 8001 --- Crest 8001 Carver PM 1.5	Michael Briggs (H) Kevin Korecky (M) Gary Whitelock

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summer. All our systems are out." . . . Rod Stewart's international tour started in early June and will continue to play North America through late November before traveling to Europe and beyond. Stewart's tour will carry an all new monitor system that was designed specifically for him by Electrotec. . . . Another client with a new custom monitor rig is pop star Barry Manilow. Back on the circuit after a three-month break, Manilow is using Electrotec's new 2x12 wedges for monitors. . . . Electrotec supplied technicians for **Foreigner** dates in Europe.

From Dallas, **Showco** reported that their summer calendar was filled to the brim. **Wil Sharpe** observed, "It is extremely busy in the U.S. now. We've had to turn tours away. Showco is now fielding 14 tours at a time. It is very busy in Europe as well." . . . Showco has Prism speaker systems out with **Eric Clapton**, **James Taylor**, and **George Michael**. Michael's tour was interrupted for unexpected surgery on the singer's vocal cords. . . . **Robert Palmer** (see "On the Road"), who started his tour up in Canada, will carry a smaller-sized P.A. with eight Prism columns of four cabinets each for his tour. Sharpe commented on Showco's speakers, "We feel the new Prism systems help attract clients. Currently we are building 16 more Prism columns. Every time a new main system is built, an additional monitor rig is manufactured also." . . . The Lone Star State's largest sound company had other systems out with **Aerosmith**, **Linda Ronstadt**, **Lynyrd Skynyrd**, **Willie Nelson**, the **Beach Boys** (who use two separate systems), **Dwight Yoakam**, the **Moody Blues** and **The Church**. . . . Crew only was supplied for **Kiss**, **James Taylor** in Europe, and **Barbara Mandrell**. . . . Other work was with **Mary Kay Cosmetics**, **Projects West**, and some outdoor dates with **John Cougar Mellencamp**.

Clair Brothers did their patriotic part and helped out at the **Gettysburg National Military Park** for the 125th anniversary of the battle of Gettysburg. A large outdoor system was required for the celebration, which featured mock battles and live entertainment for an estimated 50,000 visitors in early July. . . . Discussing the business end of things for this year, Clair's **Greg Hall** said, "The touring industry seems

to be very strong again this year. The pattern is similar to the past two years—a busy summer season feeding the fall tours." . . . Here's a quick peek at what some of the numerous Clair acts were doing: **Michael Jackson** played in European stadiums and plans to return to America in the fall . . . **Julio Iglesias** finished the American part of his international tour before heading to Europe. . . . Vocalist **Billy Ocean** was on a shed-sized tour. . . . **Kenny Rogers'** ongoing tour keeps on trucking. . . . **Robert Plant** (see "On the Road") will be out with

independent engineer **Clive Franks** mixing house. . . . **Sting's** tour did sheds across the U.S. in July and August. . . . September will see Sting join **Peter Gabriel**, **Bruce Springsteen** and others for **Amnesty International's** five-continent "Human Rights Now" tour that begins in London. Over a six-week span it will stop at 20 cities in Europe, Africa, Asia and North and South America. Clair Bros. will supply the universal P.A. equipment. Additional P.A. equipment support for the stadium-sized shows will undoubtedly be handled by many sound compa-



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nies worldwide... **Bruce Springsteen's** "Tunnel of Love" tour played European stadiums through August, with **Bruce Jackson** mixing house... **Elton John** will be starting his North American tour this September... **Kenny Loggins'** tour covers August, September and October... **Amy Grant** is starting a year-long road project.

Pro Media has left San Francisco and moved across the Bay to a 9,500-sq. ft. building in El Sobrante. Spokesperson **Debra Kay** noted that Pro Media continued to be active in spite of the move: they used a full Meyer speaker sound system for **Luciano Pavarotti** at Detroit's Joe Louis Arena in June... Continued work on an installation for the **Anchorage Performing Arts Center** up in Anchorage, Alaska... Provided Meyer P.A. in SF's Stern Grove park for ten Sunday outdoor dates that included opera, symphony, choir and jazz performances... Did sound for a production of *Aida* at **Olympic Stadium** in Montreal, with four flown sections of huge Meyer MSL10 stadium cabinets... Furnished the **Andy Williams** monitor mix and installed a permanent JBL Concert Series main P.A. system at the hard-to-mix **Concord Pavilion** in Concord, California... Pro Media is now in the process of installing a distributed P.A. system with 205 JBL-loaded cabinets at San Francisco's **Candlestick Park**. Since yours truly is a holder of season tickets for 49er football and Giants baseball games, this is welcome news. In the past, Candlestick's infamous wind, combined with the previous P.A. system, often resulted in less than adequate sound.

Does your console need a check-up?... **TLM Electronics** in Pleasantville, NH, specializes in professional sound equipment repair. Owner **Tony Marra** is known for his skill in the testing, repair and restoration of Soundcraft, Midas, Yamaha and other sound reinforcement consoles. An Audio Precision System One, running off an IBM PC, is used for diagnostic testing and charting. Recent work includes a complete overhaul on two Midas consoles for **TD Audio**. NBC had been using the mixers for *Saturday Night Live* television episodes over the past several seasons. TLM is factory-licensed for BSS, Yamaha, Ramsa, Biamp, Carver Pro, Neve, Fostex, Pana-

sonic Industrial and Trident product repair.

Good news! **Schubert Systems Group** finally got back their sound system that had been held up by the Nigerian government and airline company for months. Due to a promoter's unpaid bill, the gear was confiscated at the end of the financially troubled "Sun-splash '88" tour of Africa. SSG has been touring with **Bruce Hornsby & the Range**, **George Thorogood** (see "On the Road"), **Chick Corea** and **David Sanborn**. Highly acclaimed engineer **Michael Briggs** is now mixing house for George Thorogood... **Bobby Hickey** is mixing Hornsby.

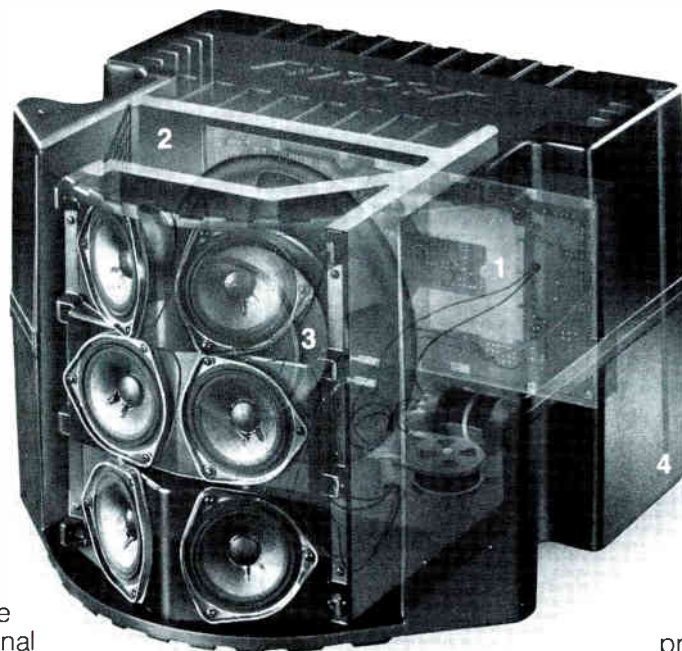
Bits and Pieces: Ultra Sound has tours out with **Bob Dylan**, the **Grateful Dead** and teen queen **Debbie Gibson** (see "On the Road")... The huge **Monsters of Rock** tour reportedly used up to 51 trucks to transport lighting, stage and audio equipment. **Audio Analysts** is providing sound reinforcement... Sound company **Tasco** is currently doing the **Whitesnake**, **Judas Priest** (see "On the Road") and **David Lee Roth** tours.

Capitol Sound is located about ten miles outside of Washington, D.C., in Springfield, Virginia. Two 40-channel Yamaha PM3000 consoles, 26 Meyer MSL3s and ten Meyer 650R2 subs powered by Crest 4001 amplifiers comprise Capitol's main P.A. Meyer monitors powered by Crest 3501 and 4001 amplifiers, along with a Midas Pro40 32x12 monitor console, complete the system. According to owner **Jeff Schwartz**, "Recently we provided Ultra Sound with 20 MSL3s and a PM3000 for George Thorogood's spring tour. Soon after that, our gear went to Maryland Sound for some Pink Floyd dates, and then to Radio City Music Hall for the "Dirty Dancing" show. Ultra Sound then contracted some of it again for the Debbie Gibson tour. Meanwhile, we have been using our Meyer UPAs for the play, *Harlem Suites*, at the Warner Theater in D.C., and for many of the country acts that appear at the local county fairs in Maryland and Virginia"... Recent new equipment purchases include a couple of Meyer MSL3s, ten Meyer UPAs and a Yamaha PM3000 console.

North Hollywood's **Stanal Sound Ltd.** reported plenty of local area work with the L.A. Greek Theater and the Universal Amphitheater... Stanal just installed delay towers and a central

—CONTINUED ON PAGE 224

The Bose® Acoustimass® Professional Powered Speaker System



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by Philip De Lancie

DRAW

SECOND GENERATION CD MASTERING

Two and a half years ago, when Ken Pohlmann wrote up the Philips CD mastering system for *Mix* (see "Audio Applications" in the March 1986 issue), photoresist mastering was the only game in town for CDs. To derive the metal parts needed for the CD molds using photoresist systems involves three main phases of several steps each (see **Figs. 1** and **2**). Master preparation entails inspection and cleaning of a glass blank, which is then spin-coated with two layers (adhesive and photoresist) and bake-dried. The mastering itself begins with exposure of the glass master by a record laser in the master cutting machine. In the developing process, the exposed areas of the photoresist are eaten away, leaving pits that will reflect light differently from the surrounding "land area." The developed master is then vacuum-deposit metalized and is ready for the electro-

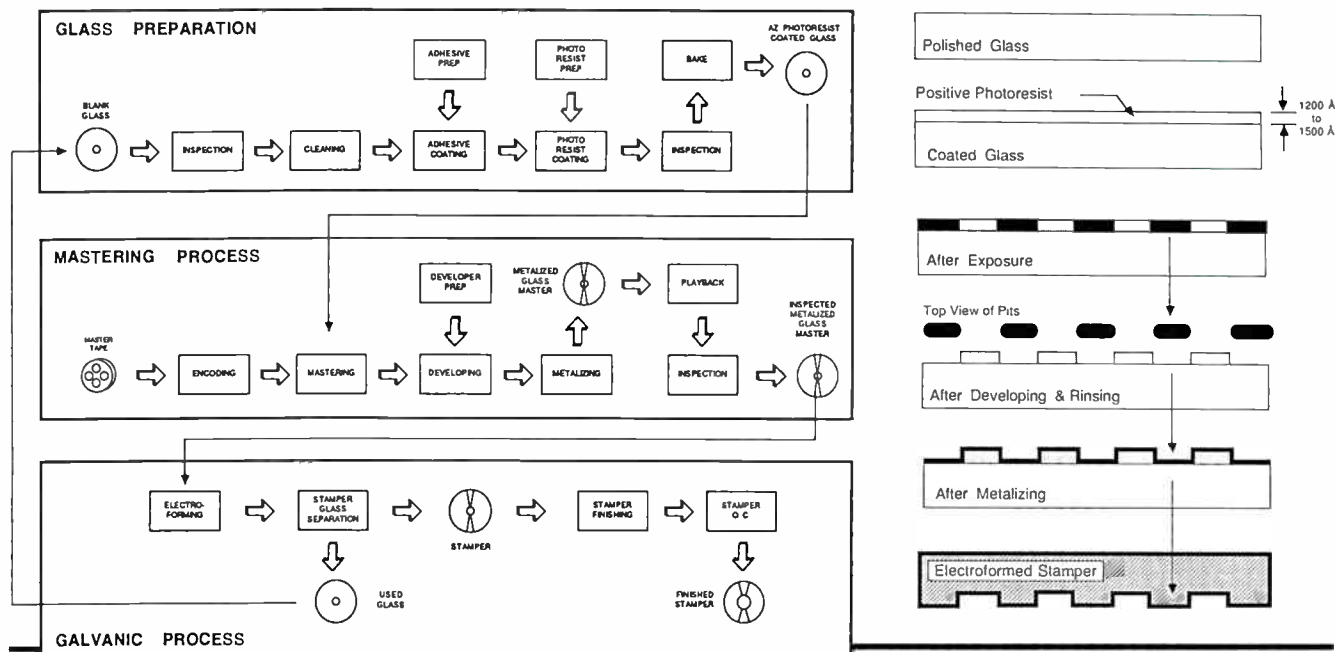
stamping for the injection molding machines which actually fabricate CDs.

While the photoresist process has served the industry well, the complexity and expense involved in both its setup and operation are formidable. And its lack of direct feedback during cutting means that qualitative analysis of the master must await completion of metalization. Teldec's Direct Metal Mastering for CD (see "After-Mix," December 1986) is one example of an alternative to photoresist that addresses these limitations. But while Teldec has substituted precision embossing for laser cutting, others have concentrated on advancing the existing optically based approach. Two Southern California companies are offering second generation CD master cutter processes in which photoresist is replaced by material that leaves the master readable as soon as it is exposed by the record laser. These Direct Read After

Figure 2:
Creation
and
transfer of
Pits in
Photoresist
mastering

Figure 1

The AZ Photoresist Mastering Process



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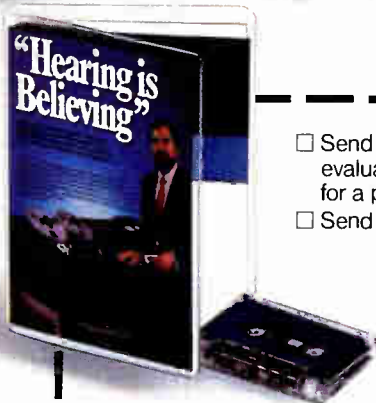


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AFTER · MIX

Write (DRAW) systems appear to offer significantly improved efficiency in terms of equipment, personnel, space and time requirements. To the operator of a CD mastering facility in today's competitive market, that can translate into lifesaving economic gains.

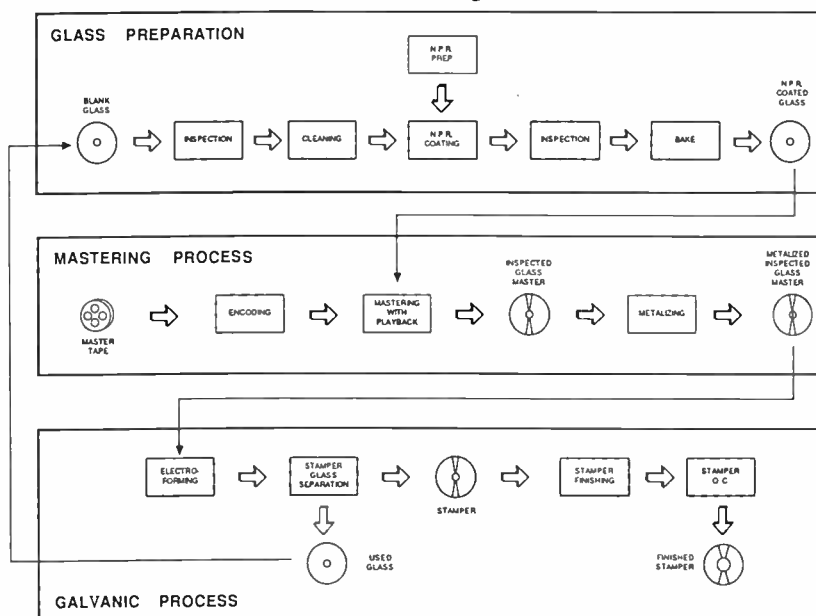
In the following interviews, the advantages of DRAW are set forth by Marvin Breyfogle, president of Digital Intelligence Systems Corporation (DISC) in Santa Ana, and Donald Hayes, vice president of Optical Disc Corporation (ODC) in Cerritos. A number of ODC's personnel have been involved in optical mastering for nearly two decades, from MCA's initial efforts in videodisc development through the setting of the LaserVision standard in the mid-'70s and the subsequent formation of DiscoVision Associates, a joint MCA/IBM venture. In 1982, when DiscoVision sold its manufacturing facilities to Pioneer and closed its R&D labs, a group of employees founded ODC to make and market a recordable videodisc. The company's Model 530 CD Master Recording System is an outgrowth of that effort. DISC, on the other hand, is primarily CD applications-oriented, though it, too, has employee experience in video-related photoresist mastering to call on as needed. DISC's DRAW mastering system, the CDM-1, has been under development since the firm started in 1986 and is now ready for sale.

Describe your company's DRAW approach to CD mastering and how it compares with existing photoresist systems.

Donald Hayes, ODC: In terms of the basic preparation of the glass, our NPR (Non Photo Resist) process (**Fig. 3**) remains similar to the conventional AZ photoresist mastering process. You have a blank piece of glass that you want to be very clean. When you spin-coat that piece of glass with the sensitive material you are going to record on, you want to be sure that the material will stick. Our material does not need an adhesion promoter, while the AZ photoresist does. Every time you add a step in a process, you have added to the potential for failure somewhere along the line. The fact that you don't need an adhesion promoter means that you have excluded the requirement for a station to perform an operation on this piece of glass. You also don't have to worry about preparing the adhesion promoter, since you don't use it. You are saving time and equipment. So with NPR, part of the coating process is eliminated, and therefore the handling and process requirements are streamlined. You are essentially left with a piece of glass with a spin-coating of sensitive material on it. Then you have the baking, which, though not always necessary, is commonly done to speed up the drying process. If you put the master on the shelf and let it sit there for a day, the same thing is accomplished. But if

Figure 3

The NPR Mastering Process



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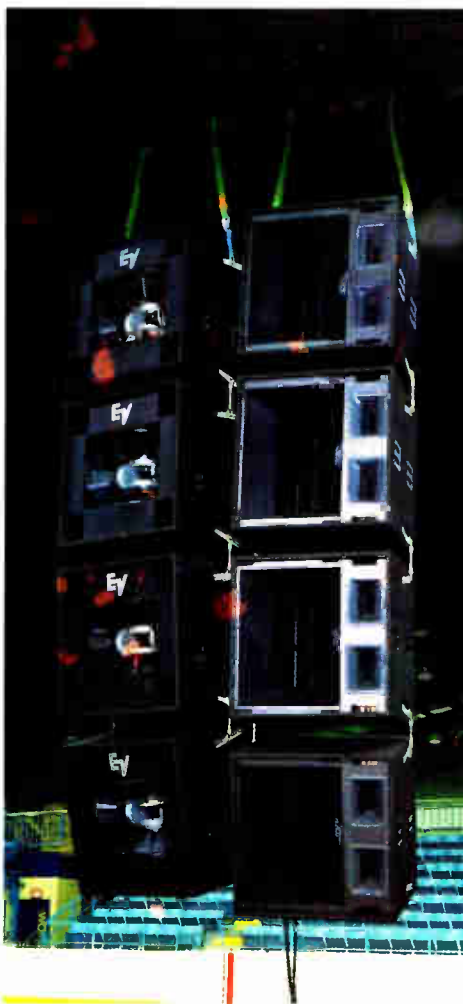
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AFTER · MIX

you are going directly from spin-coating into mastering you want to make sure that the material is ready.

The main difference between AZ photoresist and NPR is in the mastering phase. The Model 530 uses an air-cooled 50 MW argon ion record laser operating at a wavelength of 488 nanometers. It also has a 5 MW helium-neon playback laser (Fig. 4). When the coated material is evaporated by the record laser, you have a very low reflectivity from the glass—sufficient to allow the playback laser to read the disc. Having a situation in which you can directly read after writing means a number of things: First, you can use the playback signal to control the recording parameters while you are recording. You can feed the signal back to the optical path and optimize focus, and to the record laser control to optimize recording power. Also, you can take that recording signal and check it, comparing what you put in with what is actually being recorded on the disc.

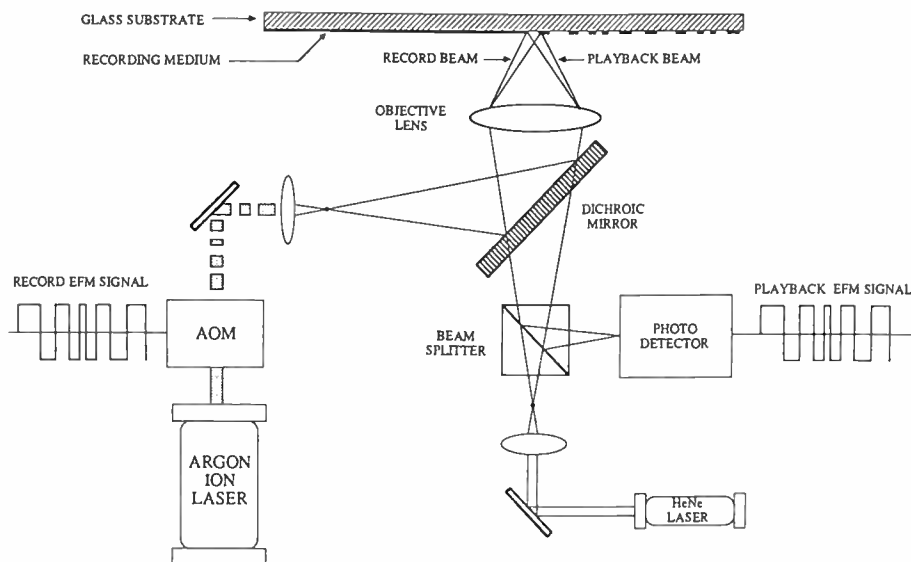
To understand how important these things are, it is helpful to look at what you have to do when mastering with the photoresist process, where you don't have the ability to use the playback signal during recording. To optimize the focus you have to go through a focus series of exposures on a blank at the beginning of each cutting day. You also have to do a power series in which, because it is a photo-

graphic process, you specify where you think the optimum focus and power are. So you run a series from low to high power and near to far focus. You take that piece of glass, develop it and typically metalize it, and only then can you determine what the best focus and power was. So it might take you a couple of hours just to find your optimum settings. And you will have to hold to those settings all day because you have that two hour feedback loop. One of the things you have to do to keep conditions from changing enough to alter your optimum settings is keep the temperature and humidity in your environment under very tight control. So you have to deal with a facilities requirement as well as a process requirement.

After you have gone through the setup process, you cut your first disc. But you have no way of knowing whether that disc is good or bad. You have to wait until after it is fully recorded, which, for cosmetic reasons, means the full 60 or 70 minutes to get to the outside edge, even if the program is only ten minutes long. Then you wait for the development, the metalizing and the playback in real time. Only then do you know if the disc is good. It's pretty much "open loop" or blind recording. You could spend a lot of time on something and then find out that it was a catastrophe. Whereas if you run into something bad on the disc while you are recording an NPR master, you can abort it right away, because

Figure 4

ODC MODEL 530 DRAW OPTICAL SYSTEM



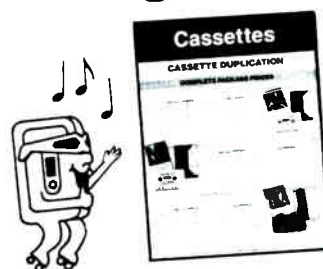
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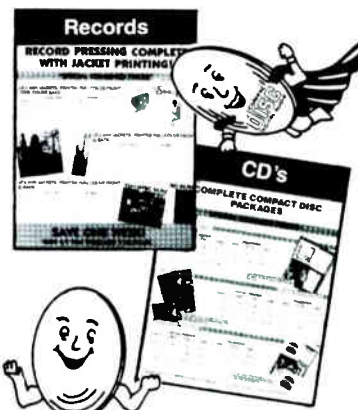
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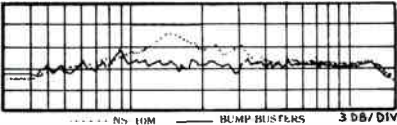
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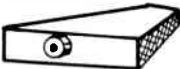
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you are checking it as you do it.

Another consideration during cutting is the laser power required to expose the two different materials. A record laser for AZ photoresist is generally ten to 40 times more powerful than our laser for NPR. So AZ lasers must be water-cooled, while ours is air-cooled. And high-powered, water-cooled lasers are susceptible to "laser blink": a very, very short interruption in what needs to be a continuous beam of light.

After cutting, you come to the developing step in the AZ process. It is very much like photography in that the end product is influenced by both the exposure and the development. The development is a critical step, and it requires very stringent controls. With NPR, we have eliminated development because the material is vaporized during exposure, and we feel that is very important. I already mentioned the advantages of eliminating steps in this kind of process, and that is especially beneficial here because the developing has such a strong influence on the outcome of the mastering process.

The next step is the metalizing of the master. That is a very common process, pretty much standard in both AZ and NPR. It is done in a vacuum chamber. We recommend that people metalize nickel onto their masters rather than silver. Both materials will do equally well as far as sticking to the sides of the pits. But when you have the kind of high yields and high confidence that come with being able to confirm the viability of your master while you are making it, you can go directly to making a stamper from your master. So, for small runs you can eliminate steps in the galvanic process. Now that is something that could be done no matter which mastering method is used. But if, as with AZ mastering, it takes you a lot longer to get a good master, you will not want to go through the process all over again if your stamper doesn't turn out. So you are likely to make stampers by going through the whole family of metal master and mothers. With NPR, if you need another stamper it could be more cost effective to make another master rather than having to go through the complete electroforming chain.

Marvin Breyfogle, DISC: We start with the glass that is used in mastering,

which our company markets to a number of replication facilities. Once you have glass that is cleaned and inspected, the next step is the proprietary spin-coating procedure. We call our formula DPF for Dry Process Formula. It is very stable, with a shelf life of more than 30 days. It is in a liquid form when applied, but it dries in about 15 seconds to one minute, depending on the thickness applied, which is normally very minimal. If you have the coating in a beaker or a flask, you could leave it open for a day or two without it drying out. But we apply it on the glass substrate so thin that it dries out as we are spinning it. The spin-coating takes less than five minutes, and then it can go directly on to the mastering system. There is no drying, curing or baking required.

The disc mastering system is a completely automated process that is controlled via a touchscreen. There is no operator interface needed for controlling the tape unit. The complexity of the mastering system might call for 100 knobs and buttons. But only the controls that you need at any particular time for the operation are presented on the touchscreen, so we don't require any long, complicated setup procedure. It is very simple and straightforward. All the necessary data is entered via the screen, including the subcode information. All the commands entered by the operator are stored in memory so that they can be retrieved at a later time for training or troubleshooting. If something goes wrong, you can see if operator error was involved.

Once mastering has begun, no operator interface is necessary. Two separate lasers are used, one to do the encoding and one to read back the data in real time. We are in the green spectrum on the cutting laser and the red spectrum on the playback. If you look at the photoresist method, your coating has photoemulsive properties associated with it. The laser exposes it, then you develop it and dry it. But with our dry process method, when the laser is focused on the coating you have a process of "ablation," where you are actually vaporizing the material and thus forming the pits in real time.

We have the ability to monitor several different signals, such as the playback signal from the master tape or the DRAW signal, so the operator can actually listen to what has been encoded

onto the master disc. You can A/B it to assure yourself of the quality. We have the ability to give real-time error analysis of Block Error Rate (BLER), BURST and uncorrectable errors, including

“Our system takes much less space than a photoresist installation, because there are fewer steps involved in dry process mastering.”

**Marvin Breyfogle,
president of Digital
Intelligence Systems
Corporation**

one-second or ten-second averaging. And because we are able to monitor the quality in real time, we have an abort level within the software. For instance, if a facility has a quality control standard such that anything above a BLER of ten is rejected, the system can sense when that standard is being

exceeded and either automatically abort or just advise the operator.

Once you have completed mastering, the master goes into vacuum deposition. You don't have the developing and drying stage that you have in the photoresist process. Then you have the electroforming part, which is pretty much the same as with the photoresist method.

What does the system require in terms of space and cleanliness for installation in the field?

Hayes: Space requirements are less than for AZ photoresist. You have fewer steps in the process, so you need fewer things. You also have fewer QC stations. Also, the equipment is smaller. Our machine has a slightly smaller footprint than a conventional cutter, though that is not a big difference.

As far as cleanliness, the cleaner the facility the better. There is not a strict requirement for the room to be terribly clean. We make master discs right here in our factory, which has no clean room. But at the same time, any area in which you are handling a master disc should be very clean. So, I don't think it is really proper to say you don't need a clean room when you are making pits half a micron in size, because dust and dirt is bigger than half a micron. Therefore, certainly when you are handling anything with parts that small, you should not have things that are bigger than that running around in the air that can attach themselves to it. But we think that the clean room requirements are less stringent than with AZ systems. We find that if you have clean areas for the handling of the disc itself, you can adequately fulfill the requirements for cleanliness. Actually, the hardest thing to keep clean in a clean room is the human body. But in any case, in any mastering facility, the cleaner the better.

Breyfogle: Our system takes much less space than a photoresist installation, because there are fewer steps involved in dry process mastering. You do not need to bake prior to mastering, and you don't need developing or drying equipment. Less equipment means less space.

The application of the coating needs to be done not in a clean room, but in a clean environment. Some time ago people in the industry got the impression that we needed big, expensive clean rooms. I feel that there are cer-

tain processes that need a clean environment, but that people are getting away from having large clean rooms. You can look at the monoline processes that people are using today for replication, like Shape's UDMs, that do not require big, expensive clean rooms. The master may be transported from the spin-coater to the master cutter in a clean cartridge if the two are not immediately adjacent. Then the mastering machine has its own self-contained clean air supply, operating in front of a clean bench. You are not really concerned about the air behind your back, because you are not processing anything there. In a small room you can easily put an array of clean benches along one wall that is putting clean air forward. The air that is coming out of the filters on the clean bench will ideally be class 10 or better. As long as the process is between the clean bench and the operator, it is in a clean environment.

Our machine is designed such that it could be installed in a recording studio-type mastering facility. For that type of environment we would actually ship them precoated glass to save them the expense of dealing with environmental considerations of coating. Most likely, the cutting machine with the clean bench would be in a separate room from the mastering engineer. Our system has a patch point that allows insertion of equipment like a Harmonia Mundi or digital reverb for real-time alterations that you associate with a mastering studio environment. We are also able to address the reference disc market that you have in a mastering studio that does lacquer mastering. People have a desire for a reference disc associated with the CD process. We have already made several for studios up in Hollywood.

How would you compare DRAW with the DMM approach to CD mastering?

Hayes: DMM is probably feasible, but there are a number of very precise physical/mechanical requirements on the system that would be very difficult to keep consistent from hour to hour and day to day when you are punching pieces into metal. I don't know if it would be possible to get such high yields as we have. We are always interested to see what is out there and what is going on, but we have yet to actually test any CDs that have been made via that process. So I can't technically

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assess what they are doing.

Breyfogle: I think the future lies more with optical technology than with a contact-type system like DMM. When I think of something contacting like that, I have concerns about wear and maintenance. That's the same reason why people want to get away from tapes and records—the wear and degradation of materials and equipment over time. With a non-contact process, the longevity and maintenance are vastly improved.

What might a prospective customer expect to pay to purchase and install DRAW CD mastering in a facility?

Hayes: When you are quoting numbers for a mastering facility to people, you can go anywhere from throwing a box in their direction to providing a whole facility. So that can go anywhere from half a million to a million dollars, which gets you from something that cuts the discs to something that outfits a whole production facility. It really depends on what the customer's requirements are. We typically prefer to

talk to the customer, find out his particular needs and base things on that, rather than just publishing a price list with cookbook prices in it.

Breyfogle: Our system price is currently \$595,000, based on the premise that we supply precoated glass master blanks. That includes the complete mastering system with installation and training for personnel. A quotation for the glass master preparation part would be available on request. It depends on the facility and the arrangement of the room.

How much success have you had in actually placing these systems in the field, and what effect has greater competition among replicators had on the marketability of your system?

Hayes: Currently we have four systems in the field recording commercial product. Until recently, we have not really looked at the European market. We have sold most of our products in the United States, and we are just getting started in understanding the requirements of the international marketplace.

As far as the competition issue, the

fact that there is a lot of replication available doesn't necessarily mean that there is a lot of mastering available, since there are many places that have been doing replication only. There are a lot of runs that don't require that many discs, so the master/replica ratio is not always one to 1 million. In fact, filling up excess replication capacity could mean accepting more small-run projects, which actually increases the demand for mastering capacity. That can also apply to CD-ROM and CD-I. We have observed that extensive capital outlays for replication facilities and for mastering facilities are being severely challenged. And that's why we feel that, with the higher yield and lower cost of our DRAW system, there is now an advantage to replicators who bring their mastering in-house.

Breyfogle: We have the one system that we have designed, which is in use in our facility in Santa Ana. As yet, we have no system operating out in the field. We just started using our system around the beginning of June to make masters for manufacturing commercial CD product. At that point we began

—CONTINUED ON PAGE 224



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1988 MIX DIRECTORY

SOUTHERN CALIFORNIA STUDIOS

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Sunset Sound Recorders recently installed a 64-channel Amek APC1000 Assignable Production Console in Studio 2. The new digitally controlled analog console is also equipped with Amek's Recall and Dynamic Reset system, in addition to GML moving-fader automation. Photo: Elizabeth Annas/Photosensations.

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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, or call our toll-free number 1-(800) 344-LIST. Completed questionnaires may be sent via our FAX line: (415) 653-5142.

Upcoming Directory Deadlines:

AES/New Audio, Video & Music Products: **August 15, 1988**

Tape & Disc Manufacturing, Pressing & Duplication: **September 6, 1988**

Northwest Studios: **October 4, 1988**

Southwest Studios: **November 3, 1988**

SOUND ACHIEVEMENT

TEC WINNER'S PROFILE



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Few have revolutionized studio design like Chips Davis, pioneer of LEDE® technology and designer of world-class rooms, from Granny's House in Reno to Sounds Interchange in Toronto. *Mix* readers acknowledged his achievements by voting him the 1987 Technical Excellence and Creativity Award for Acoustics/Studio Design. Chips Davis has mastered the blueprint for excellence:

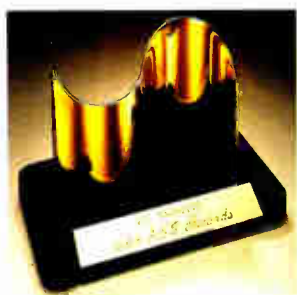


PHOTO BY C.R. KING

Defining stereo: "Stereo is not left/right. Stereo is left/right, front/back, up/down. It's a dimensional entity. The better you can hear in a space, the better you can mix dimensionally."

Control room philosophy: "There isn't yet a control room where we have an acoustic neutrality, a blank, white canvas. We've still got a canvas that's got a little color. The more neutral canvas we start with, the more we can do in our painting, and we don't have to cover up so much."

Advice to new designers: "Learn music — the artistic point of the music, learn to engineer, learn what you hear, and then learn the acoustics."

The TEC Awards: "The TEC Awards are something that has been long overdue. They help bring to the forefront the people who are on the cutting edge of our business and give them their just due."

Mix magazine: "Mix's database is invaluable to everyone in the business who's looking for information. It's a superb magazine. It has its own niche and is part of our industry."

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The 1988 TEC Awards will be held Nov. 3 in Los Angeles. Call (415) 653-3307 for more information.

SOUTHERN CALIFORNIA STUDIOS

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SOUTHERN CALIFORNIA

24+ TRACK

STUDIOS

[24+] **A & R RECORDING SERVICES;** also **REMOTE RECORDING;** 71906 Hwy. 111; Rancho Mirage, CA 92270; (619) 346-0075. Owner: Scott Seely. Studio Manager: Christie Crain.

[24+] **ADAMO'S RECORDING;** 16571 Higgins Circle; Huntington Beach, CA 92647; (714) 842-2668. Owner: Gerald Adamowicz. Studio Manager: Gerald Adamowicz

[24+] **ALPHA STUDIOS AUDIO/VIDEO;** 4720 W. Magnolia; Burbank, CA 91505; (818) 506-7443. Owner: Del Lewis, Gary Brandt, Denny Shaw. Studio Manager: Gary Brandt.

[24+] **AMERICAN VIDEO FACTORY;** 4150 Glencoe Ave.; Marina Del Rey, CA 90292; (213) 823-8622. Studio Manager: Jacqueline Marsall.

[24+] **AUDIO ACHIEVEMENTS RECORDING STUDIO;** also **REMOTE RECORDING;** 1327 Cabrillo Ave.; Torrance, CA 90501; (213) 533-9531. Owner: Audio Achievements, a Cal corp.. Studio Manager: Donovan

[24+] **AUDIO CYBERNETICS;** 22941 Ventura Blvd., Ste. H855; Woodland Hills, CA 91367; (818) 703-7102. Owner: Christopher Currell. Studio Manager: Michael Krygier. Engineers: Michael Krygier, Ron Fosnot. Dimensions: Control room 12 x 15. Mixing Consoles: TAC Matchless 36 x 36. Audio Recorders: New England Digital 8-track direct-to-disk, Otari MX-80 24-track, Synclavier 200-track digital music system, Tascam 32 2-track, Sony PCM-F1 2-track Beta, VHS, U-matic, digital audio tape machine. Cassette Recorders/Duplicators: Denon, Marantz. Synchronization Systems: Synclavier SMPTE Echo, Reverb, & Delay Systems: (3) Lexicon PCM70 rev 3.0, Yamaha REV7, (6) Yamaha SPX90, Yamaha REV5, Quantec room simulator w/Macintosh SE computer. Other Outboard Equipment: (4) Yamaha 1/3-octave stereo EQ, Yamaha compressor/limiter, Scholz Rockman sustainer and chorus, (2) BBE 802 Vocal Exciter. Microphones: AKG, Sennheiser, Beyr, Shure. Monitor Amplifiers: Crest, Hafler, Yamaha. Monitor Speakers: Wolcott Omnispheres, Visonik David 8001, Auratone Musical Instruments: Synclavier digital music system w/32 megabytes of RAM, 64 voices, SMPTE, music printing, 200 tracks, 304,000 note capacity, modem, 16 multi-channel outputs, mouse, track-ball, Mac II, Sony 19" color monitor, stereo sampling, 240 megabytes hard disk storage, 2 gigabytes optical disk storage, Yamaha DX7IID, (4) Yamaha TX81Z synth modules, (2) Yamaha TX802 synth modules, Yamaha KX88 controllers, Akai MX73 controllers, Macintosh SE w/Total Music and Performer, Roland Octapads, Mesa/Boogie Lab Series, Randall guitar amps, Marshall guitar amps, Kramer guitars, Synthaxe controller, Synclavier guitar synth, huge library of sounds and sound effects. Video Equipment: Sony VO-5800 U-matic 3/4" VTR, Panasonic VHS VTR, Sony Super Beta VTR, Proton 19" color monitor. Other: Denon compact disc player w/Sound Ideas CD library Volume 1 and 2, CD Holophonic library. Rates: Available upon request. Extras & Direction: Audio Cybernetics is owned by Christopher Currell (Michael Jackson Band), and possesses one of the largest Synclavier Digital Music Systems and Sound Libraries available

[24+] **AUDIO RESOURCE HONOLULU;** also **REMOTE RECORDING;** Century Center, 1750 Kalakaua; Honolulu, HI 96826; (808) 944-9089. Owner: Tony Hugar, Milan Bertosa. Studio Manager: Tony Hugar.

[24+] **THE AUDIO SUITE;** 1110A W. Glenoaks Blvd.; Glendale, CA 91202; (818) 241-9090. Owner: Eric Sclar. Studio Manager: Eric Sclar. Engineers: Eric Sclar, Larry Kornfeld. Dimensions: Studio 25 x 20, control room 12 x 15. Mixing Consoles: Custom 44-input. Audio Recorders: MCI JH-24, Fostex E2 2-track w/center time code, Revex A77 2-track. Cassette Recorders/Duplicators: Tascam 122B Noise Reduction Equipment: Dynaflex. Synchronization Systems: Fostex 4030/35, Southworth Jambbox/4 MIDI/SMPTE. Echo, Reverb, & Delay Systems: (2) Lexicon 200, Lexicon Super Prime Time w/MEO, Yamaha SPX90II, Roland SRV-2000. Other Outboard Equipment: dbx 165A comp/limiter, (4) Gain Brain, (4) Kepex, (2) Maxx Q. Microphones: (2) AKG 414, Sennheiser 421, Neumann KM84, (6) Shure SM57, (2) Shure SM58, (2) Audio-Technica ATM-63. Monitor Amplifiers: (2) Hafler 220,

(2) Phase Linear 700 B. Monitor Speakers: (2) JBL 4411, (2) JBL 4401. Musical Instruments: Martin D35, Ibanez Roadstar bass. Other MIDI Equipment: Macintosh Plus computer w/ MIDI paint, Performer, MIDImac, Soundesigner, DX lib/editor, E-mu Emax sampler, Yamaha RX5, Yamaha TX7, Yamaha KX88, Roland D-50, Roland MKS-20. Video Equipment: Sony VO-5850 w/address track. Rates: \$40/hr includes engineer and use of all instruments

[24+] **AUDIOWORKS/STARWORKS/FILM COMPLETION SERVICE, INC.;** 1017-1019 N. Cole Ave.; Ste. 2, 3, 4; Hollywood, CA 90038; (213) 463-4707; (213) 461-8658. Owner: F.C.S. Inc. Studio Manager: Chris Columby



BABY'O RECORDERS, INC.
Hollywood, CA

[24+] **BABY'O RECORDERS, INC.;** 6525 Sunset Blvd.; Hollywood, CA 90028; (213) 464-1330. Owner: Rafael Villafane, Richard Perrotta, Enrique Senker, Alfredo Diaz Ordaz. Studio Manager: Richard Perrotta. Engineers: Mark Stebbins, Glenn Kurtz, Nick Els, Frank Garli, Rick Clifford, Tom Nellen, Bruce Sugar, Hill Swimmer, Steve Sykes. Dimensions: Room 1: studio A 26 x 22 x 30, isolation booth 11 1/4 x 12 x 13, isolation booth 2 13 x 12 x 13, control room 19 5 x 18 5. Room 2: studio B 24 x 22 5 x 30, isolation booth 17 5 x 8 5 x 10, control room 19 5 x 18 5. Mixing Consoles: Neve Custom V Series 60 inputs w/Necam 96 automation, Studiomastrer 24 x 24, Hill 16 x 4. Audio Recorders: Studer A800 MkIII, Studer A800 MkII, Studer A80RC 1/2" and 1/4", Ampex ATR 4-track 1/2", Ampex ATR 2-track 1/2", Revex, Technics, Sony DAT. Cassette Recorders/Duplicators: Technics, Sony, Aiwa. Synchronization Systems: Lynx, Adams-Smith. Echo, Reverb, & Delay Systems: EMT 140, Lexicon PCM70, Lexicon 224X, AMS RMX-16, AMS 1580S, Eventide 949, Eventide 910, Lexicon Prime Time, Yamaha REV7, Yamaha SPX90, Publison America, Roland SDE-3000, Roland SRV-2000. Other Outboard Equipment: UREI 1176LN, dbx 160X, dbx 160, dbx 165, Orban 526A, Kepex II, Gain Brain II, Teletronix, LA-2A, Pultec, Drawmer, UREI 964, UREI 1122, Spectra Sonics 51. Microphones: Neumann, AKG, RCA, Sony, Sennheiser, Shure, Crown PZM, plus many choice tubes. Monitor Amplifiers: Perreaux, BGW, Crown, Marantz. Monitor Speakers: Augspurger, TAD w/White crossover and EQ, Tannoy SRM 10-8, Super Gold, Yamaha NS-10M, JBL 4311, JBL 4312, JBL 4430 (bi-amped), Auratone 5C, Auratone T6, ROR E3, Tannoy ARDEN 15" coaxial. Musical Instruments: Yamaha C7, Fender, Vox, Marshall, Sonor drum kit, Kurzweil 250, Roland D-50, Roland S-50, Sequential Circuits Prophet-5, Yamaha DX7, Yamaha MIDIRack, Ensoniq ESQM, Roland MKS-70, (2) Moog Minimoog, LinnDrum, E-mu SP-1200. Other MIDI Equipment: Macintosh Plus. Video Equipment: JVC 850U 3/4" Professional, Sony 2850-A 3/4", Mitsubishi 1/2" VHS, Panasonic 1/2" VHS. Rates: Please call for rates. Extras & Direction: Both studios have separate lounge areas, kitchens, bathrooms, cable TV and service phones. We

have accommodations for our out of town guests, and we have full production capability

BARRYTONE

Productions Inc.

BARRYTONE
Hollywood, CA

[24+] **BARRYTONE;** 5465 Santa Monica Blvd., #202; Hollywood, CA 90029; (213) 463-9557. Owner: Barrytone Productions, Inc. Studio Manager: James Barry. Terry Koeckritz. Engineers: Bobby Ley, Bob Kinsey. Dimensions: Studio 20 x 30, control room 22 x 15. Mixing Consoles: Mitsubishi Westar 28 x 28 w/sub grp faders, parametric, graphic and selectable EQ. Audio Recorders: Tascam ATR-80 24-track, Mitsubishi X-86 2-track digital w/electronic editor, Tascam ATR-60 2-track high speed (15-30 ips) and center SMPTE track. Cassette Recorders/Duplicators: (2) Nakamichi MR-2 Noise Reduction Equipment: (2) Dolby SR. Synchronization Systems: (2) Tascam ES-50, Tascam ES-51 controller. Echo, Reverb, & Delay Systems: Lexicon 224XL, Lexicon PCM70, (2) Yamaha SPX90II, Alesis XTC digital reverb. Other Outboard Equipment: Valley People GateX 4-ch. gate, (2) dbx 160 compressor/limiter, dbx 160X, BBE Vocal Processor, Symetrix 522 compressor/limiter, Aphex Type C Aural Exciter. Monitor Amplifiers: Yamaha PD2500 (control room), Yamaha P2150 (studio), Soundcraftsmen PM-860 (cue sends). Monitor Speakers: (2) UREI 811 custom design (control room), (2) Toa ME-302 studio, (2) Yamaha NS-10, (2) Auratone 5-C. Musical Instruments: Fairlight Series II, Kurzweil 250 w/Mac Attach and Macintosh SE, Yamaha CP70B electric grand piano, Roland JX-8P, Roland MSQ-700 sequencer, Roland TR-909 rhythm composer. Other MIDI Equipment: Macintosh SE w/Performer software. Video Equipment: JVC 600 U-matic, JVC HR-D55U VHS stereo deck, Sony PVM-2330 25" monitor, Sharp VHS camcorder, NEC CT-2015A 20" monitor/receiver. Other: Tascam CD-501 CD player, Sound Ideas CD sound effects library w/Foley, Technics SLP-1200 turntable w/Shure preamp and Stanton 681-EEE cartridge, FAX machine. Rates: By hour, day or week. Special rates for lock-outs and block bookings. Call and discuss your project. Extras & Direction: James Barry is a musician, producer and composer. His influence has created an environment of concern and understanding for your project. We care about your needs! Unlike many facilities, there is no extra charge for our X-86 digital 2-track recorder or Kurzweil 250 with Mac SE. Juices, soft drinks and "munchies" are always on hand free for your refreshment. Meal service is available at cost. The glass block windows in our studio provide natural light, complementing the natural plantings and refined contemporary look of pastels and oak. Our facility was designed for audio-to-video sweetening, music recording and mixing. Built acoustically correct by Doug Jones of Chicago, we are confident you will find it the finest sounding mixing room you have used! We offer complete music services, composition, scoring and arranging plus video lock-up. Please call, we welcome the opportunity to be of service to you

[24+] **BLUE CANYON RECORDERS;** 11616 Ventura Blvd.; Studio City, CA 91604; (818) 505-0755. Owner: Bad Boy Engineers: Jeff Goodman, Craig Doubet. Mixing Consoles: SSL 4056 G Series 56 x 32 in a Vincent Vann Heff-designed control room. Audio Recorders: Studer 800 MkIII 24-track, Studer 80 MkIV 24-track, Studer A820 2-track 1/2", Scully 280 2-track, Technics 1500 2-track. Cassette Recorders/Duplicators: (2) Yamaha 1000, Sony DAT. Synchronization Systems: (2) Lynx TimeLine. Echo, Reverb, & Delay Systems: Lexicon 480L, AMS RMX-16 reverb, (2) Lexicon PCM70, AMS 1580 6.4, (4) Roland SDE-3000, Lexicon Prime Time, (2) Yamaha SPX90, (3) Yamaha REV7, (2) Eventide 910 Harmonizer. Other Outboard Equipment: (2) Focusrite 1151+D EQ, (4) Massenburg 8200 EQ, (4) dbx 160X, (2) Inovonics 201 limiter, (2) UREI 1176, Marshall Time Modulator, TC Electronic spatial expander, (2) Orban EQ, (4) Kepex II. Monitor Speakers: (2) UREI 813B, (2) Yamaha NS-10M studio, (2) Tannoy Little Gold, (2) Auratone. Musical Instruments: Forat F-16, Yamaha DX7, Fender Rhodes. Rates: Call for rates

[24+] **BLUE MOON STUDIO:** 28205 Agoura Rd., Agoura Hills, CA 91301; (818) 889-8920. Owner: Joe & Gino Vannelli. Studio Manager: Diane Ricci

[24+] **BOSSA NOVA HOTEL:** 452 Newton St., San Fernando, CA 91340; (818) 898-1157. Owner: Bossa Nova Hotel, Inc. Studio Manager: Holly Martino. Engineers: Bud Rizzo, Hilary Bercovici, Frank La Rosa. Dimensions: Studio 18 x 7, control room 18 x 16. Mixing Consoles: Mitsubishi Superstar 52 x 32 w/CompuMix automation. Audio Recorders: Mitsubishi X-850 32-track digital, Otari MTR-90 24-track, Otari MX-5050 2-track reel-to-reel, Sony PCM-F1 2-track digital audio processor. Cassette Recorders/Duplicators: Awa Excelia digital audio tape deck, (2) Yamaha K1000 w/dbx Noise Reduction Equipment; (4) Kepex II TR804 noise gate, (2) dbx 904 noise gate. Echo, Reverb, & Delay Systems: AMS RMX 16 digital reverb, Publison America DHM-8982 digital delay w/pitch shift, Eventide signal processor, (2) Yamaha SPX90, Yamaha SPX90, Ibanez SDR-1000 digital reverb, Yamaha D1500 DDL, Roland DEP-5 digital effects processor. Other Outboard Equipment: Wolstein stereo imager, GML parametric EQ, (2) Sontec MEP-250A parametric EQ, Sontec DRC-202 compressor/limiter, (2) dbx 160X compressor/limiter, (2) dbx 902 de-esser, GML 2-ch mic preamp. Microphones: Neumann U47, AKG 414. Monitor Amplifiers: McIntosh MC2105 Solid State power amp, Perreaux 9000B power amp, Halfer 1505 Monitor Speakers: (2) Westlake BBSM-15, (2) Yamaha NS-10M (control room), (2) Yamaha NS-10M (studio). Musical Instruments: On request only. Linn 9000, Yamaha DX7, Yamaha TX8, Roland D-110, Akai S900, Roland RD-1000 MIDI piano, Emulator II, extensive sound library. Other MIDI Equipment: Macintosh Plus computer. Rates: Available upon request.

[24+] **WALLY BURR RECORDING:** 1126 Hollywood Way, Ste. 203, Burbank, CA 91505; (818) 845-0500. Owner: Wally Burr Studio Manager: Ellen Burr. Dimensions: Room 1 studio 20 x 32, control room 16 x 20. Room 2 studio 14 x 17, control room 12 x 17. Mixing Consoles: Quad Eight Coronado 32 x 24. Audio Recorders: 3M M79 24-track 2", 3M M79 4-track 1/2", (2) 3M M79 2-track 1/4", Fostex E-16 16-track 1/2", Fostex E-22 2-track 1/4" w/center-track time code. Noise Reduction Equipment: Dolby SR and Dolby A. Synchronization Systems: Q Lock and Fostex w/ADR and audio post capabilities. Echo, Reverb, & Delay Systems: Lexicon 224, SPX90. Other Outboard Equipment: Orban parametric equalizer, UREI "Little Dipper", Aphex Aural Exciter, (2) dbx limiters. Monitor Speakers: (2) UREI B13A, (4) JBL 4311. Video Equipment: (2) JVC CR850 3/4" decks. Other: 16-track pre-lease room for video/audio, post-production, music and effects editing etc. Emulator II. Extras & Direction: Wally Burr Recording has developed a reputation for being the place to do multiple voice recording and vocal overdubbing. The studio's two rooms have provided special facilities and expert engineering for hundreds of animated shows (CBS-TV's *The Muppet Babies*, NBC-TV's *Kissy Fur*, ABC-TV's *The Real Ghostbusters*, *The Littles*, *Little Wizards* as well as top syndicated series, including *G.I. Joe*, *Transformers*, *Jem*, *Inspector Gadget* and many others. Also, we supply post-production audio for both TV and film, including recent English language dubbing (ADR) and subsequent remixing of '988's three most celebrated foreign films - *Babette's Feast*, *Au Revoir Les Enfants* and *My Life as a Dog*.

[24+] **CAN-AM RECORDERS, INC.:** 18730 Oxnard St., Tarzana, CA 91356; (818) 342-2626. Owner: Can-Am Corp. Studio Manager: Larry A. Cummins. Engineers: Brian Malouf, Stan Kayayama, Jeff Poe. Dimensions: Room 1 studio 25 x 40, control room 20 x 25. Room 2 studio 30 x 40, control room 26 x 27. Mixing Consoles: SSL 4000E 52-in w/Total Recall and G Series computer. Audio Recorders: Studer A800 III 24-track, Studer A820 24-track, Studer A820 2-track, Ampex ATR-102 2-track. Cassette Recorders/Duplicators: Nakamichi, Yamaha. Noise Reduction Equipment: Dolby Synchronization Systems: Adams-Smith. Echo, Reverb, & Delay Systems: EMT 140, EMT 240, AMS RMX 16, AMS 1580S, Lexicon 224XL, Lexicon 480L, Lexicon PCM70, Yamaha REV5, Yamaha REV7, Yamaha SPX90, Roland SDE-3000, Lexicon PCM-42, Eventide Harmonizers, TC Electronic 2290. Other Outboard Equipment: Focusrite EQ and mic preamp, Massenburg EQ and mic preamp, Drawmer gates, Kepex gates, dbx de-essers/flangers. UREI 1176, UREI LA4, UREI LA2 limiters, dbx 160X, dbx 165 limiters. Microphones: Neumann, AKG, Sennheiser, Beyers, E-V, Shure, Crown PZM, Fostex, Sony, Audio-Technica, Superscope. Monitor Amplifiers: Crown, Yamaha, Technics. Monitor Speakers: JBL, Yamaha, E-V. Auraltone. Musical Instruments: Yamaha C7 grand piano.

[24+] **CAPITOL RECORDS STUDIOS:** 1750 N. Vine St., Hollywood, CA 90028; (213) 462-6252. Owner: Thorn-EMI. Studio Manager: Charles Comelli, Barbara Hein. Engineers: Coronel, Dixon, Doell, Doffelmyer, Jones, Ketterer, Minnich, Norberg, Paakkari, Ramos, Ranelucci, Sands, Schreyer, Traugott, Thomas, Walsh, Wersbeck. Dimensions: Room 1, studio 60 x 45, control room 15 x 20. Room 2 studio 33 x 31, control room 20 x 22. Room 3 studio 10 x 12, control room 18 x 22. Mixing Consoles: Neve 8068 32 x 16, Neve 8108 48 x 32, Quad Eight 32 x 16, Studer 900 12 x 4. (2) Sony 1105-K 8 x 2 digital, Sony MXP-2000. Audio Recorders: (3) Studer A800 24-track, Studer A80 24-track, (3) Studer A820 2-track, (8) Ampex ATR-100 2-1/4-track 1/4" and 1/2", (4) Sony BVU-800

SOUTHERN CALIFORNIA

24+ TRACK

STUDIOS



CAPITOL RECORDS STUDIOS
Hollywood, CA

2-track digital, (2) JVC 8200/BP90 2-track w/editor (proc.), (6) Sony DMR-4000 2-track. Cassette Recorders/Duplicators: Awa 660, Awa 770. Noise Reduction Equipment: Dolby, Dolby SR. Synchronization Systems: (2) Lynx, Q lock 3 10. Echo, Reverb, & Delay Systems: AMS digital delay, AMS reverb, (8) Live Echo chambers, EMT 250, (3) Yamaha REV7, (2) EMT 40 plates, (2) Roland Super Prime Time, (2) Roland 3000, Klark-Teknik analog delay, (2) Eventide 949, Eventide 910, Yamaha SPX90, TC Electronic 2290, Roland DEP-5. Other Outboard Equipment: Studio Technologies stereo simulator, Kepex 1, ITT parametric EQ, Trident parametric EQs, Neve 8078 EQs, dbx 900 de-esser, NTF-200 EQ for disc mastering, various tube and Solid State limiters, noise gates. Microphones: Sanken CU-41, (2) Neumann TLM-170, Neumann U47 FET, over 200 microphones of popular makes and models. Monitor Amplifiers: Halfer modified. Monitor Speakers: UREI. Amsourger, JBL 4320 custom alt 2 way, JBL 4425, all rooms tuned. Musical Instruments: Yamaha 9' concert grand, Steinway grand piano, Hammond B3. Other: Sony DAE-1100A digital editor, Harmonia Mundi digital processor, Yamaha F1 Beta and VHS deck, 601 digital processor, coprocessor, diglitcher. Rates: Studio A: day \$125/hr, night \$135/hr, studio B: day \$135/hr, night \$150/hr, studio C: day \$135/hr, night \$150/hr. Extras & Direction: We have added to our cutting system the NTP-200 transformerless program-mable EQ. This superb EQ is smooth and sweet and features undetectable switching noises. This allows us to make EQ changes mid-cut without noise. Zuma cutting system, digital editing and compact disc mastering. Facility tie-lines for inter-connecting studios. XDR cassette mastering.

[24+] **CARRERA RECORDING STUDIO:** 1504 Columbia, Ste. 3; Riverside, CA 92507; (714) 784-5777. Owner: Armi Atli, Tony Shepperd. FC Atli Studio Manager: Armi Atli, Tony Shepperd. Engineers: Tony Shepperd, independents welcome. Dimensions: Studio 26 x 30, control room 24 x 28. Mixing Consoles: Neve 8232 32 x 24 64 inputs analog. Audio Recorders: Sony JH-24 24-track, Otari MX-70 16-track, Sony PCM-2500 2-track, R-DAT, Otari 5050B 2-track. Cassette Recorders/Duplicators: (2) Nakamichi MR-2. Noise Reduction Equipment: Dolby SR. Synchronization Systems: Lynx TimeLine. Echo, Reverb, & Delay Systems: Lexicon 480L, (2) Lexicon PCM70, Yamaha REV7, (2) Yamaha SPX90. Other Outboard Equipment: (2) dbx 160X compressor/limiter, (4) Drawmer noise gates, UREI compressor limiters. Microphones: Neumann, TLM170, Neumann KM84, Neumann U87, AKG 414, AKG "The Tube," Shure SM57. Sennheiser 421. Monitor Amplifiers: HH Electronic V-500, (3) HH Electronic V-200. Monitor Speakers: Westlake BBSM-15, Yamaha NS-10M studio version, E-V Sentry 100. Auraltone. Musical Instruments: New England Digital Synclavier audio system, Moog Minimoog, Wendel Jr., Alesis HR-16, Steinway B grand, Yamaha TX802, Roland Octapad, Roland D-550. Video Equipment: Sony 5850 3/4" video, Sony 27" video monitor. Rates: Ten-hour day \$1,100, lockout, 24-track and Synclavier.

[24+] **CHAMELEON RECORDING STUDIOS:** 216 Chatsworth Dr., San Fernando, CA 91340; (818) 361-9232. Owner: Larry Gerber. Joe Branam. Studio Manager: Larry Michael Gerber. Dimensions: Room 1 studio 30 x 35, control room 26 x 20. Room 2 control room 15 x 20. Mixing Consoles: Trident Series 80 56 x 24, Electrodyne 24 x 16. Audio Recorders: Otari MTR-90II 24-track, Otari MX-80 24-track, Otari MTR-12

2-track 1/2" and 1/4" heads. Cassette Recorders/Duplicators: (3) Nakamichi MR-1, Nakamichi MR-2. Echo, Reverb, & Delay Systems: Lexicon 480L digital reverb, Lexicon 224 digital reverb, Lexicon PCM70 digital reverb/multi-effects processor, Lexicon PCM42 DDL, Lexicon PCM41 DDL, TC Electronic MDL-2290 DDL/sampler, Ibanez DM2000, live chamber. Other Outboard Equipment: (2) dbx 160 comp/limiter, (2) dbx 160X comp/limiter, (2) dbx 166 comp/limiter, UREI 1176 comp/limiter, Orban 536A de-esser 2-channel, (8) Drawmer DS-201 gate, (4) Aphex CX1 expander/gate (in rack), (3) Barcus-Berry parametric EQ, Eventide H910, (2) Aphex Type B Aural Exciter. Microphones: (2) Neumann U87, Neumann U47, AKG C-12 tube mic, (2) AKG 414, AKG D-112, (2) AKG 451, (2) Neumann KM84, E-V RE20, (6) Sennheiser 441, Shure SM57, Shure SM58, Shure SM56, Shure SM59, (2) Audio-Technica 33R. Monitor Amplifiers: Perreaux 9000B, Perreaux 3000, (2) BGW 250. Monitor Speakers: TAD main monitor system, (2) Tannoy Little Gold 12", (4) Yamaha NS-10, (2) Auraltone. Musical Instruments: Yamaha 9' concert grand w/MIDI, Gretsch 5-pc. drum set w/Tama hardware and Zildjian cymbals, Yamaha DX7IIDF, Sequential Circuits Prophet-2000, Sequential Circuits Prophet-5 (MIDI), Roland Juno-106, Casio CZ-1000, Linn 9000 (latest software, mods). Other: Simmons RDB-400 4-ch direct box. Rates: \$75-\$100/hr, call for block rates.

[24+] **CHEROKEE RECORDING STUDIOS:** 751 N. Fairfax Ave., Hollywood, CA 90046; (213) 653-3412. Owner: The Robbs. Studio Manager: Susan Donaldson.

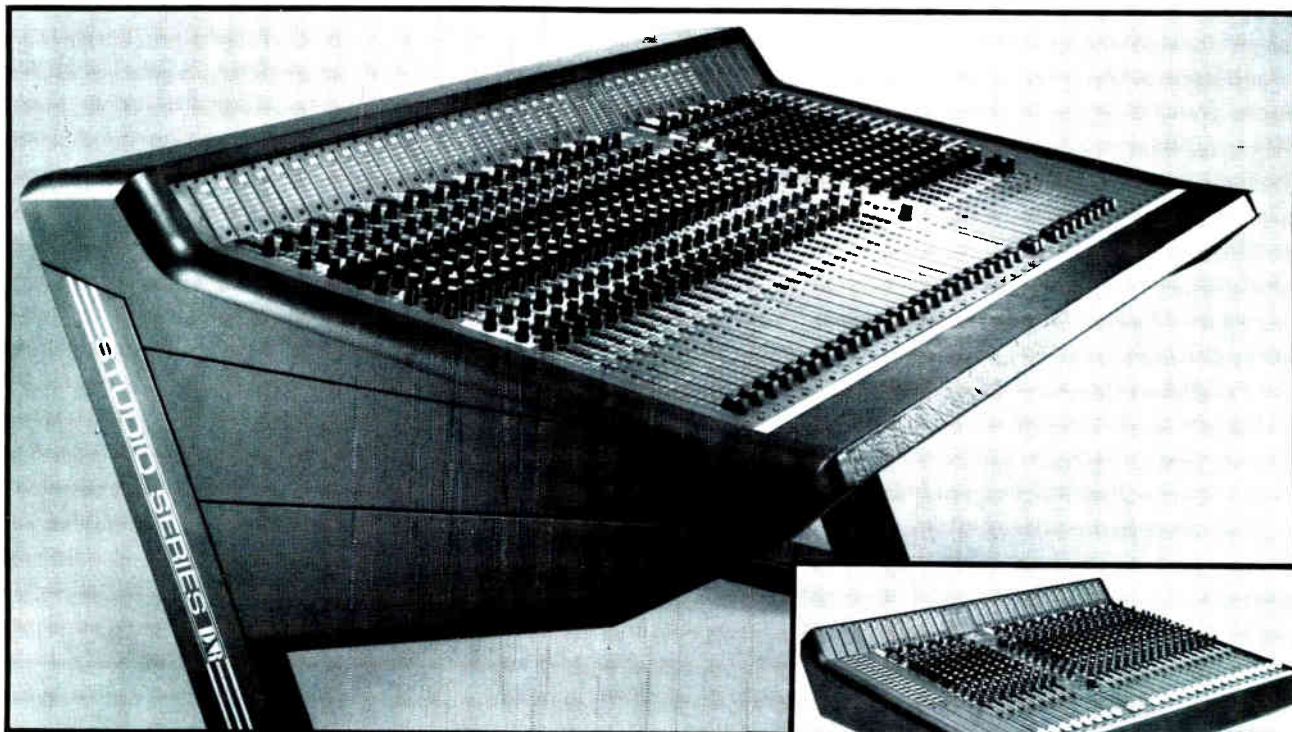
[24+] **COMMERCIAL RECORDING, HAWAII:** 333 Cooke St., Honolulu, HI 96813; (808) 536-5439. Studio Manager: Donn V. Tyler. Dimensions: Room 1 studio 16 x 22, control room 12 x 22. Room 2 studio 26 x 34, control room 16 x 24. Mixing Consoles: Tangent 3216 28 x 28, custom 8 x 4. Audio Recorders: Ampex MM-1200 16-/24-track, (5) Ampex ATR-100 4-/2-/1-track, (3) Magna-Tech 3-track 16/35mm. Cassette Recorders/Duplicators: Otari 5050 duplicator, Kenwood, Sony, (3) Wollensak. Synchronization Systems: Audio Kinetics 3.10 Q Lock. Echo, Reverb, & Delay Systems: Lexicon 224, AKG BX-10, Fairchild 658, DeltaLab DL2, (2) Yamaha SPX90, Loft 440. Other Outboard Equipment: (4) Inovonics comp/limiter, (2) Orban parametric EQ, Teletronix LA-2A comp/limiter, Marshall Time Modulator, (4) Omni Craft noise gate, Aphex Exciter. Eventide omnireverb, Eventide Harmonizer, Orban stereo synthesizer, (3) Orban de-esser. Microphones: Neumann U67, (4) Neumann U87, (2) AKG C-414EB, (4) AKG C-452EB, (4) AKG D-200E, (2) Sony C500, (2) Sony C38, Sony C57, (2) Sennheiser MD-421, (2) Sennheiser MD-211, (4) Shure SM53, (2) Shure SM57, (2) RCA 77DX. Monitor Amplifiers: Yamaha P2050, (2) Crown DC300, Crown D150. Pioneer 5500II. Monitor Speakers: (2) JBL 4333A, (2) JBL 4310, (2) Yamaha NS-10, (2) Auraltone SC. Musical Instruments: Steinway M7 piano, Singlerland drum set. Video Equipment: (3) Toshiba monitors, JVC VCR recorder. Other: Magna-Tech 16/35mm transfer system. Rates: \$50-\$150/hr.

[24+] **THE COMPLEX:** 2323 Corinth Ave., West Los Angeles, CA 90064; (213) 477-1938. Owner: Yume-Ya Corporation. Studio Manager: Arthur Kelm, Debora Sumer. Engineers: Sharon Rice, Duane Seykora, Paul Deiter, Raoul Rogut. Dimensions: Room 1 studio 66 x 44. Room 2 studio 60 x 42. Mixing Consoles: (2) GML 7900 48 x 12 x 24 w/moving fader system. Audio Recorders: Ampex ATR-124 24-track, Ampex ATR-104 4-track, Ampex ATR-102 2-track, Mitsubishi X-850 32-track digital, Mitsubishi X-86 2-track digital. Cassette Recorders/Duplicators: Nakamichi MR-1. Noise Reduction Equipment: Dolby 361, Dolby M Series. Synchronization Systems: Lynx Echo, Reverb, & Delay Systems: (2) EMT 250, (2) EMT 140 tube, AMS RMX 16, (2) Lexicon 480L, Yamaha REV5, Yamaha REV7, Eventide 2016, AMS DMX-16, (2) TC Electronic 2290, (2) Lexicon 102. Other Outboard Equipment: LA-2A, (6) GML limiter (stereo), (6) GML EQ (stereo). Monitor Amplifiers: Sax Thermocore 200 tube amps, BGW 1000, Bryston 4B, Marantz 8B, Marantz 250. Monitor Speakers: GML custom large monitors, Tannoy 10 Gold, Yamaha NS-10, Auraltone. Musical Instruments: dbx rack, Kepex rack, (2) Fairchild 670 limiter, (2) Sony PCM-2500 DAT. Rates: \$160/hr.

[24+] **CONTROL CENTER:** 128 N. Western St., Los Angeles, CA 90004; (213) 462-4300, 413-2522; (213) 650-2334. Owner: Aseley Otten, Frank Blue Spotalo, Rick Novak. Studio Manager: A Otten, F Spotalo, R Novak. Engineers: Aseley Otten, Rick Novak, Frank Blue Spotalo, Mike Kapitani, Eric Westfall. Dimensions: Room 1 studio 18 x 24, control room 12 x 16. Room 2 studio 7 x 12. Mixing Consoles: API custom 32 x 16 x 24 console w/550A and 560 EQs. Audio Recorders: Studer A80 24-track, Ampex ATR-102 2-track. Cassette Recorders/Duplicators: (2) Technics. Echo, Reverb, & Delay Systems: Yamaha REV7, Yamaha SPX90, Urs Major ST-282 Space Station, Roland SRV-2000, Roland SDE-3000 DDL, MXR DDL, Eventide 910 Harmonizer and delay, Lexicon PCM-70, Lexicon 200. Other Outboard Equipment: (2) dbx 161 compressor, (2) UREI LN1176 limiter, (2) Valley People Dyna-Mite, pinball game. Microphones: AKG 414, AKG 451, Neumann U87, Sennheiser 421, Sennheiser 441, Shure SM57, Shure SM77, AKG V-2. Monitor Amplifiers: Hill DX-3000, Crown D75, Crown 300, BGW 250, BGW 750. Monitor Speakers: Tannoy 15X, JBL 4312, Yamaha NS-10, Auraltone

—CONTINUED ON NEXT PAGE

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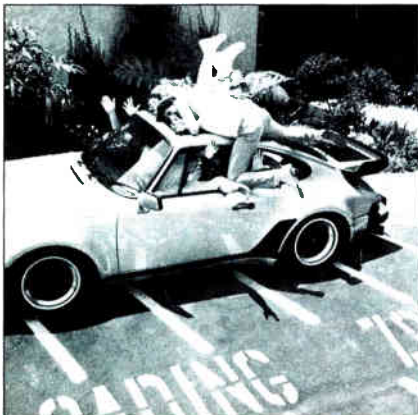
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CONTROL CENTER
Los Angeles, CA

5C Musical Instruments: Howard baby grand piano, Linn-Drum and synthesizers upon request Rates: \$60/hr., call for block rates and off-hours Extras & Direction: Clients include Los Lobos, John Adams, Gene Clark, Long Ryders, Green on Red, Dream Syndicate, Textones, Rappin' Duke, Heavy Traffic, Malice, Taxi, Pat Boone, Holland-Dozier-Holland, Henry Lewey, Mike Huey, Steve Barri, Tony Peluso, Jimmy Haskell, PolyGram, A&M, Warner, MCA, Atlantic, Dunhill, Rhino, Slash, Enigma, Bug, Demon, Down There, Bus Boys, etc



CONWAY RECORDING STUDIOS
Hollywood, CA

[24+] **CONWAY RECORDING STUDIOS**; 655 N. St. Andrews Place; Hollywood, CA 90004; (213) 463-2175. Owner: Buddy & Susan Brundo Studio Manager: Jill Pearlman Engineers: Mick Guzowski, Daren Klein, Duane Baron, Csaba Petocz, Richard McKernan, Gary Wagner, Marne Riley, Steve Toby, Bryant Arnett. Dimensions: Room A studio 30 x 60 x 16, control room 26 x 25 x 16 Room B studio 10 x 20 x 16, control room 25 x 28 x 16 Mixing Consoles: (2) Neve V-60 custom 60 x 48 w/Massenburg moving ladder automation Audio Recorders: (3) Mitsubishi X-850 32-channel digital, (2) Studer A800 24-channel analog, (2) Mitsubishi X-86 high speed 2-channel digital, (2) Ampex ATR-102 2-channel, Ampex ATR-104 4-channel, (2) Sony DAT Noise Reduction Equipment: Dolby SP Type A 48 channels Synchronization Systems: Lynx Time-Line code modules Echo, Reverb, & Delay Systems: EMT 250, RMX 16, SP-2016, EMT 140, 150-8S, Lexicon 480L, TC Electronic 2290, etc Other Outboard Equipment: Just about everything else Microphones: Large assortment including Elam 251, Neumann U47, Neumann M49, Neumann U67, Neumann TLM170, C-24, etc Monitor Amplifiers: Perreaux Monitor Speakers: TAD components in Augsburg-type enclosures, variety of small speakers Musical Instruments: Yamaha 9' concert grand piano Rates: \$2,800/day digital lock-out Extras & Direction: The Conway grounds offer our clients a country-club setting in the middle of Hollywood Beautiful tropical gardens, manicured lawns, covered patios and a bar-b-que make us a unique oasis of tranquility amid the chaos of the city And, of course, ample gated off-street parking for your fine European motor car Direction Studio "C" breaking ground summer 1988.

[24+] **CRAIG HARRIS MUSIC**; PO Box 110; North Hollywood, CA 91603; (818) 508-8000. Owner: Craig Harris Studio Manager: Matt Brown

SOUTHERN CALIFORNIA

24+ TRACK

STUDIOS

[24+] **DIGITAL INNOVATIONS**; 1441 N. McCadden Pl.; Hollywood, CA 90028; (213) 464-7391. Owner: Michel Rubini Studio Manager: Brian Vessa Extras & Direction: We are a fully equipped scoring and recording facility centrally located in Hollywood Featured is the Synclavier Digital Music System with the West Coast's largest digital music library on optical disk, full SMPTE lockup of audio and video, lots of synthesizers and outboard gear and a 20 x 40 live recording room. There is also a secured parking lot for 40 cars We have integrated the entire system to be fast and easy to use, with no headaches or unsightly cables A Macintosh computer holds the library of synth sounds and also serves as a MIDI sequencer for composers wishing to bring in their composition on micro-floppy Some of our satisfied clients are Kenny Loggins and Gene Page Recent projects include Michael Mann's films *Manhunter* and *Band of the Hand*, NBC mini series *Hands of a Stranger*, NBC movie *Moving Target*, and CBS movie *Unholy Matrimony* We hope to hear from you!



DIGITAL SOUND RECORDING
Los Angeles, CA

[24+] **DIGITAL SOUND RECORDING**, also **REMOTE RECORDING**; 607 N. Ave. 64; Los Angeles, CA 90042; (213) 258-6741. Owner: Van Webster Studio Manager: Adele Gold Engineers: Van Webster, Mariellen Webster Dimensions: Room 1 Studio 40 x 32, control room 16 x 16 Room 2 control room 18 x 10 Mixing Consoles: MCI 428B 28 x 24, Stevenson Interface 100 8 x 4 Audio Recorders: Sony 1610 2-track digital audio system, 3M M79 24-track w/Selectate II, Studer B67 2-track, Ampex AG440 2-track, (2) TEAC A3300S 2-track, TEAC 3340S 4-track Cassette Recorders/Duplicators: Nakamichi BX-300, (5) Hitachi DE 11 Noise Reduction Equipment: Burwen DNF-1000 2-channel Synchronization Systems: Adams-Smith 2600, EECO EMME 4-machine editing system Echo, Reverb, & Delay Systems: Yamaha REV7, Master-Room Super C reverb, Eventide Harmonizer, Eventide phaser, Efectron 1024, (2) Scamp ADT flangers, Wavemaker phaser Other Outboard Equipment: (2) dbx 161 compressor/limiter, UREI 1176 limiter, Teletronix LA-2A tube limiter, Inovonics 201 compressor/limiter, (4) Kepex expanders, (2) Scamp 501 limiters, (2) Scamp F300 expander/gates, (2) Scamp 503 Super EQ, (4) SAE parametric EQ, Orban stereo synthesizer, Burwen DNF-1000 dynamic noise reduction system Microphones: (5) tubes Neumann U47, Neumann U64, Neumann SM2, (6) FETs Neumann U87, Neumann KM84, Neumann U47, (7) Shure SM58, Shure PR54D, Shure 580S4, (7) E-VRE15, E-V 666, E-V RE20, (8) AKG 452, AKG 451, AKG 414, AKG 224E, (2) AKG C60 tube, (4) Sennheiser 421, Sennheiser 404, RCA 77DX Monitor Amplifiers: (2) SAE 2600, (2) SAE 2200, (4) JBL Dyna Monitor Speakers: (2) JBL 4341 4-way bi-amplified, (2) Auratone 2-way, (2) Auratone 5C, (2) RSL 3300, HSS DB-8 8-channel direct box Musical Instruments: Steinway B 7' grand piano, Oberheim OBX Other MIDI Equipment: Yamaha REV7 Video Equipment: (3) Sony BVU-800/850, (2) Fortel TC, EECO EMME a/b roll editing system, full edit bay, DSC Illusion digital video effects Other: Hitachi Z31 3-tube video camera, Crosspoint Latch 6109 production switcher Rates: Call for rates.

[24+] **DOLPHIN SOUND**, also **REMOTE RECORDING**; KHNL-TV 150-B Puuhale Rd.; Honolulu, HI 96819; (808) 847-3253. Owner: King Broadcasting Company Studio Manager: Ron Klohs

[24+] **DOM "O" SHANTA PRODUCTIONS, UNLTD.**; 17137 Index St.; Granada Hills, CA 91344; (818) 363-0636. Owner: Mark Bryan Johnson Studio Manager: Mark Bryan Johnson, Denise DeLong Engineers: Mark Bryan Johnson, Hal Sacks, Jim Williams, Dennis MacKay Dimensions: Studio 18 x 28, control room 13 x 15 Mixing Consoles: Jim Williams' Electronics custom-built 24 x 16 x 2, .001 THD, 20-volt slew rate, MIC in S/N—129.5, input to output S/N—88dB, 4 sends, 2 returns, another 8 x 2 x 1 console with same specs and 2 sends and 2 returns Audio Recorders: Jim Williams modifications on: Sony/MCI JH-24 24-track, Sony/MCI JH-110 2-track 1/2" and 1/4" formats, Tascam 32 2-track, Ampex Model 600 mono Cassette Recorders/Duplicators: Nakamichi MR-1 Jim Williams mods, Technics M85 Synchronization Systems: Linn 9000 Echo, Reverb, & Delay Systems: Live chamber 10 x 12'8", Lexicon 200, Jim Williams modifications on: Lexicon PCM70, Lexicon PMC60, (2) Lexicon PCM42 w/extended memory, Lexicon PCM41, Eventide instant flanger Other Outboard Equipment: Bob Wolstein Labs "Stereo Imaging Systems," Alembic F2-B stereo preamp (tube), Klark Teknik DN60 real-time spectrum analyzer, Jim Williams modifications on: (2) dbx 166, (3) dbx 160X, Orban 424A (stereo compressor, limiter, de-esser, floating gate), custom-built stereo synthesizer, Aural Type B Exciter Custom-built Jim Williams Electronics: (8) noise gate, (8) keyable noise gate, (4) hiss filter, stereo direct box w/parametric EQ and mix controls, (4) DI amps rack mounted in control room Mark Bryan Johnson designed 10-line stereo guitar/line level instrument pass-thru system, 16-line level input system for drum machines and synthesizer Microphones: (3) AKG 414EB, (2) AKG 451EB, Beyer M101, Beyer M500, E-V RE20, E-V 636, E-V 630, PML DC-63, (2) Schoeps Omni/Cardioid capsules, (2) Schoeps Hypercardioid capsules, (6) Shure SM77, Shure SM57 Monitor Amplifiers: (2) BGW 750B, BGW 100, (2) Crest Model 300 "Power Line Series," Class A custom-built Jim Williams Electronics 100-watt stereo power amp Monitor Speakers: (2) JBL 4530, (2) JBL 4311, (2) Yamaha NS-10M, (2) Auratone QC66 3-way quality control, (2) Auratone 5C Super Sound Cube, (2) JBL 4406 Musical Instruments: Steinway baby grand piano 77 yrs. old, duplex scaling, newly rebuilt, w/MIDI mod by Jim Wilson's L.A. Piano Service, Linn 9000, Jim Williams modifications on: Yamaha DX7, (2) TX card, Roland Jupiter-8 MIDI, Music Man bass, custom-built 5-string fretless bass, (7) custom guitars of pro quality available upon request Rates: Available upon request.

[24+] **DUBMASTER**; 11110 Magnolia; North Hollywood, CA 91601; (818) 989-6004. Owner: Magnolia Properties Studio Manager: Conrad Gleich



ECHO SOUND RECORDING
Los Angeles, CA

[24+] **ECHO SOUND RECORDING**; 2900 Los Feliz Blvd.; Los Angeles, CA 90039; (213) 662-5291. Studio Manager: Mike Williamson Dimensions: Room 1 studio 18 x 18, control room 20 x 18 Room 2 studio 26 x 27, control room 18 x 16 Mixing Consoles: Trident 75 24 x 28 x 24, Trident 80B 30 x 24 x 24, Yamaha DMP7 automated mixer, Carvin MX 1688 Audio Recorders: Sony/MCI JH-24 24-track, Otari MX-80 24-track, Otari MTR-12 2-track 1/2" and 1/4" 30 ips, (2) Fostex B16D 16-track, (2) Otari MX-5050 2-track, Technics 1500 2-track, Sony digital, E-V S700U 8mm PCM, Otari MX-5050 MkII 8-track, TEAC A-3440 4-track Cassette Recorders/Duplicators: Yamaha C200, (5) Yamaha K1020, TEAC Z-5000 Noise Reduction Equipment: Dynaflex D-2B Synchronization Systems: Fostex 4035, Jambox/4, SMPTE/MIDI, Macintosh Plus Echo, Reverb, & Delay Systems: Lexicon 480L digital delay processor, (6) Yamaha SPX90, (2) Yamaha REV7, (2) Eventide H949 Harmonizer, Lexicon Super Prime Time, (3) Lexicon 93, Roland SDE-3000, (2) Furman RV-1, Ibanez HD-1000, (2) Yamaha R1000 digital reverb, AMS 15-80S DDL/sampler/harmonizer, (2) Yamaha REV5 Other Outboard Equipment: (2) Aphex Aural Exciter enhancer, Aphex Dominator limiter/enhancer, (4) dbx 166 comp/lim., (2) dbx 160X comp/lim., (2) dbx 160 comp/lim., Yamaha GC2020 comp/lim., (2) Orban 622B parametric EQ, SAE 2800 parametric

EQ, UREI 533 graphic EQ, (12) Gatec noise gates, dbx F900 mainframe w/flianger, (2) 903 comp/lim, (2) Eventide Omnipressor, (2) Rane HC6 headphone consoles, (2) Yamaha Q2031 31-band graphic EQ, (3) EXR Exciter, UREI LA-2A comp/lim, Microphones: Neumann U87, AKG "The Tube," (2) AKG C414, (3) AKG 460, AKG D224E, Crown PZM, E-V PL20, E-V BK1, E-V PL80, E-V PL5, E-V PL6, Shure SM57, Shure SM58, (7) Sennheiser MD-421, (2) Sennheiser MD-409, Neumann TLM170, Monitor Amplifiers: (2) Yamaha P2200, (3) BGW 750B, (2) BGW 150, TDM electronic crossover Monitor Speakers: (2) JBL 4430, (2) Yamaha NS-10, (2) Auratone 5C, (2) Bose, Westlake BBSM4, JBL 4311, JBL 4301B Musical Instruments: E-mu Emulator II, Yamaha TX816 FM tone generator system, Yamaha DX7, Shaeffer grand piano, Akai AX80, Roland Jupiter-8, Roland Juno-60, Roland GR-700, Fender Precision bass, (2) Simmons SDS-V electric drum sets, LinnDrum drum machine, Oberheim DX drum machine, Korg Poly-800, Casio CZ-101, Fender Concert and Super Reverb amps, Yamaha bass amp, Scholz Rockman X-100 bass, Fender Rhodes, Other MIDI Equipment: Roland MD-8 MIDI converter, Garfield sync-MIDI converter, Macintosh Plus, Jam Box/4, Yamaha DMP7, Mark of the Unicorn Performer, Jam Box MIDI patch bay Rates: Reasonable, \$50-\$70/hr, block rates, day rates and prepay discounts. Extras & Direction: Echo Sound provides professional quality, cost-efficient recording services Studio A: 16- and 24-track; studio B: 16- and 24-track; studio C: MIDI and 16-track production. We have provided recording services for Capitol Records, Arista Records, Motown, A&M Records and various independents. Our new addition, Studio C, is a MIDI production facility offering the producer, arranger and songwriter the latest Mark of the Unicorn Performer software and a selection of MIDI sound sources complete with Fostex 16-track recorder, console and outboard effects, in-house arranging and production services. Sequenced tracks may also be transferred and/or sync locked with studio A/B, 24-track rooms. Echo Sound provides a professional, creative, comfortable studio environment conveniently located in the Griffith Park area with secure off-street parking. Our experienced staff engineers strive to have clients work comfortably and efficiently, with emphasis on technical expertise and client satisfaction. Recent projects include: Capitol Records, *Chapter Eight*, A&M Records *The Hit*, Arista Records, Roy Hay of Culture Club. We invite you to please call so that we may discuss your project requirements and arrange for a tour of our facilities.

[24+] EFX SYSTEMS; 919 N. Victory Blvd.; Burbank, CA 91502; (818) 843-4762; (213) 460-4474. Owner: Sole proprietorship. Studio Manager: Philip Moore. Extras & Direction:

EFX Systems is a fully implemented digital audio for film and television post-production facility. We feature an award-winning staff of mixers and editors working with the latest digital audio equipment from New England Digital and Sony Rooms range in size from edit and prelay rooms to ADRI/Foley stage to a television mix suite to a full digital film mixing stage. The staff works directly with the client to develop a sound track that is all the picture requires. We still adhere to the philosophy that the editor/mixer is more important than the equipment that they use, but using the best allows the editor/mixer the freedom to be creative and not buried in the mechanics of the job. The facility is equipped with all the comforts of home (lounge, cable TV, etc.) so that the creativity is not hampered in any way. Our staff are people, and not computerheads. Most come from a sprocketed background and all are fluent in Sprocket-talk and Time Code Language. EFX Systems, high performance post-production, with a family twist.

[24+] EMI MANHATTAN RECORDING; 6920 Sunset Blvd.; Hollywood, CA 90028; (213) 461-9141, ext.307. Studio Manager: Tina Hopkinson. Engineers: Jim (J.B.) Bauerlein. Dimensions: Studio 26 x 30, control room 12 x 16. Mixing Consoles: MCI JH-416 24 x 24 (modified). Audio Recorders: (2) ATR 102 2-track, AG 440 2-track, Sony PCM-1630 2-track, Sony M-79 24-track. Cassette Recorders/Duplicators: (15) Real-time duplication available. Noise Reduction Equipment: Dolby A, dbx 1 Echo, Reverb, & Delay Systems: Roland SDE-3000 DDL, Roland SRV-2000 reverb, EMT 140 plate. Other Outboard Equipment: (2) Yamaha SPX90, Eventide H910 Harmonizer, dbx 900 rack w/lim/comp, de-esser, para EQ, gates, UREI 1176 limiter. Microphones: E-V RE20, (2) Sennheiser MD-421, Neumann U87, (2) Superscope EC9P condenser mics, (3) Shure SM57, (3) Shure SM58, (2) E-V 666, misc. others. Monitor Amplifiers: BGW 750C, Crown D60. Monitor Speakers: (2) JBL 4315 4-way, (2) Yamaha NS-10M, (2) Auratone 5C. Musical Instruments: Piano. Video Equipment: Complete 3/4", Sony off-line editing system including: Sony BVE-800 edit controller, (2) Sony BVU-800 3/4" VTRs, Sony BVU-820 3/4" VTR, (plus various monitors and related equipment). Other: Disc mastering and CD preparation available.

[24+] ENCORE STUDIOS, INC.; also REMOTE RECORDING; 721 S. Glenwood Place; Burbank, CA 91506; (818) 842-8300. Studio Manager: Darryl Casene. Dimensions: Studio 25 x 40, control room 26 x 26. Mixing Consoles: SSL 6056E 60 x 56 8 stereo modules/48 mono modules. Audio Recorders: (2) Studer A800 MkII 24-track, (2) Studer A80 2-track 1/4" and 1/2" Cassette Recorders/Duplicators: Yamaha

C300, Magnavox CD player. Noise Reduction Equipment: Dolby 24-ch Synchronization Systems: Lynx Echo, Reverb, & Delay Systems: EMT 140TS tube echo plates, (2) AMS digital reverb, (2) AMS digital delay, Lexicon 480XL digital processor, Lexicon 224XL, Yamaha REV5, (2) Yamaha SPX90, TC Electronic 2290 w/11-sec. sampling, Lexicon PCM70, TC Electronic EQ. Other Outboard Equipment: Eventide 949 Harmonizer, Lexicon Super Prime Time. Microphones: Neumann, Sennheiser, AKG, RCA, Shure, Sony, PML, tube and other vintage mics. Monitor Amplifiers: Hill 3000, (2) Hill 1000, Bryston 2B. Monitor Speakers: Auspurg design, TAD woofers, TAD tweeters and drivers, Northwest horns. Musical Instruments: Tama electronic drums, Yamaha 9' ebony grand piano. Rates: Negotiable.

[24+] THE ENTERPRISE; 4620 W. Magnolia Blvd.; Burbank, CA 91505; (818) 505-6000. Owner: The Enterprise, Inc. Studio Manager: Thom Brown. Engineers: Eric Lee Levinson, Joel Iwataki, Gary Chase, Craig Huxley, Joel Storer. Dimensions: Room 1: studio 25 x 27, control room 30 x 25. Room 2: studio 15 x 8, control room 27 x 25. Room 3: control room 20 x 25. Room 4: control room 14 x 25. Mixing Consoles: SSL 4072 72-input, SSL 4064 72-input, SSL 4056 60-input, SSL 4040 48-input. Audio Recorders: (3) Studer A820 24-track, (8) Otari MTR-90 MkII, 8-track Synclavier direct-to-disk, (2) Synclavier Poly Tower, Studer A820 2-track 1/2", (3) Mitsubishi X86 digital. Cassette Recorders/Duplicators: (4) Studer, (10) Aiwa, (2) Sony digital. Noise Reduction Equipment: Dolby SR, Dolby A. Synchronization Systems: (20) Lynx Echo, Reverb, & Delay Systems: Lexicon 480L, Eventide H3000, AMS RMX, AMS DMX 1580S, EMT tube plates, Lexicon PCM70, Eventide SP2016, Yamaha REV5, TC Electronic. Other Outboard Equipment: Drawmer 28-ch noise gate, Cycloscanner panner, (5) Massenburg equalizer, (3) Neve stereo compressor, (4) Pultec EQP1A3, (4) API 550A. Microphones: Neumann U47, Neumann U67, Neumann U87, Neumann M49, Neumann M50, AKG C12, AKG C24, AKG C12A, AKG 414, Shure SM57, Telefunken 251E, Sennheiser 421, E-V RE20. Monitor Amplifiers: (24) Yamaha Class A, (3) Threshold Class. Monitor Speakers: (6) Quested 412, (2) Tannoy SMB10 Gold Foil, (12) Yamaha NS-10, (2) UREI Time Align. Musical Instruments: (2) Roland D-50, (2) Roland D-550, (2) Roland S-550, (2) Roland SX-10, (2) Roland SP-8, (2) Roland MKS-20, (2) Yamaha TX816, (2) Yamaha DX7, (2) Yamaha DX7II, (2) Yamaha GS1, Linn 9000, Masterbeat, (2) Moog vocoder, (2) Synclavier 32 Mb RAM, 64-voice, optical drive, plus 16 high outputs, super floppy. Other MIDI Equipment: (4) Mac Plus computers.

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Right Between The Ears

For pure, transparent, accurate stereo recording just "point and shoot" a Sanken. Japan's oldest and most original microphone manufacturer has the world's first line of professional portable MS-stereo condenser mics in the world. They're rugged, reliable and all Sanken mics feature titanium diaphragms that are corrosion-free and immune to temperature and humidity changes.

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w/Opcode Video Equipment: (5) Sony XBR 25" monitors/RGB, Sony 1" VTR, (5) JVC B250 3/4" U-matic, (3) JVC 1/2" VHS. Other: From boom boxes to blaster beams. Rates: Super packages

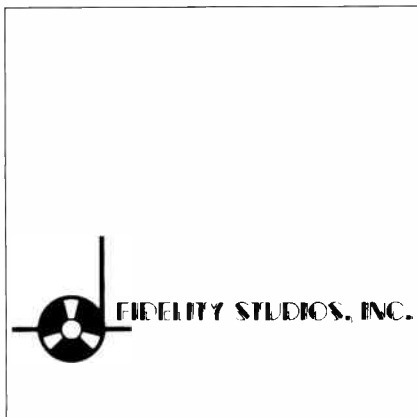
[24+] EVERGREEN RECORDING STUDIOS: 4403 W. Magnolia Blvd., Burbank, CA 91505; (818) 841-6800. Owner: Charles Fox, Gayle Levant, Arlie Butler Studio Manager: Sandra Smart Engineers: John Richards, Rick Riccio, Murray McFadden, Marc Gebauer, Mike Halcher Dimensions: Room A studio 46 x 70, iso booth 12 x 17, rhythm stage 16 x 8, control room 20 x 26 Room B studio 35 x 35, rhythm booth 14 x 27, iso booth 7 x 8, control room 20 x 26 Radford studio 130 x 70 x 30 Mixing Consoles: Studio A Harrison 4832 custom 48 x 32 Studio B Harrison MR2 54 x 48 custom scoring console, Harrison 4032 custom 40 x 32/ Audio Recorders: (3) Ampex MM1200 24-track, (5) Ampex ATR-104 4-track, (5) Ampex ATR-102 2-track (with 1/2" headstack capability), (2) Magna-Tech w/6- or 3-track overdub, (3) Magna-Tech 3- or 1-track dummies, (2) Magna-Tech 3- or 1-track recorders, (2) Magna-Tech PR635 hi-speed projectors w/Xenon lamps, Radford Studer A80 24-track, (2) Ampex ATR-104 4-track, (2) Ampex ATR-102 2-track, Otari 1/4-track 1/4" Echo, Reverb, & Delay Systems: (2) live chambers, (3) EMT 140 stereos, Lexicon 224, Lexicon 200, Radford (3) EMT (2) digital, (2) lives, Ibanez SDR-1000, (3) Yamaha 1500 DDLs in each room Other Outboard Equipment: Eventide Harmonizers, Lexicon Prime Time, Kepex II, Dolby, UREI, Inovonics plus EECO sync (B), Adams-Smith sync (A), Shadow sync (Radford), complete transfer facilities mag, reel-to-reel, cassettes, projection in all rooms Microphones: All standard makes and models Monitor Amplifiers: Crown PSA2 in control rooms and for playback in studios Monitor Speakers: UREI Time Aligned, JBL 4311, Yamaha NS-10, Hitachi, Auratone, Radford custom Evergreen, components (LRC monitoring) Musical Instruments: Yamaha grands Video Equipment: (3) 1/4" VCRs w/monitors for control rooms and studios Rates: Film scoring and record rates call for information

[24+] FANFARE RECORDING STUDIOS: 120 E. Main St., El Cajon, CA 92020, (619) 447-2555. Owner: Ronald L. Compton Studio Manager: Carol A. Compton Dimensions: Studio 25 x 30, control room 17 x 20 Isolation room 1' 10" x 12 Isolation room 2' 7" x 7 Mixing Consoles: MCI 636 36 x 36 (full mixing automation) Audio Recorders: MCI JH-24 24-track, MCI JH-16 16-track, MCI JH-100 2-track, Ampex 440B full-track, Ampex 440B 2- and 4-track, (3) Revox A77 2- and 1/4-track Cassette Recorders/Duplicators: (2) Akai, Otari high-speed duplicator Noise Reduction Equipment: (2) Dolby A-361, (2) DNR Dynamic noise reducers, (8) Kepex and Furman noise gates Synchronization Systems: Adams-Smith Zeta Three w/MIDI sync for 16- and 24-track machines Echo, Reverb, & Delay Systems: EMT stereo plate, Lexicon 224 w/all programs and non-volatile memory, Yamaha REV7, (2) Yamaha SPX90, Alesis MIDiverb, Alesis Microverb, Eventide Harmonizer, Deltalab digital delay, (2) Digitech DSP128 Other Outboard Equipment: (2) dbx compressor, (4) UREI LA-3A compressor, UREI 1176LN, (2) Gain Brain, (4) Orban Parametric EQs, Orban sibilance controller, UREI digital metronome Microphones: (4) Neumann U87, (4) Neumann KM86 Neumann KM84, Neumann U47 original w/tube, (4) AKG 414, AKG 202E, AKG 119, (8) Shure SM57, E-V RE10, (4) Sony 337, Altec, RCA over 50 mics to choose from Monitor Amplifiers: (4) BGW, (8) Crown Monitor Speakers: (4) JBL large monitor, (6) Auratones, (2) Bose, (2) Yamaha NS-10M Musical Instruments: E-mu Emax sampling keyboard w/extensive software library, Ensoniq Mirage sampling keyboard, Yamaha C7 conservatory grand piano, Hammond B3 organ w/tube Leslie speaker, Ludwig traps set w/concert toms, Yamaha RX5 drum computer, Roland Octapad, Casio CZ-101 w/computer interface librarian, Roland TR-707 drum machine, Yamaha FB-01 synth module, congas, orchestra, bells, chimes, percussion devices, Alesis HR-16 drum machine, Roland MT-32 Other MIDI Equipment: Yamaha QX5 sequencer, Macintosh Plus w/Performer Video Equipment: JVC VHS, video monitors

[24+] F.D.S. LABS/QUAD TECK STUDIOS: 4007 W. 6th St., Los Angeles, CA 90020; (213) 383-2155. Owner: F.D.S. Labs, Inc. Studio Manager: Hank & Joan Waring

[24+] FIDELITY STUDIOS, INC.: 4412 Whittett Ave., Studio City, CA 91604; (818) 508-3263. Owner: Arlie & Phyllis Ripp Studio Manager: Sharon Valentine Rex Engineers: Cliff Zellman, Bob Bridges, Larry Elliott, Steve Zipper, Dave Lopez Dimensions: Room 1 studio 23 x 56, control room 18 x 13 Room 2 studio 23 x 16.5, control room 16 x 12 Mixing Consoles: MCI JX500 automated 42 x 32 (studio A), Aengus/B&B custom 24 x 8 (studio B), Audio Recorders: (2) Ampex MM-1200 16- and 24-track (Heider/Bull, modified) (studio A), Stephens 821B-40 16-, 24- and 32-track (studio B), (2) Ampex ATR-104 2- and 4-track, (2) Ampex ATR-102 2-track (1/2" and 1/4"), (4) Otari MX-5050 2-track (1/2" and 1/4"), Sony/MCI JH-24 24-track 2" Cassette Recorders/Duplicators: (5) Sony TC-K81, Otari DP-4050 C2 high-speed duplicator, (2) Dual Noise Reduction Equipment: (4) Dolby 361, (24) Dolby M-Series Synchronization Systems: (2) BTX Softouch, (3) BTX Shadow, (2) BTX Cypher Echo, Reverb, & Delay Systems: Publication America Internal 90, AMS DMX 80 stereo delay/pitch

SOUTHERN CALIFORNIA 24+ TRACK STUDIOS



FIDELITY STUDIOS, INC.
Studio City, CA

changer, EMT 250 digital reverb, Roland SRV-2000 MIDI digital reverb, Lexicon 224 digital reverb, (2) EMT 140 plate reverb, Lexicon Prime Time digital delay, (2) Eventide H910 Harmonizer, Marshall Time Modulator Yamaha REV5, Lexicon PCM60 Other Outboard Equipment: (2) Teletronix LA-2A leveling amplifiers, (4) UREI LA-3A leveling amplifiers, (4) UREI 1176LN peak limiters, (2) dbx 160 compressor/limiters, (2) Neve 2254A limiter/compressors, Orban Dynamic sibilance controller, ADR vocal stessor, Aphex II Aural Exciter, (2) Pultec EQP-1R parametric equalizer, (8) Kepex II gate Microphones: AKG 414/P48, AKG 451EB w/pads, AKG C-24, AKG C-12, AKG C-60, Neumann U87, Neumann U67, Neumann M49, Neumann KM86, Sennheiser MD-421, Sennheiser MD-441, Sony ECM-22P, Sony ECM-250, Sony C-500, Sony C-37A, Sony C-38, E-V RE20, E-V RE666, Shure SM56, Shure SM57, Shure 545, Crown PZM Monitor Amplifiers: Haller, BGW, Phase Linear Monitor Speakers: UREI 813 Time Align (studio A), JBL 4311 (studio B), Yamaha NS-10M, Auratone Super Sound Cubes, Tannoy Super Reds Musical Instruments: Yamaha grand piano (studio A), Mason & Hamlin grand piano (studio B), Roland JX-3P MIDI synthesizer, E-mu Emax w/multi-disk, Casio FZ1 sampling keyboard, Oberheim Xpander, Yamaha DX100, LinnDrum, programmer/operator Other MIDI Equipment: Altan 1040ST w/Hybrid Arts 60-track MIDI sequencer Video Equipment: (2) Sony BVU-800 3/4" U-matic VCRs, (2) VHS VCRs (including Hi-Fi stereo JVC), Quasar 40" rear-projection color monitor, RCA Colorcraft 2000 and JVC color monitors, Panasonic 10" color monitor, (2) Hitachi 7" black & white monitors, Bell & Howell broadcast sync generator Other: Denon direct-drive quartz-lock turntable, Technics CD player Rates: Call Extras & Direction: Fidelity features an extensive library of finished controlled masters and songs available for film, video, television and commercial productions, as well as a complete Sound Ideas sound effects library on CD Long and successful relationships with major distribution companies allow us to provide the liaison and exposure necessary to secure recording, motion picture, television and home video arrangements for your production Additionally, we can provide complete music clearance services from the #1 record on down, including copyright, writer/publisher clearances and licensing. Having its own in-house publishing and production companies, Fidelity is fully staffed with composers, musicians, arrangers and producers for all your music needs Be sure to check out our new video editing suite! Fidelity is the only complete creative sound and music service facility in Los Angeles to serve your post-production needs for film, TV, video or commercial productions Complete ADR, Foley, Sound EFX and 24-, 32- and 48-track automated mixing We are proud of our warm, creative atmosphere and technical expertise that serve a wide spectrum of clients from all areas of the entertainment and communications industries

[24+] FIESTA STUDIO: 1655 S. Compton Ave., Los Angeles, CA 90021; (213) 748-2057. Owner: R.G. Robeson Studio Manager: Rick Robeson Engineers: Octavio Villa, Gary Dobbins, Salvador Sandoval Dimensions: Studio 30 x 60 plus isolation rooms, control room 25 x 15 Mixing Consoles: MCI 428 32 x 24 Audio Recorders: MCI 32-track, MCI 2-track, Otari 2-track Echo, Reverb, & Delay Systems: Lexicon 200 digital reverb, Eventide H969 Harmonizer, Lexicon DDL, Master-Room III echo, Yamaha REV7, Yamaha SPX90 Other Outboard Equipment: UREI graphic EQs, 31-band EQ, Dolby,

UREI 1176, dbx 160 compressor/limiter, Orban 424 comp/limiter Microphones: Neumann U87, Neumann KM84, AKG C-452, AKG C-414, Sennheiser MD-421, Shure SM57, Shure SM7, Sony ECM-33F, E-V RE20 Monitor Amplifiers: Crown DC-300 Monitor Speakers: JBL 4333 Musical Instruments: Steinway 6' grand piano, Fender Rhodes electric piano, D-6 clavinet, ARP Omni, ARP Odyssey synth, Fender Twin Reverb amp Steinway grand Rates: Call for rates We encourage block booking



FLOUNDERGASH PRODUCTIONS
North Hollywood, CA

[24+] FLOUNDERGASH PRODUCTIONS: 5102 Vineland Ave., North Hollywood, CA 91601; (818) 509-8821. Owner: FlounderGash Emporium Studio Manager: Tom Slamdancer Engineers: Jeff McLane, Desmond Jamfator, Dubious Jamfator, Tom Slamdancer Mixing Consoles: Helios 28 x 24 w/54 inputs on mixdown Audio Recorders: Stephens 821A 24-track, Otari 2-track, Ampex 2-track, DAT Cassette Recorders Duplicators: Sony Echo, Reverb, & Delay Systems: ART 01A, (2) Roland DEP-5, (3) Yamaha SPX90II, EXR Exciter, BBE 802, Marshall Time Modulator, (3) Roland SDE-1000, Countryman phase shifter Other Outboard Equipment: Teletronix LA-1, (2) Teletronix LA-2, (2) Pultec EQP-2, Fairchild limiter, (24) Vacuum tube class A mic preamp, (2) Langevin EQ, Trident parametric EQ, Orban 622B, SAE 2700, (2) Aphex gate Microphones: Neumann M49 thru Shure SM57 Monitor Amplifiers: SAE 2500, SAE 2400, SAE 2200, Jamfator 100-watt tube amps Monitor Speakers: Tannoy 15" golds, Yamaha NS-10M, Fostex 765 co-axial Musical Instruments: Synclavier, E-mu Emulator II, E-mu SP-1200, Yamaha DX7, Casio FZ-1, Roland Super Jupiter, Moog Minimoog, Roland MKS-20, Yamaha KX68 Other MIDI Equipment: MIDI patcher Other: Roland vocoder, Roland GR-700 Rates: Near \$50/hr for non-smokers Near \$250/hr for smokers

[24+] FOOTPRINT SOUND STUDIOS: 13216 Bloomfield St., Sherman Oaks, CA 91423; (213) 872-1854. Owner: Jerry Fuller Studio Manager: Annette Fuller Engineers: Brian Friedman Neil Hopper Dimensions: Studio 27 x 56 w/20'-high string room plus isolation booth, drum booth and projection room/I/O Control room 10 x 12 Mixing Consoles: Trident Series 80 w/mixing capabilities up to 56 tracks Audio Recorders: 4mpex MM1200 24- and 16-track, ATR-100, Ampex 350 2-track, (2) Sony various 1/4-track Cassette Recorders/Duplicators: (2) Technics cassette Echo, Reverb, & Delay Systems: AKG BX-10, Orban dual reverb, Eventide DDL, Lexicon Prime Time, Ecoplate, (2) Harmonizers, Deltalab Effectron, Yamaha REV7 Other Outboard Equipment: UREI 1176 LA-3A, dbx 160 comp/limiters, GT-4 noise gates, UREI 527-A and Spec Acoustics graphic EQs, Orban parametric EQ, UREI digital metronome, Orban de-esser, SyncPulse Microphones: Neumann, AKG, E-V, Shure, Sony, Sennheiser, Crown PZM Monitor Amplifiers: SAE, Crown, Yamaha P100, (2) Haller 225 Monitor Speakers: MDM-4 Time Aligned, Auratone, Yamaha NS-10M, JBL 4411 Musical Instruments: Complete 7-piece drum set, Yamaha 6' grand piano, Yamaha DX7 w/ROM cards, Sequential Circuits Prophet-5, Iso box, Fender bass/guitar amps Rockman amps, percussion, Yamaha RX11 drum machine all keyboards MIDIed Rates: 24-track from \$55/hr to \$95/hr plus special rates (all equipment included) Extras & Direction: Production assistance available Musicians' lounge, coffee, tea, refreshments, swimming pool, basketball, nearby restaurants, liquor store/market, guest room available Quality, affordable product in relaxed environment Clientele: Glen Campbell, Tanya Tucker, Jerry Fuller, Johnny Mathis, Kimberley Springs, Irene Cara, James Ingram, Cliffe Stone

[24+] FOR THE RECORD: 833 W. Collins, Orange, CA 92667; (714) 771-1410. Owner: Eric Garten, Dr. Dream Records Studio Manager: Eric Garten Dimensions: Studio 28 x 28, control room 24 x 14 Mixing Consoles: NEOTEK Series III modified 29 x 24 Audio Recorders: Studer A80VU 24-track w/autolocate Otari MTR-12 2-track w/remote 1/2" 30 ips, Technics RS1500 2-track w/remote, Technics RS1506 2-track w/remote, Technics SU100 digital, Cassette Recorders/Duplica-

tors: Studer A710, Technics RSM95, Technics RS9900. Noise Reduction Equipment: dbx 224. Synchronization Systems: SMPTE, FSK24, MIDI time code. Echo, Reverb, & Delay Systems: Lexicon 224X w/LARC, Ecoplate III, (2) Roland SRV-2000, (3) Roland SDE-3000, DeltaLab DL4, Ibanez DM2000, ADA 2FX, TC Electronic TC1210 spatial expander. Other Outboard Equipment: (2) UREI 1176LN, (6) dbx 904, (2) dbx 902, dbx 165A comp, (2) dbx 160 comp, (4) Symetrix 544 gates, BBE 802, Aphex Type C, TC Electronic 1210 spatial expander, Symetrix 522 duckers. Microphones: (2) AKG tube, (2) Neumann U87, (2) Neumann U89, (2) AKG 460, (2) AKG 414, (2) AKG 451, (2) Neumann KM84, (2) Crown PZM, (2) E-V RE20, (2) Sennheiser 441, (5) Sennheiser 421, Shure Monitor Amplifiers: Eagle 7A, (3) Unisync 50, SAE, Soundcraftsmen, Foxtex, Rane Monitor Speakers: JBL 4435, Infinity RS2 5 bi-amped, Yamaha NS-10, Infinity RS10, Stax Gamma electrostatic. Musical Instruments: Kurzweil K250, Akai MPC60 w/many samples, Roland D-50 w/custom patches, Akai S900, Roland S-50. Other MIDI Equipment: Atari 1040ST w/many goodies, Yamaha MCP4, Roland PM-16 pad-MIDI interface, Roland VP-70 pitch-to-MIDI converter. Other: Rane headphone mixing station. Rates: The usual. Extras & Direction: Chops are important, but attitude is everything. Just ask abecedarians, Adolescents, Agent Orange, Ann DeJarnett, El Grupo Sexo, Cripples, Hyde, Jade, Noise Toys, National Peoples Gang, SWA, Dr. Starr, Fashion Crisis, 3-D Picnic, Love Canal, Royal Tease, Joneses, SST Record, Enigma Records, etc



41-B
Westlake Village, CA

[24+] **41-B:** 41-B Duesenberg; Westlake Village, CA 91360; (805) 494-3613. Owner: Bruce Jackson. Studio Manager: Robb Klein. Engineers: Bruce Jackson, Robb Klein, Chuck Rosa. Dimensions: Room 1 studio 48 x 43, control room 30 x 26, three iso booths. Room 2: (under construction) control room 24 x 23. Mixing Consoles: Trident 808 40 x 24 x 64, SSL 6000E 72 x 48. Audio Recorders: Otari MTR-90II 24-track, Otari MTR-12 4- and 2-track 1/2", Otari MTR-12 2-track 1/4". Cassette Recorders/Duplicators: (2) Nakamichi MR-1. Noise Reduction Equipment: Available on request. Echo, Reverb, & Delay Systems: Lexicon 200, (2) Yamaha REV7 digital reverb, (2) Yamaha SPX90, Eventide 949 Harmonizers, (2) Eventide 910 Harmonizer, Lexicon PCM42, Lexicon PCM41, Lexicon Prime Time, Ecoplate II, (2) ART digital delay lines, Lexicon PCM70. Other Outboard Equipment: dbx 900 racks with (4) noise gate, (2) parametric, (2) de-esser, EXR exciter, (4) UREI 1176 limiter, (2) dbx 160X, (2) dbx 160, dbx 165A, dbx 162 stereo limiter, Ashly stereo parametrics, (6) channels Drawmer noise gate. Microphones: Neumann U87, Neumann KM84, AKG 414, AKG 451, AKG 452, AKG 460, Sennheiser 421, E-V RE20, AKG D-12, Shure 57, Crown PZM, Shure 77, Sony ECM-50, etc. Monitor Amplifiers: Hafler monitors 1000-watt per side, Hafler 220 headphones. Monitor Speakers: JBL 4435, JBL 4411, JBL 4401, Yamaha NS-10, Yamaha NS-20, Auratone T-6 speakers, Advent speakers. Musical Instruments: Kawai 6' MIDI grand piano, all other synths and drum machines and computers available. Other MIDI Equipment: All available. Video Equipment: Sony WEX-2000 special effects, Sony 5800 VCRs, Fortel Y-688 time base corrector, Ikegami cameras, Chyron VP-1 graphics, fully integrated multi-format editing system. Rates: Call for rates

[24+] **FUTURE SOUND:** 1842 Burleson Ave., Thousand Oaks, CA 91360; (805) 496-2585. Owner: Randy Dew. Studio Manager: Randy Dew

[24+] **GALAXY SOUND STUDIOS:** 1635 N. Cahuenga Blvd., 3rd Floor; Hollywood, CA 90028; (213) 461-1971. Studio Manager: Nyia F. Lark. Engineers: Nyia F. Lark, independents. Dimensions: Room 1: 3,000 sq. ft. Room 2: 1,200 sq. ft. Mixing Consoles: SSL 4000E 56 x 56 w/Total Recall. Audio Recorders: (2) Studer A800 24-track, Studer A80 2-track, Studer A820 2-track. Cassette Recorders/Duplicators: Nakamichi MR-1, Nakamichi MR-2, (2) Aiwa. Noise Reduction Equipment: Dolby 24 rack units. Synchronization Systems: (2) Lynx

TimeLine units. Echo, Reverb, & Delay Systems: (2) EMT stereo plates, (2) AMS RMX 16 reverb units, (2) AMS DMX 15-80S, Lexicon 224XL digital reverb, Lexicon Super Prime Time, (2) Lexicon PCM70. Other Outboard Equipment: (2) Aphex II Aural Exciter, Orban Parasound sibilance controller, (6) Drawmer gates, (6) dbx 902 rack, Eventide 949 Harmonizer, (3) Yamaha SPX90II, (3) Yamaha REV5, (2) UREI 1176 limiter, (2) UREI LA-3A limiter. Microphones: (4) Sennheiser 441, (3) Neumann 84, (5) Neumann U87, (4) AKG 414, (3) Neumann U89, (4) Sennheiser 421, (3) Neumann U47, (6) AKG C460, (3) Crown PZM. Monitor Amplifiers: (4) BGW 250E, (2) BGW 750. Monitor Speakers: JBL Augspurger custom main, Yamaha NS-10M, Auratone 5C. Video Equipment: Sony VCR camera, Sony VCR monitor (for rehearsal room). Other: (12) AKG 141 headphones, Stewart and mini cube DIs. Rates: All rates are negotiable from book rate. Supplied upon request

[24+] **GATEWAY STUDIOS:** 6381A Rose Lane; Carpinteria, CA 93013; (805) 684-8336. Owner: Jim Messina. Studio Manager: Amy Foster. Engineers: Peter Bergren, independents. Dimensions: Studio 23 x 27, control room 18 x 23, piano isolation 11 x 16, vocal isolation 11 x 13. Mixing Consoles: Soundcraft Series 2400 28 x 24, Audio Recorders: Studer A80 24-track, Studer A80 2-track 1/2", Scully 4-track 1/2", Scully 2-track 1/4", Otari 2-track 1/4", 1/4" stereo cart rec/reproducer. Echo, Reverb, & Delay Systems: AMS DMX 15-80S stereo digital delay, AKG BX-20E1 spring reverb, Lexicon 480. Other Outboard Equipment: Valley People trans-amps, Drawmer dual gates, Pultec EQP-1, Pultec EQP-1A3, Pultec PEQ-MEG-5, UREI 175, UREI 175A, UREI 1176, Teletronix and leveling amps, UREI EQs, Langevin 252-A, Altec 9073A graphic EQ. Microphones: AKG, Beyer, Neumann, Crown, RCA, E-V, Schoeps, Sennheiser, Shure, Sony, B&K. Monitor Amplifiers: Phase Linear 700B. Monitor Speakers: Altec 604E w/Mastering Lab crossovers and Super Red 15" sub-woofers. Musical Instruments: Roland JX-10 w/programmer and Roland Juno-106, Yamaha DX7FD, Yamaha C7E grand piano, Oberheim controller keyboard, Moog Minimoog, Linn 9000 w/sampled drums, Seymour Duncan amps, guitar rentals, Fender, Gibson, Dobro, Martin, etc. Macintosh w/Jam Box F-550, Roland D-50. Video Equipment: Video monitoring w/BNC connector for hookups, Lynx sync system. Rates: Call for rates

[24+] **GOLDEN GOOSE PRODUCTIONS:** 2074 Pomona Ave., Costa Mesa, CA 92627; (714) 548-3694. Owner: D & E Rose. Studio Manager: D.P. Rose. Engineers: D.P. Rose, Mark Madden, Ken Rains, Rick DeLong, John Whitney. Dimensions: Studio 20 x 22, control room 18 x 17. Mixing Consoles: Custom in-house design/Spectra Sonics, API 40 x 40. Audio Recorders: Ampex MM-1100 24-track, Ampex MM-1100 16-track, Ampex ATR-100 2-track, Ampex AG-440C 2-track, Hitachi PCM-V 300 2-track digital, Sony PCM-1 2-track. Cassette Recorders/Duplicators: Nakamichi 600, KABA duplication real-time and two-speed, A/W/A WX10 2x and real-time duplication. Synchronization Systems: EECO BE 450 SMPTE synchronizer. Echo, Reverb, & Delay Systems: (2) Ecoplate III, Lexicon PCM60 digital reverb, Yamaha REV7 digital reverb, (2) Lexicon PCM40 DDL, Yamaha SPX90 DDL, DeltaLab ADM64 Efectron DDL, DeltaLab ADM 4096 Echotron DDL sampler, Marshall Time Modulator, AKG BX10 reverb, Eventide H910 Harmonizer. Other Outboard Equipment: (4) dbx 160 comp/limiter, Orban Parasound "stereo" parametric EQ, (2) Altec Acoustavoice 1/3-octave EQ, Altec passive octave graphic EQ, Allison Gain Brain, (2) Allison Kepex, UREI Universal Audio digital metronome, (4) API 550A equalizer, (6) UREI dual band EQ, mic preamp, "extra clean" 30 db of headroom, API filter set HP/LP. Microphones: Neumann U47, Sony C-500, (2) AKG C-414E, (2) AKG C-414EB, (2) AKG C-451E, (2) Neumann KM84, (2) RCA 77DX, (2) Beyer M160 dual ribbon, E-V 666, E-V RE20, Sennheiser 421, Sony ECM-22D, Sony ECM-250. Monitor Amplifiers: Great American Sound, BGW 500B, (2) Marantz 240. Musical Instruments: Steinway studio grand piano, Hammond M10 organ, Moog Micro-moog synth, Fender Rhodes 88 elec. piano, Fender P. bass, Gibson Les Paul Custom guitar, Guild Jumbo acoustic guitar, Jose Ramirez Flamenco guitar, Oberheim DMX drum machine, Roland PV guitar synth, Fender Twin Reverb amp, Roland Jazz Chorus 70 amp, Scholz Rockman, misc. Latin percussion instruments. Monitor Speakers: (2) control room main UREI 813 W604E, secondary JBL 4311 and custom near-field, (2) Altec 604E w/custom crossover. Video Equipment: 25" monitor, Panasonic stereo audio VHS VCR, Magnavox VHS VCR, Panasonic camera w/lr/tpod. Rates: Call for rates (714) 548-3694 10 a.m. until 10 p.m.

[24+] **GOLDMINE RECORDING STUDIO:** also REMOTE RECORDING; 1393 Callens Rd.; Ventura, CA 93003; (805) 644-8341. Owner: Goldmine Productions. Studio Manager: Jeff Cowan. Engineers: Mike Horn, Jeff Cowan, Bob Spittle. Dimensions: Studio 40 x 26 x 12, control room 18 x 16, iso 26 x 16 x 12, 9 x 10 x 12. Mixing Consoles: NEOTEK Series II 28 x 24 w/Jensen 990s. Audio Recorders: Otari MTR-90 24-track, TEAC 80-8 8-track, Otari 5050B 2-track, Technics 1506 2-track. Cassette Recorders/Duplicators: (2) Sansui SC-1110, (2) Aiwa F-770. Echo, Reverb, & Delay Systems: Lexicon Prime Time DDL, MXR DDL, DeltaLab Efectron, Eventide H910 Harmonizer, Yamaha REV7, Yamaha REV5, Korg DRV-3000, Roland SRV-2000 digital reverb, Ecoplate II. Other

—CONTINUED ON NEXT PAGE

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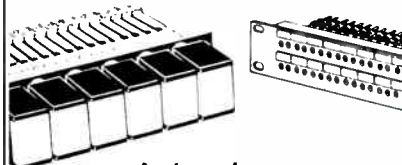
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Outboard Equipment: UREI LA-2A limiters, UREI 175 limiters, dbx 161, Valley People noise gates, Omni Craft gates. Microphones: Neumann, Sennheiser, Sony, AKG, Shure, Crown PZM, E-V, RCA 44A, RCA 77D. Monitor Amplifiers: Hafler DH500, Fostex 600, Phase Linear 700B. Monitor Speakers: UREI 813, Yamaha NS-10, Auratone. Musical Instruments: Yamaha C7 grand piano, Yamaha DX7, Yamaha CP80, Yamaha PF15 electronic piano, LinnDrum, J.L. Cooper drum chest, Marshall guitar amp. Rates: \$55/24-track, \$35/8-track, \$30/2-track, block rates available.

[24+] **GROUND CONTROL**, 1602 Montana Ave., Santa Monica, CA 90403; (213) 453-1255. Owner: Paul Ratajczak. Studio Manager: Lisa Roy. Dimensions: Room 1 studio 60 x 23, control room 23 x 24. Room 2 studio 10 x 21, control room 15 x 25. Mixing Consoles: SSL 4060E 60 x 48 w/Total Recall, Amek M3000 36 x 24, Neve V88 60 x 32 60-ch w/Neacm 96 Audio Recorders: Otari MTR-90 24-track, Studer A820 2-track, Studer A80 2-track, ATR-100 2-track, ATR-100 2-track 1/2" and 1/4". (2) Studer A820 24-track w/sync out mod, Mitsubishi X-850 32-track digital, (2) Studer A800 MkII 24-track, (2) Studer 820 2-track (1/2" and 1/4" heads), Studer A80 2-track 1/2" Cassette Recorders/Duplicators: (4) Aiwa, (2) Sony 777 Noise Reduction Equipment: (2) Dolby SR 48 channels available for A820 24-track machines. Synchronization Systems: (4) Lynx modules, (3) Adams-Smith Echo, Reverb, & Delay Systems: Lexicon 480XL, Lexicon 224XL, (4) Lexicon PCM70, (2) Eventide 2016, (8) Yamaha SPX90, (4) Yamaha REV7, (8) Roland SRV-2000, AMS RMX 16, 7" Ecoplate, AKG BX-20E, (2) Quantec QRSXL w/Atari 1040ST computer, Yamaha REV-1, (2) T.C. Electronic 2290 32-sec., (2) T.C. Electronic, (2) Eventide H3000 Harmonizer, Drawmer M500. Other Outboard Equipment: (4) UREI 1176, (4) Allison Gain Brains, (3) dbx 165, (3) dbx 902 de-essers, (2) Valley People Dyna-Mite, (2) dbx 160, (2) MDB window recorders, (4) SRV-3000, (2) Pultec EQP1, (2) Eventide 949 Harmonizers, AMS DMX 15-805, Aphex II System, (2) MXR Delay II, (2) Massenburg EQs, (2) Massenburg mic preamps, (2) MXR phasers and flangers, Marshall time modulator, (4) Srate gates, (4) Kepex II, (4) Gatec, (2) MiCMIX flangers, Pultec EQP-1A3. Microphones: Neumann U67, Neumann U87, Neumann KM84, Neumann U47F, Cinc Church, AKG C-12, AKG D-12E, AKG 451, AKG PML DC-63, AKG 414, AKG C-60, Telefunken 251, RCA 77, E-V 666, Sennheiser 421, Altec 195, Shure SM57s. Monitor Amplifiers: Perreux 2150B, Perreux 1850, Perreux 8000, Threshold, Hill, Hafler, Studer A68. Monitor Speakers: TAD TSM-1 w/third center channel (studio A), TAD TSM-2, Yamaha NS-10, Tannoy NFM-8, Tannoy NFM-10, Fostex RM780, Visonik David 9000, Sony APM-700, Dahlquist DQ-10 and, Stax electrostats, Tannoy SGM-10B, Quesed Musical Instruments: Yamaha C7 grand piano, Rhodes 88 electric piano, ARP 2600, Hammond B3 organ, selection of electric and acoustic guitars. Video Equipment: Sony BVU-800 1/4". Rates: Available upon request.



GROUP IV RECORDING, INC.
Hollywood, CA

[24+] **GROUP IV RECORDING, INC.**, 1541 N. Wilcox Ave., Hollywood, CA 90028; (213) 466-6444. Owner: Angel Balesler, Dennis Sands. Studio Manager: Elissa Kline. Extras & Direction: Group IV Recording has set the pace for film scoring studios in Hollywood. Founded over a decade ago by co-owners Angel Balesler and Dennis Sands, Group IV has contributed to the scores of such box office hits as *Back to the Future*, *On Golden Pond*, *Flashdance*, *Outrageous Fortune* and *Broadcast News*, just to name a few. In addition to music scoring for television and film, Group IV has facilities allowing full audio production and post-production services, capable of handling 35-mm film or 1" video. Consultation and package bids available. Call for rates.

[24+] **HALLMARK PRODUCTIONS & STUDIOS**, 31320 Via Colinas, Ste. 118, Westlake Village, CA 91362; (818) 991-4857. Owner: Steve Hallmark. Studio Manager: Steve Hall-

SOUTHERN CALIFORNIA 24+ TRACK STUDIOS

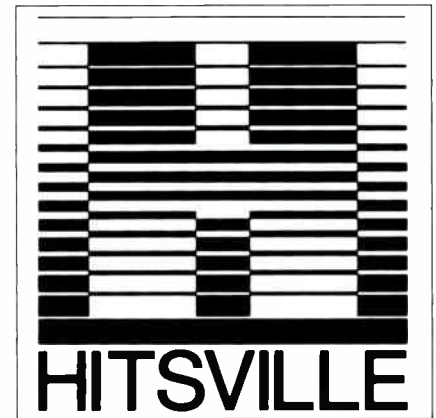
mark Engineers: Steve Hallmark, Curt MacDonald, various independents. Dimensions: Room 1 studio 10 x 14, control room 14 x 17. Room 2 video/editing 10 x 12. Mixing Consoles: Soundcraft 2400 28 x 24 (52 in remix) Audio Recorders: Soundcraft 760 MkIII 24-track, Otari 5050BII 2-track. Cassette Recorders/Duplicators: Aiwa 6900, Yamaha C200. Synchronization Systems: Fostex 4030, Fostex 4035. Echo, Reverb, & Delay Systems: Lexicon PCM70 w/current software, (2) Yamaha SPX90II w/current software, Yamaha REV7, (2) Roland SDE-3000 DDL, (2) ADA 1024 DDLs. Other Outboard Equipment: dbx 166 comp/lim/gate(stereo), (2) Symetrix 155 comp/lim/gate/exp (stereo), BBE 202R, Aphex Type B Microphones: AKG, Sony, E-V, Sennheiser, Shure. Monitor Amplifiers: Crown, AB Systems. Monitor Speakers: JBL 4411, Tannoy NFM-8, Yamaha NS-10, Auratone, Fostex T10. Musical Instruments: Yamaha TX816, Sequential Circuits Prophet-VS, Kurzweil 1000 PX, Oberheim DPX-1 w/library, Roland D-50, Roland Jupiter-6, Roland MKS-70, Roland Super JX mod., Roland MKS-20 digital piano, E-mu SP-12 drum machine w/drum file library (over 500 samples), E-mu Emulator II+ w/library, Yamaha KX88 keyboard controller, Roland Octapad w/drum workshop trigger pedal, Ibanez elec guitar, Washburn elec/acoustic guitar, Ibanez bass guitar. Other MIDI Equipment: Apple Macintosh Plus w/2 1/2 meg RAM and 30 meg hard disk drive, Opcode time code machine (SMPTE-MIDI converter), Sonus Mac interface, Roland SBX-10 sync box (click, PPQ, FSK, etc.), KMX 15 x 16 MIDI patch bay, software includes "Performer" sequencing, editor/librarians for D-50 DX7, TX816 and SP-12. Video Equipment: Sony 25" video monitor, Sony 1/4" VTR w/address track, Panasonic 1/2" VTR. Rates: \$65/hr (includes all equipment, instruments, computer and engineer!)

[24+] **HEADWAY STUDIOS**, 7560 Garden Grove Blvd., Westminster, CA 92683; (714) 891-8548. Owner: Steve McClintock. Studio Manager: Catherine McClintock.

[24+] **HIT CITY WEST**, 6146 W. Pico Blvd., Los Angeles, CA 90035; (213) 852-0186. Owner: Jason Bell. Studio Manager: Jason Bell. Engineers: Jason Bell, Ron McCoy, John Hiler, Kevin O'Connor, Richard Schweitzer. Dimensions: Room A studio 18 x 30, control room 16 x 15. Room B 13 x 5, control room 13 x 15. Mixing Consoles: Soundcraft Series 2400 28 x 52 x 24 ("A"), Soundcraft Series 600 24 x 6 ("B"). Audio Recorders: MCI JH-114 24- and 16-track w/autolocator (transferless), Tascam 85-16B 16-track w/dbx noise reduction, Otari 4- and 2-track, Ampex ATR-102 2-track (transferless), MCI JH-110 2-track, Akai GX624 1/4-track Cassette Recorders/Duplicators: Harman Kardon Noise Reduction Equipment: Drawmer noise gates, Kepex gates, ADR Vocal Stresser Echo, Reverb, & Delay Systems: Lexicon 224X digital reverb, EMT Gold Foil, (2) Yamaha REV7 digital reverbs, Lexicon PCM70, Master-Room Super C, Master-Room XL-305 stereo reverb, Ursa Major Space Station, Countryman flanger/phaser, DeltaLab DL-2 Acousticcomputer, Eventide 910 Harmonizer, Eventide 949 Harmonizer, Eventide Instant Flanger, Lexicon Prime Time and Lexicon Prime Time II, Roland SDE-3000 digital delay, (2) Yamaha SPX90. Other Outboard Equipment: UREI Model 545 parametric EQ, UREI Model 537 1/3-octave graphic EQ, Technics Model 9010 parametric EQ, dbx 160, dbx 165, dbx 160X, UREI 1176, Allison Gain Brains, Orban de-esser (5 channels), EXR SPL psycho-acoustic processor, UREI digital metronome. Microphones: AKG, RCA, Beyer, Countryman, Crown, Neumann, Sennheiser, Sony, Telefunken. Monitor Amplifiers: HH Electronic, Crown, SAE, Technics. Monitor Speakers: JBL custom monitors w/wood horns, TAD and JBL drivers, Yamaha NS-10M and Auratone. Musical Instruments: Knabe grand piano, Casio CZ-101, Prophet-2000 sampling keyboard (complete library), E-mu SP-12: drum machine (complete library), Yamaha DX7II, Roland D-50, Roland Juno-106. Video Equipment: Lynx Time-Line synchronization system, JVC CR 6650U 1/4" video recorder/player, Sony monitors. Other: (2) cart machines, CD player and sounds on CDs. Rates: Call for rate information. Extras & Direction: New MIDI studio w/Mac file, full real-time tape duplication, sound effects and music library Bobby Womack, Wall of Voodoo, Motley Crue, Babylon Warriors, The Dillards, Freddy Hubbard, L.L. Cool J., Dwight Yoakam, Mojo Nixon, Honey-moon Suite, The Alarm, Slayer, Red Hot Chili Peppers and major advertising agencies are among the clients who have found that our experienced, knowledgeable staff, the professionally designed state-of-the-art studios and comfortable working environment make Hit City West an ideal place to bring their projects. New studio coming soon to Hit City West! We are expanding eastward to enlarge the studio and provide another large facility and live room.

[24+] **HIT SINGLE RECORDING SERVICES**; also *REMOTE RECORDING*; Marketplace at the Grove, Lower Ct. #4; San

Diego, CA 92115; (619) 265-0524. Owner: Scottman Ltd. Studio Manager: Randy Fuelle.



HITSVILLE STUDIOS
West Hollywood, CA

[24+] **HITSVILLE STUDIOS**, 7317 Romaine St., West Hollywood, CA 90046; (213) 850-1510; Fax: (213) 874-1420. Studio Manager: Ron S. Lagerlof.

[24+] **IGNITED PRODUCTIONS INC.**, 1645 N. Vine, Hollywood, CA 90028; (213) 461-0734. Owner: Thomas Appleton, Jr. Studio Manager: J.C. Phillips. Engineers: Paul Klingberg, Fletcher DoBrocke, Greg Barthel, Mike Axworthy. Dimensions: Studio 12 x 14, control room 25 x 30. Mixing Consoles: Neve 8058 32 x 16, (6) Wolstein 8 x 2 custom line mixers. Audio Recorders: Studer A800 24-track, Sony/MCI JH-24 24-track, Ampex ATR-100 2-track 1/2" and 1/4" stacks, Otari MTR-10 4-track, Technics 1500 2-track, Pioneer 2-track R-DAT Cassette Recorders/Duplicators: (3) Aiwa (C + 4 dbm) Synchronization Systems: Adams-Smith 2600 Echo, Reverb, & Delay Systems: Roland SRV-2000, Lexicon 224XL w/LARC, Yamaha PCM70, EMT Gold Foil, (2) Yamaha SPX90, Roland DEP-5, Yamaha REV7, Roland SDE-3000. Other Outboard Equipment: Pultec PE-1, (2) Jensen/Boulder mic preamp, UREI LA-2A, (2) UREI 1176 limiter, (2) dbx 160X compressor, dbx 166 compressor/limiter/gate, (5) Drawmer DS-201 gate, (2) Orban 526 de-esser, Aphex Aural Exciter. Microphones: Neumann U47, Neumann U67, (2) Neumann U49, (2) Neumann U87, (2) Neumann KM84, AKG 414, Shure SM7, Shure SM57 (all Neumanns except KM84 rebuilt by Stephen Paul Audio). Monitor Amplifiers: (4) Jensen 500, Times One, BGW 150. Monitor Speakers: Yamaha NS-10M studio, Tannoy SGM 10B Super Gold, Meyer 833. Musical Instruments: Fairlight IIX, Oberheim Matrix-12, (2) Yamaha DX7 w/EI, Yamaha TX816 w/8 modules, Yamaha KX88 keyboard controller, Korg EX-8000, Roland MKS-20, Roland MKS-80, Roland MPG-80, Photon MIDI guitar system, Roland S-50, Roland D-50, Moog Minimoog w/MIDI, Roland MPV-101, PPG Wave 2.2 w/MIDI. Other MIDI Equipment: Macintosh Plus w/Bernolli 40 megabyte drive, Phycologic 16/32 programmable MIDI switcher, Garfield Masterbeat, Yamaha MEP-4. Video Equipment: Sony BVU-800 1/4" Extras & Direction: Ignited Productions, Inc. studio is a 48-track state-of-the-art MIDI recording and production facility with video lockup. We have knowledgeable in-house programmers to operate the room's synthesizer, sampling and sequencing equipment and to familiarize the client with its extensive sound libraries. An assistant engineer is provided at no additional charge. First engineers are available upon request. Ignited Productions, Inc. personnel have been active in the recording industry for over 25 years. We would be happy to consult with you on your special requirements.

[24+] **IMAGE RECORDING STUDIOS**, 1020 N. Sycamore Ave., Los Angeles, CA 90038; (213) 850-1030. Owner: Harry Maslin. John Van Nest. Studio Manager: John Van Nest, Harry Maslin. Engineers: Harry Maslin, John Van Nest, Ron Dasilua, Squeak Stone. Dimensions: Room 1 studio 20 x 40, control room 14 x 20. Room 2 studio 18 x 12, control room 13 x 15. Mixing Consoles: SSL 4000E 60 x 32 w/G computer, Trident A Range 28 x 24 x 48. Audio Recorders: Studer A800 24-track, (2) MCI JH-24 24-track. Cassette Recorders/Duplicators: Aiwa, Yamaha, Technics. Noise Reduction Equipment: Dolby M-24 24-track. Synchronization Systems: (4) Lynx, Echo, Reverb, & Delay Systems: EMT 140 plate, AMS RMX 16 digital reverb, Lexicon 480L, (2) Lexicon PCM70, (2) Yamaha REV7, AMS DEX 15-80S digital delay/harmonizer, Lexicon Delta T, Marshall tape eliminator, EMT 140 plate, Lexicon 200. Other Outboard Equipment: Eventide Harmonizer, (2) AMS flanger, ADR panscan, Dyrnics cyclosonic, (4) dbx 902 de-esser, (2) dbx 160X limiter, (2) UREI LA-4 limiter, (2) Inonovics 201 limiter, (4) Drawmer noise gate, (28) Dolby units, (2) Lang PEQ-1 EQ, (2) Neve 1064 EQ, UREI metronome, Sony PCM-F1 recorder. Microphones: Over sixty available. Monitor Amplifiers: McIntosh, Yamaha. Monitor Speakers: UREI Time-Line modules, Yamaha NS-10M. Musical Instruments: Various

available upon request Other MIDI Equipment: Masterbeat, Macintosh Performer, various sequencers, various MIDI switchers, filters, channelizers, etc. Video Equipment: Video monitoring in both rooms with 3/4" or 1/2" playback Rates: Call

[24+] **INDIAN HILL AUDIO/VIDEO**; also *REMOTE RECORDING*; 224 N. Indian Hill Blvd.; Claremont, CA 91711; (714) 625-2396. Owner: C.E. Whittington Studio Manager: Terrance Dwyer Engineers: Tony Cisneros, Terry Dwyer Dimensions: Studio 22 x 37, control room 18 x 22, video suite 12 x 15 Mixing Consoles: Neve custom 40 x 24 w/Necam Audio Recorders: Ampex MM1200 24-track, Ampex ATR-102 2-track, Ampex AG-350 2-track Synchronization Systems: Fostex 4030/4035 Echo, Reverb, & Delay Systems: Lexicon 224, live chamber, Yamaha REV7, AKG BX10, Ecoplate Monitor Amplifiers: McIntosh, Crown, AB Systems Monitor Speakers: UREI 813 Time Align, Yamaha NS-10M Musical Instruments: Sequential Circuits Prophet-2000, LinnDrum, Yamaha DX7, Yamaha 7' grand piano, Video Equipment: Complete off-line 3/4" suite, Chyron VP2, Convergence Super 90 editor, graphics camera and more. Rates: Competitive!

[24+] **INDIGO RANCH RECORDING STUDIO-MALIBU**; PO Box 24-A-14; Los Angeles, CA 90024; (213) 456-9277. Owner: Richard Kaplan, Michael Hofmann. Studio Manager: Michael Hofmann Engineers: Richard Kaplan, Chris Brunt, Chuck Johnson, Thom Panunzio. Dimensions: Studio 22 x 30 plus iso rooms, control room 20 x 20 (keyboard player's dream) Mixing Consoles: "Deane Jensen"/Aengus custom 32 x 24 fully automated, plus eight echo returns and 14 sends Audio Recorders: 3M M-79 24-track, 3M M-79 2-track 1/4", 3M M-79 2-track 1/4" or 1/2", Stephens 821 4-track 1/2", Mitsubishi X-850, Mitsubishi X-80 (upon request) Cassette Recorders/Duplicators: (3) Sony 777, (2) Technics M-65 Technics M-85 Echo, Reverb, & Delay Systems: EMT 250, (3) EMT plates, Lexicon 224, (2) Yamaha SPX90, Roland SRV-2000, Alesis XT, Publison America Infernal 90, AMS available upon request, Ursa Major, Telefunken reverb, MXR 01, MICMIX MasterRoom reverb, Roland SDE-3000, (2) Eventide DDL MXR DDL, (3) Eventide Harmonizer, Marshall time modulator, J.L. Cooper Time Cube, Eventide Instant Phaser, Loft flanger Other Outboard Equipment: Teletronix LA-1, Teletronix LA-2, Teletronix LA-2A, Pultec EQP-1A, Pultec EQH-2, Pultec MEQ-5, ADR, ADR stereo comp/limiter, ADR stereo selective processor, Lang PEQ-4, Fairchild, UREI UA175, UREI UA176, Collins 26, API 550, B&B, Aengus EQs, UREI Little Dippers, RCA B&G, Gain Brain limiters, EXR Exciter, Aphex Compeller, dbx de-esser, Orban parametric EQs, Kepex I, Kepex II, (4) strate gate, (4) dbx 160, (2) UREI 1176 Microphones: AKG C-12, AKG C-12A, AKG C-24, AKG C-28, AKG C-60, AKG C-61, AKG C-451, AKG C-456, Neumann U47, Neumann M49, Neumann M249, Neumann M50, Neumann SM2, Neumann SM23, Neumann SM69, Neumann KM53, Neumann KM54, Neumann KM56, Neumann U67, Neumann U64, Neumann KM64, Neumann KM84, Neumann KM86, Neumann KM88, Neumann U87, Sony C-37A, Sony C-220 stereo, Sony C-37P, Sony C-57, Sony C-107, Sony ECM-22, Sony ECM-54, Sony ECM-56, Sony C-500, Telefunken 250 (vacuum tube), Shure, RCA, Schoeps, E-V, Altec, Sennheiser, Sony PML American, Philips Monitor Amplifiers: HH Electronic custom bi-amp 1600 watts per side, Crown DC300A, EA-31 Musical Instruments: Steinway grand piano, (2) ClapTrap, guitar accessories, most things available on request Video Equipment: The Indigo Ranch Studio's support facilities and grounds (orchards, mountains, canyon and ocean view) are very picturesque, private and conducive for film and video production Rates: Ask about our block booking rates Extras & Direction: Secluded 60-acre ranch, with satellite TV, minutes from beach, living and cooking facilities Great for artist from out-of-town and a wonderful retreat for those living in the Southern California area Indigo Ranch provides a unique environment conducive to musical creativity in a home-like but professional setting. Located in the Malibu Hills overlooking the Pacific Ocean, Indigo services top recording artists from all over the world. The 60-acre ranch offers sleeping accommodations, kitchen facilities and a gourmet cook (on request). The ranch and its fully equipped, state-of-the-art studio are beautifully maintained by an experienced and conscientious staff, doing its utmost to please clients feel welcome and comfortable We are pleased to announce that Indigo Ranch Studios is entering its second decade of continuous service to the musicians, producers and engineers of Los Angeles and the world

[24+] **INTERSOUND, INC.**; 8746 Sunset Blvd.; Los Angeles, CA 90069; (213) 652-3741. Owner: Ahmed Agrama Studio Manager: Kent Harrison Hayes

[24+] **J.E. SOUND PRODUCTION & ENTERTAINMENT**; 11323 Santa Monica Blvd.; West Los Angeles, CA 90025; (213) 479-7653. Owner: John E. Goodenough Studio Manager: John Goodenough Engineers: John Goodenough, Bob Schwartz, Kelly Martin Dimensions: Studio 28 x 24, control room 24 x 15 Mixing Consoles: Trident Series 24 36 x 24 Audio Recorders: Otari MTR-90 24-track, Otari MTR-12 2-track 1/2" and 1/4", Otari MX-70 16-track 1" Cassette Recorders/Duplicators: (4) Fisher, Nakamichi, TEAC Echo, Reverb, & Delay Systems: Roland SDE-1000, Roland SRV-2000, Lexicon PCM70, Lexicon PCM60, Lexicon Prime Time, (2) Yamaha SPX90 Other Outboard Equipment: (4) dbx 160X, (2) dbx 165A, dbx gates and de-essers. Microphones: (2) Neumann

U87, (4) Sennheiser 421, (6) Sennheiser 441, (2) AKG 414, (2) AKG 1000, (8) Audio-Technica, (4) E-V, (2) Shure, (4) Shure SM58, (2) Shure SM57 Monitor Amplifiers: BGW 8000, BGW 7500 Monitor Speakers: JBL 441, JBL 4430, Toa RS 21M, Yamaha NS-10M Musical Instruments: Yamaha DX7, Roland JX-3P, Linn 9000 digital drum and MIDI sequencer and sampling Rates: As low as \$35/hr. blocks.

[24+] **JEPHTHA STUDIOS**; also *REMOTE RECORDING*; 28561 Front St., Ste. 94; Temecula, CA 92390; (714) 676-8371. Owner: Jeff Dykhous

[24+] **J.E.R. STUDIOS, RECORDING/REHEARSAL COMPLEX**; 214 Anacapa St.; Santa Barbara, CA 93101; (805) 966-4222. Owner: John & Debra Esparza Studio Manager: John & Debra Esparza

[24+] **JINGLE BELLS PRODUCTION CO.**; 1260 N. Havenhurst Dr., #104; West Hollywood, CA 90046; (213) 656-3990. Owner: Michael Hurwitz Studio Manager: Michael Hurwitz

[24+] **FRED JONES RECORDING SERVICES**; 6565 Sunset Blvd., Ste. 211; Hollywood, CA 90028; (213) 467-4122. Owner: Fred Jones Studio Manager: John Brady

[24+] **JUNIPER APV**; 719 Main St.; Burbank, CA 91506; (818) 841-1244. Owner: Geoff Levin. Studio Manager: David Bolger

[24+] **KEY PRODUCTIONS RECORDING STUDIO**; 12933 Cantara St.; North Hollywood, CA 91605; (818) 994-4849. Owner: Bruce K. Monical Studio Manager: Bruce K. Monical

[24+] **KINGSOUND STUDIOS**; 7635 Fulton Ave.; North Hollywood, CA 91605; (818) 764-4580. Owner: Eddie King Studio Manager: Steve Cormier Engineers: Eddie King, Steve Cormier Dimensions: Studio 24 x 40, control room 19 x 27 Mixing Consoles: Amek Angela 28 x 24 w/custom modifications Audio Recorders: Otari MTR-90II 24-track, Otari MTR-10 2-track, Otari MX-5050 2-track Cassette Recorders/Duplicators: Akai GX8 3-head Echo, Reverb, & Delay Systems: Lexicon 480L w/new software, Lexicon 224XL 8 2, Lexicon PCM70, Ecoplate II, Yamaha SPX90, Roland SDE-3000, Lexicon PCM41. Effectron 256 Other Outboard Equipment: BSS 402 limiter/compressor/de-esser, (2) dbx 165 compressor, (2) Valley People Gain Brain, Drawmer noise gate, Galex 4-ch. gate Valley People Kepex II, Valley People Maxi-Q, Garfield Digital Click Microphones: AKG 414/TLS transformerless, AKG C-460, Neumann TLM170, Neumann U89, Neumann U47 FET, Sennheiser 421, Sennheiser 441, Shure SM81, Schoeps, E-V, Crown PZM Monitor Amplifiers: Carver 1 ST, Eagle II, Acoustat, Haller, BGW Monitor Speakers: Custom monitors using TAD components, Yamaha NS-10M studio, Auratone 5C Musical Instruments: Yamaha 6'6" grand piano, Roland JX-3P, Ampeg Reverb Rocket Rates: Upon request

[24+] **KITCHEN SYNC**; 5325 Sunset Blvd.; Hollywood, CA 90027; (213) 463-2375. Owner: Zamp Nicall Studio Manager: Jerry Roberts

[24+] **KREN STUDIOS, INC.**; 6553 Sunset Blvd.; Hollywood, CA 90028; (213) 461-5781. Owner: Ken Suesov, Kris Clark, Chuck Plotkin Studio Manager: Ken Suesov Engineers: Joe Hall, Ken Suesov, Russell Bracher, Ron Manus Dimensions: Studio 25 x 35, control room 22 x 25 Mixing Consoles: Mitsubishi/Westar 44 x 88 w/Compumix automation. Audio Recorders: Mitsubishi X-850 32-track digital, MCI JH-16 24-track analog, ATR-102 2-track, Studer A80 2-track, Sony PCM-F1 2-track digital Cassette Recorders/Duplicators: (3) Technics Echo, Reverb, & Delay Systems: EMT 250, Publison America, (2) Yamaha REV7, (2) Yamaha SPX90, Ecoplate, Lexicon Prime Time, Eventide DDL TC Electronic 2290 Other Outboard Equipment: Teletronix LA-2, (2) UREI LA-3A, (3) UREI 1176LN, (2) EMT PDM 156 limiter, Eventide Omnipressor, (8) Kepex noise gate, (2) Eventide and Bell flangers, Eventide Harmonizer, (6) assorted graphic equalizers Microphones: Neumann U47 (tube), Neumann U48 (tube), (3) Neumann U67 (tube), (2) Neumann U87, (2) Neumann KM86, (2) AKG C-12A, (4) Sony C-37, (4) AKG C-414, (2) RCA 44 (ribbons), E-V, Shure, Beyer, (6) Sennheiser, (2) Sony C-500 Monitor Amplifiers: (2) Perreaux, (2) Haller, (2) Crown Monitor Speakers: Lakeside monitor system, (2) Yamaha NS-10, (2) E-V Century 100A, (2) Advent, (2) UREI 813 Time Align, (2) JBL 4311 Musical Instruments: Steinway 1929 baby grand piano Rates: Call for information.

[24+] **LAHAINA SOUND RECORDING STUDIO**; 840 Waihee St.; Lahaina, HI 96761; (808) 667-2587. Owner: George Benson Studio Manager: Amos Daniels

[24+] **LARRABEE SOUND STUDIO**; 8811 Santa Monica Blvd.; West Hollywood, CA 90069; (213) 657-6750. Owner: Keda Enterprises Studio Manager: Kevin Mills Mixing Consoles: (2) SSL 4000E 56-input G Series computer w/Total Recall, plus 4 stereo modules, Neve 12 x 8 sidcar mixer Audio Recorders: (4) Studer A800 MkII 24-track, (2) Studer A820 2-track, (5) Ampex ATR 2-track, Ampex ATR 4-track, Mitsubishi X-80 2-track digital Noise Reduction Equipment: Dolby 48-tracks Synchronization Systems: (5) Lynx Echo,

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Reverb, & Delay Systems: (4) AMS DMX stereo sample, (2) AMS RMX, (2) Lexicon 480L, Lexicon 224XL, (2) Yamaha REV-1, (2) Yamaha REV5, Yamaha REV7, Sony DRE-2000A, (2) Lexicon 200, (8) Lexicon PCM42, (2) Eventide H3000 Ultra-Harmonizers, (2) Lexicon PCM70, Publison America DHM89B, (2) Yamaha SPX90 Other Outboard Equipment: (4) Focusrite Dynamic modules, (8) Focusrite EQ, (16) API 550A EQ, (4) Pultec EQP-1A, (4) Pultec EQP-1, (6) Lang PEQ-2, (4) Pultec MEQ-5, (2) GML EQ, and a large selection of outboard compressors, limiters and noise gates. Microphones: Large inventory of tube, condenser and ribbon microphones. Monitor Amplifiers: BGW, Bryston. Monitor Speakers: Custom design w/TAD components. Musical Instruments: Kawai grand piano

[24+] **L'AZUR PRODUCTIONS**: PO Box 16201; Encino, CA 91416; (818) 708-1149. Owner: Pat Giraudi, Yves Chicha, Michel Vangineau. Studio Manager: Pat Giraudi. Engineers: Patrick Giraudi, Michel Vangineau. Dimensions: Studio 9 x 11, control room 16 x 18. Mixing Consoles: Soundcraft 2400 24 x 24 modified transformerless. Audio Recorders: Otari MX-80 24-track. Technics 2-track. Cassette Recorders/Duplicators: Pioneer D1000 DAT K7, TEAC C3RX K7, Technics SLP500 CD player. Noise Reduction Equipment: Kexep. Synchronization Systems: Adams-Smith Zeta III. Echo, Reverb, & Delay Systems: Yamaha REV7, Yamaha SPX90II, Roland DEP-5, Roland SDE-2500, Lexicon PCM70, dbx comp/limit, dbx de-esser, Aphex Type C Aural Exciter, MIDVerb II, Lexicon PCM41, Lexicon Prime Time digital delay. Microphones: Neumann, AKG, Sennheiser, Shure. Monitor Amplifiers: Crown, Yamaha, Haller. Monitor Speakers: JBL 4435, JBL Control V, Yamaha NS-10M. Musical Instruments: Yamaha C7 grand piano, Oberheim Matrix-12, Oberheim O88, Sequential Circuits Prophet-T8, Yamaha D7IIIE, Yamaha DX7 plus Opcode edit library, Yamaha TX816, Yamaha TX7, Yamaha TX802, Yamaha TX81Z plus DMS edit library, D-110 multi-limbral, Roland D-50 plus edit library, Roland S-50 sampler plus ext lib., Akai S900 sampler plus ext lib., ADAP II sampler direct-to-hard disk w/Hybrid Arts. Other MIDI Equipment: Macintosh Plus w/60Mb HD, Mark of the Unicorn Performer and Composer, Studio II interface, Atari Mega ST4, Akai EWI MIDI saxophone, Yamaha PMC1 drums. Rates: \$40/hr



LION SHARE RECORDING STUDIOS
Los Angeles, CA

[24+] **LION SHARE RECORDING STUDIOS**, 8255 Beverly Blvd., Los Angeles, CA 90048; (213) 658-5990. Owner: Terry Williams, Jay Antista, Donn Chickering. Studio Manager: Terry Williams. Engineers: Jay Antista, Paul Bassett, Laura Livingston, Ray Pyle, Karl Gruenwald. Dimensions: Room 1 studio 20 x 36, control room 18 x 13. Room 2 studio 17 x 18, control room 13 x 15. Room 3 studio 18 x 20, control room 17 x 20. Mixing Consoles: Neve 8108 56 x 48 w/Necam I, Neve 8128 48 x 32 w/Necam II, API DeMedia 36 x 24. Audio Recorders: (2) Mitsubishi X850 32-track, (3) Mitsubishi X80 2-track, (5) Studer A800 24-track. Cassette Recorders/Duplicators: (8) Studer Noise Reduction Equipment: Dolby 48-tracks. Synchronization Systems: Studer TLS 2000, BTX Softouch Echo, Reverb, & Delay Systems: (3) Live acoustic chambers stereo, (6) EMT plates, (3) Lexicon 224XL w/LARC, (3) AMS RMX 16 reverb, (3) AMS DMX 15-80 DDL, EMT 250 reverb, Quantec room simulator, (3) Yamaha REV7, (4) Yamaha SPX90 Other Outboard Equipment: Publison America DHM 89-B2, GML Massenburg dual limiter, GML equalizer, Lexicon Prime Time, Lexicon Super Prime Time, limiters dbx 160, dbx 160X, dbx 162, dbx 165, Neve limiters, UREI LA-3A, Teletronix LA-2A. Microphones: Neumann M49 tube, Neumann U48 tube, Neumann U47 tube, Neumann U67 tube, Neumann U87, Neumann 47, Neumann KM86, Neumann KM84, Neumann KM88, Shure SM81, Shure SM7, Shure SM57, Shure SM56, Shure 546, Sennheiser 416, Sennheiser 435, Sennheiser 2002 binaural, Sennheiser MD-421, AKG 412, AKG 414EB, AKG 452, AKG C24 tube, E-V RE20, E-V RE15, Telefunken 250 tube. Monitor Amplifiers: H&H amplifiers, Bryston amps

Monitor Speakers: JBL custom, Yamaha NS-10, Yamaha 1000, Auratone T66, T6. Musical Instruments: LinnDrum machine, Bosendorfer piano, (2) Steinway grand piano, Rhodes 88 Eddy Reynolds. Other MIDI Equipment: Bosendorfer piano (MIDI), Hammond B3 organ (MIDI). Video Equipment: Ampex UPR2B 1" tape recorder, Sony BVU-800, Sony BVU-200, Sony Beta 1/2" and Panasonic VHS 1/2" Rates: Available upon request. Extras & Direction: Tapeless studio-Synclavier. Hardware features: 32 sampling voices, 32 synthesizer voices, 20 megabytes RAM, 16 multi-channel outputs, 100 kHz stereo sampling, MIDI, SMPTE, 160 megabyte hard disk storage, Kennedy tape division storage, mouse. Software features: 200-track sequencer, cut and paste, 1/100,000th second resolution, crossfade and reverse looping, filtering, vocal editing

[24+] **LYON RECORDING STUDIO**, also **REMOTE RECORDING**: 2212 Newport Blvd., Newport Beach, CA 92663; (714) 675-4790. Owner: Curt Lyon. Studio Manager: Naomi Davis

[24+] **MAD DOG**: 1717 Lincoln Blvd., Venice, CA 90291; (213) 306-0950. Owner: Michael Dumas, Dusty Wakeman. Studio Manager: Meryl Starbin. Engineers: Eric Westfall, Don Tittle, Rae Diled, Dusty Wakeman, Michael Dumas. Dimensions: Studio 25 x 18, control room 20 x 15, iso room 25 x 25. Mixing Consoles: Neve 8108 28 x 32 w/Necam computer-assisted mixdown. Audio Recorders: Studer A800 24-track, Ampex ATR-102 2-track, Otari MX-5050B 2-track. Cassette Recorders/Duplicators: TEAC 122HX. Noise Reduction Equipment: On request. Synchronization Systems: On request. Echo, Reverb, & Delay Systems: (2) Yamaha REV7 digital reverb, (3) Yamaha SPX90 digital reverb, Lexicon PCM70 digital reverb, Lexicon PCM60 digital reverb, Master-Room MICMIX spring reverb, (2) Roland SDE-3000E digital delay, Korg SDD-3000 digital delay, Eventide FL201 Instant flanger, Lexicon Prime Time digital delay, Ecoplate I, Eventide 910 Harmonizer, Lexicon PCM41. Other Outboard Equipment: (2) Drawmer DS-201 noise gate (dual channel), (2) Galax noise gate (4-channel), (2) dbx 165A limiter, (3) dbx 160X limiter, (2) UREI LA-4 limiter, UREI 546 dual parametric EQ, (2) UREI 537 1/3-octave graphic EQ, (2) White 1/3-octave EQ, (2) Lang PEQ-2, (2) UREI 1176LN limiter, (2) dbx 263X. Microphones: Neumann U47 tube, Neumann U67 tube, Neumann U87, AKG 414, AKG 451, AKG D-12E, E-V RE20, Shure SM56, Shure SM77, Sennheiser 421, Crown PZM, Neumann TLM170. Monitor Amplifiers: (2) Crown Micro-Tech 600, Bryston 4B. Bryston 3B. Monitor Speakers: (2) Westlake BB5M-12, (2) Yamaha Engineers: (2) Auratone 5C. Musical Instruments: LinnDrum MIDI, Robin Custom Ranger guitar, Robin bass, Fender '61 P-bass, Turner bass, (2) Fender Twin, Yamaha C7 grand piano. Other MIDI Equipment: On request. Video Equipment: On request. Other: Foxtex and AKG headphones, Countryman and Sescum direct boxes, monitors wired w/ Monster cable, mic lines wired w/Mogami cable. Rates: Call for rates



MAD HATTER RECORDING STUDIO
Los Angeles, CA

[24+] **MAD HATTER RECORDING STUDIO**, 2635 Griffith Park Blvd., Los Angeles, CA 90039; (213) 664-5766. Owner: Chick Corea. Studio Manager: Mark Francovich. Engineers: Ira Rubnitz, Larry Mah, Duncan Aldrich, Bernie Kirsh. Dimensions: Studio 38 x 26, control room 18 x 22. Mixing Consoles: Trident Series 80 computerized 40 x 24 w/GML automation. Audio Recorders: Studer A800 24-track, Studer A80 24-track, (2) Studer A80RC 2-track stereo (1/2" or 1/4"), Otari MTR-121 4-track 1/2". Cassette Recorders/Duplicators: (2) Nakamichi, (2) Yamaha Synchronization Systems: (2) Lynx Echo, Reverb, & Delay Systems: AMS 15-80S DDL, sampler and harmonizer, (2) EMT 140 stereo plates (Solid State and Tube), EMT 240 "Gold Foil" reverb plate, (2) Lexicon 224XL digital reverb, Lexicon Prime Time, Lexicon Super Prime Time, (4) Yamaha SPX90 multi-effects processor. Other Outboard Equipment: (2) Teletronix LA-2A tube limiter, Eventide 949 Harmonizer, Eventide Instant flanger, (2) UREI 1176 limiter, (2) dbx 160X limiter/compressor, (2) Sontec parametric EQ, (4) API 550A EQ, (2) Drawmer noise gate, Kexep noise gate, (2)

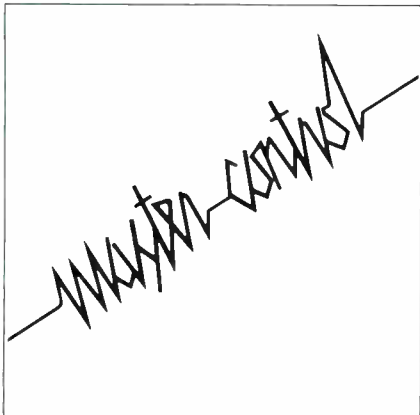
Klark-Teknik graphic EQ. Microphones: (10) Schoeps CMC3, (4) AKG 414EB/P48, (2) Neumann U67, (2) Sanken CU32, (4) Bruel & Kjaer 1/2" measurement, (4) Shure SM57, (6) Sennheiser MD-421, (2) AKG C-12, (2) AKG C-12A, (4) Neumann U87, AKG 414EB, Neumann M49, Neumann KM84, AKG D-12E, AKG D-1000E. Monitor Amplifiers: Meyer, Haller, McIntosh. Monitor Speakers: John Meyer ACD monitors, Yamaha NS-10, Tannoy SRM10-B, Auratone, JBL. Musical Instruments: Bosendorfer 9' concert grand w/MIDI, Hamburg Steinway D 9' concert grand. Video Equipment: JVC CR600 3/4" recorder/playback, 19" and 26" monitors. Other: Massenburg automation. Rates: Upon request. Extras & Directions: "The building of Mad Hatter studios is the realization of having a place where musicians could make music in a free, easy atmosphere. Our technical concept is clarity of sound. Our musical concept is the artist's vision realized." —Chick Corea. Our clients include: Prince, Robert Palmer, Chick Corea, Pebbles, Wayne Shorter, Laverne, Maynard Ferguson, Chico DeBarge, Los Lobos, Teena Marie, Jennifer Warnes, Warren Zevon, Madame X, Robben Ford, Jean Luc Ponty, Yellow Jackets and Billy Crystal. Movie soundtracks include: *Nightmare on Elm Street*, *Surrender*, *The Principal*, *Deathwish 4*, and *School Daze*



MAMA JO'S RECORDING STUDIO
North Hollywood, CA

[24+] **MAMA JO'S RECORDING STUDIO**, 8321 Lanker-shim Blvd., North Hollywood, CA 91605; (818) 982-0305. Studio Manager: Teri Pro. Engineers: Gil Morales. Dimensions: Studio 23 x 22 w/15 x 10 alcove, control room 23 x 20. 1st iso booth 16 x 12, 2nd iso booth 12 x 10. Mixing Consoles: Trident Series 80 modified w/56 GML-automated inputs and additional non-automated inputs (80 inputs overall). Audio Recorders: (2) MCI JH-16 24-track w/autolocators, (2) MCI JH-110A 2-track w/1/4" and 1/2" assemblies, ATR-104 w/4-track heads, 1/2" and 1/4" stereo heads. Noise Reduction Equipment: Dolby MH-24 noise reduction units. Synchronization Systems: BTX Shadow, Lynx Echo, Reverb, & Delay Systems: EMT 250, EMT 251, AMS RMX 16, Yamaha REV7, (2) EMT stereo plate, AMS 15-80S DDL, (3) Roland 3000 DDL, DeltaLab DL2. (2) Yamaha SPX90 Other Outboard Equipment: EQs: API 550A, B&B, UREI 545, Klein & Hummel UF 400, Langevin 251, Pultecs, limiters UREI LA-2A, UREI LA-3A, UREI 1176LN, Fairchild 660 mono, Fairchild 670 stereo, Inovonics 201, gates Allison Kexep II, Drawmer, Aphex CX-1, tube mic preamps, Lexicon Prime Time, Eventide 949 Harmonizer, Eventide DDL w/pitch chair, Lexicon PCM70 digital effects processor, Massenburg EQs, (2) dbx de-esser. Microphones: Telefunken 250, Telefunken 251, Neumann U47, Neumann M49, Neumann U67, Neumann U87, Neumann KM56, Neumann KM54, Neumann KM84, Neumann KM88, AKG C-412, AKG D-414, AKG C-451, AKG C-452, AKG C-12A, AKG C-24 and many more. Monitor Amplifiers: "NOYB" amp. Monitor Speakers: Custom 604-E w/Mastering Lab crossovers. Musical Instruments: Yamaha C7 grand piano, Hammond B3 w/Leslie, Prophet-5, DMX drum machine. Other: AMS DMX 15-80 DDL, Pultecs, Fairchild 660 mono limiters, Fairchild 670 stereo limiter, UREI LA-2 limiter, SMPTE transfers, video playback available. Rates: Please call for studio rates. Extras & Direction: We have made a "commitment to excellence," so we are constantly pursuing the best in equipment whether it's new or old, vintage type. The studio gives an at-home feeling w/a full kitchen area and comfortable lounge. We have recently done work on LP projects for George Duke, Howard Hewitt, Stephanie Mills, Jennifer Warnes, Sadeo Watanabe, Brenda Russell, Sherrick, Royalty, Randy Stonehill, Denise Williams, Diane Reeves, Bert Robinson, Twila Paris, Dale Bozzio, Pat Benatar, Al Jarreau, Wilton Felder, Maranatha Praise, Hideki Saijo, David Meece, Bill Gaither Trio, Ziggy Marley, Judy Whaley, Wang Chung, Richard Souther, Terry Talbot, Lee Aaron, Leslie Phillips, Soundtracks, Golden Child, Beverly Hills Cop II, *Hunk*, *Miami Vice*, *Toki*, *Cries*, *Roby Duke*, Vanessa Williams, Gary Taylor, Steve Green, Smitty Price and Harlan Rogers, Nia Peeples, Steve Kujala, Bash-N-The Code, Angela Bolil.

[24+] **MARTINSOUND RECORDING STUDIOS**; 1151 W. Valley Blvd.; Alhambra, CA 91803; (818) 281-3555; Fax: (818) 284-3092. Owner: A.J. Martinson. Studio Manager: Annette Martinson. Engineers: Shawn Micheal, Bill Stein, Greg Potter. Dimensions: Room 1 studio 45 x 48. Room 2 studio 23 x 14. Mixing Consoles: Trident Series 80 40 tracking/68 mix/26 bus/5 aux and "flying faders" automated mixing, MCI JH-416 24 x 16. Audio Recorders: (2) Sony/MCI 24-track 1986. Noise Reduction Equipment: Dolby 24-track, Dolby 4-track, Dolby 2-track. Synchronization Systems: Lynx 3 units, house sync, pacer. Echo, Reverb, & Delay Systems: AMS, (2) Yamaha REV7, (2) Lexicon SPX90, EMT plates. Other Outboard Equipment: Misc. EQ equipment, Kepex II noise gates, silent clock, misc. digital delay lines, UREI LA-2A modified. Microphones: Over 60 tube and condenser mics. Monitor Amplifiers: Boulder Monitor Speakers: UREI Time Align w/Yamaha NS-10M mini monitors, JBL 604 w/Yamaha NS-10M mini monitors. Musical Instruments: Steinway 7' grand, Yamaha 7' grand. Video Equipment: Sony 3/4" U-matic deck, (2) Sony color monitor. Other: Digital metronome. Rates: Studio I \$110-\$150/hr. Studio II \$80/hr.



MASTER CONTROL
Burbank, CA

[24+] **MASTER CONTROL**; 3401 W. Burbank Blvd.; Burbank, CA 91505; (818) 842-0800. Owner: Aseley Otten, Steve Catania. Studio Manager: Aseley Otten, Steve Catania. Engineers: Steve Catania, Aseley Otten, Ted Pattison, independents. Dimensions: Main room 58 x 24, iso room 14 x 18, vocal booth 7 x 8, control room 20 x 24. Mixing Consoles: SSL 4048E 52 x 32 w/G Series computer and Total Recall. Audio Recorders: Studer A80 VU-Ki III 24-track, Studer A80 RC-MK II 2-track (1/4" and 1/2"), Revox PR-99. Cassette Recorders/Duplicators: Studer A710, Revox B215. Noise Reduction Equipment: Available upon request. Synchronization Systems: Lynx TimeLine synchronizer, Echo, Reverb, & Delay Systems: Lexicon 224XL, Lexicon 200, Lexicon PCM70, Lexicon PCM42, AMS RMX 16 digital reverb, AMS DMX 15-80, (2) Yamaha REV7, Eventide 949 Harmonizer w/de-glitch, (2) Roland SDE-3000, Effectron II 1275 DDL. Other Outboard Equipment: UREI LA-2A, (2) UREI 1176 limiter, (2) dbx 160X limiter/compressor, Valley People 430, Valley People Dyna-Mite limiter/gate, (2) CBS Audimax II RZ limiter, (2) API 560 graphics, Pultec EQP-1, Pultec EQP-1A, Pultec EQP-1S, Pultec EQH-2, Pultec MEQ-5, Pultec HLF-3C filter, Drawmer gates, Eventide Instant phaser, Klark-Teknik DN332 graphic EQ, Trident A Range input EQ module, UREI LA-3A, Inovonics 201 limiter, Aphex II exciter, dbx 902 de-esser, Massenburg EQ. Microphones: AKG "The Tube", AKG 414/P48, AKG 451, Beyer M 160, Crown PZM, E-V 665, E-V 666, Neumann U87, Neumann U47, Neumann KM84, Neumann KM85, RCA 77-DX, Sennheiser 421, Shure SM77, Countryman, Westlake and Jensen DI boxes, Shure SM81. Monitor Amplifiers: Crown PSA-2, Eagle 2A, Studer A68, Crown 150, Crown 75, Haller P500, Hill 3000. Monitor Speakers: JBL 4435, JBL 4311, Tannoy SRM-12B, Yamaha NS-10M, Auratone 5C, Realistic Minimus 7, JBL 4406. Westlake BBSM-4. Musical Instruments: Steinway C grand piano, Hammond B3 w/Leslie, LinnDrum and others upon request. Video Equipment: 26" SVT, NTSC, PAL. SECAM color monitor. Rates: \$145/hr. Call for block bookings. Extras & Direction: Credits include Madonna, Loverboy, Cock Robin, REM, Bernie Taupin, Crystal Gayle, Strypker, Eddie Rabbitt, Kenny Rogers, Poison, Juice Newton, Sergio Mendes, Dream Syndicate, Reckless Sleepers, Hunters & Collectors, Devo, Robert Tepper, The Eurythmics, Del Lords, Herbie Hancock, Bus Boys, Cheech Marin, Dream Academy, Alice Cooper.

[24+] **MASTER TRACKS RECORDING & MULTI-MEDIA**; 402 Loma Alta Dr.; Santa Barbara, CA 93109; (805) 966-6374. Owner: T. David Sommers. Studio Manager: T. David Sommers. Extras & Direction: Master Tracks specializes in serving the Christian community. It is our desire to facilitate Christian projects by providing a comfortable atmosphere for those who believe. The focus of this facility is to provide a creative atmosphere for those to whom quality is an essential ingredient.



MAXIMUS RECORDING STUDIOS
Fresno, CA

[24+] **MAXIMUS RECORDING STUDIOS**; also **REMOTE RECORDING**; 2727 N. Grove Industrial Dr., Ste. 111; Fresno, CA 93727; (209) 255-1688. Owner: Jeff Hall. Studio Manager: Leigh Ratliff. Engineers: Jeff Hall, Eric Seaberg, Nye F. Morton, Loyd Clift, independents. Dimensions: Room A studio 28 x 34, control room 24 x 19 w/machine room, iso room 16 x 21. Room B studio 21 x 29, control room 24 x 18, iso room 12 x 15. Room C studio 9 x 10, control room 16 x 10. Studio D Mix. Mixing Consoles: Harrison MR-3 48 x 24 w/autoset, Harrison MR-3 32 x 24, Sound Workshop Logex 8 12 x 8. Audio Recorders: Studer A800 MkII 16- and 24-track, Studer A80 16- and 8-track, (5) Studer 810 and A80RC 2-track, (5) Revox PR-99 2-track, Nagra IV-S 2-track w/sync, Otari 5050B 2-track. Cassette Recorders/Duplicators: Studer, Sony, Akai, Telex. Noise Reduction Equipment: dbx. Synchronization Systems: Q Lock 3 10. Echo, Reverb, & Delay Systems: Lexicon 224X w/LARC, Ecoplate III, live room, Yamaha, Lexicon, Lexicon Prime Time II, Super Prime Time, Eventide 949, Ibanez 1000+, more. Other Outboard Equipment: UREI Orban Paramount, dbx, EXR, limiting, Aural Exciters, etc. Most of the normal stuff. Microphones: AKG 414EB/P48, AKG 460, AKG C-34, AKG D-12, E-V RE20, Sennheiser 421, Sennheiser 441, Wahnbrock PZM, Beyer, Audio-Technica, etc. Monitor Amplifiers: Crown DC-300, Crown DC-75, Crown PS-200, McIntosh tubes. Monitor Speakers: Augspurger custom, E-V Sentriv 500, E-V Sentriv 100, Yamaha NS-10M, Fostex, Auratone. Musical Instruments: Emulator II, Yamaha DX7, Oberheim Xpander, E-mu SP-12, Yamaha QX1, Yamaha TX7, 360 Systems MIDI Bass, Korg Poly 61-M, Yamaha SPX90, Rockman, Oberheim Matrix-6R, Kawai K5M, Mac Plus w/ Sound Designer, Drumulator, Yamaha grand piano, Kawai grand piano, Prophet-5, Fender Rhodes piano, Marshall, Fender, Stage, Road, Peavey instrument amps, Tama drum kit, plus more... the list keeps getting bigger! Video Equipment: Full synchronous lockup to Sony 1" or Sony 3/4" Video production, scoring, SFX, audio post-production, sweetening. Rates: Rates start at \$60/hr (includes engineer). Block discount available. Extras & Direction: "What's a nice studio like you doing in a place like Fresno?" you may ask. Well, we're glad you did. What we're doing is winning awards for our work and servicing clients from all over the country who enjoy working in Fresno because it is convenient, cost effective and outstanding quality. Join the millions who "take their talent to the max!" Call now. Operators standing by to take your order.

[24+] **MIDILAND**; 1615 Rancho Ave.; Glendale, CA 91201; (818) 507-7982. Owner: Chris Page. Studio Manager: Scott Cochran. Engineers: Scott Cochran, David Hentschel, Chris Page, Steve Smith, Bill Jenkins, Kevin Woodman. Dimensions: Studio 12 x 24, control room 20 x 20. Mixing Consoles: Trident Series 65 40 x 24 w/custom patch bay, Hill 16 x 16 w/4 effect sends, Roland 16 x 16 w/4 effect sends. Audio Recorders: MCI 24-track w/autolocator III, Studer B67 2-track 1/4", Ampex 4-track 1/2" (on request). Cassette Recorders/Duplicators: (2) Awa F770. Noise Reduction Equipment: (2) Dolby SR (on request). Synchronization Systems: Fostex, (3) Dolby SR units (on request). Echo, Reverb, & Delay Systems: AMS DMX 15-80 digital delay, AMS DM 220 stereo flanger, Lexicon 224 digital reverb, Lexicon PCM70, Yamaha SPX90, Yamaha REV7, Korg SDE-3000, DeltaLab DL5 harmonizer, Dyrtronic CS5 stereo tri-chorus, Marshall 5002 times modulator. Barth Vocoder. Monitor Amplifiers: BGW, Audirtronic. Monitor Speakers: (2) UREI 809A, (2) Yamaha NS-10, (2) Auratone. Musical Instruments: Yamaha C7EPE 7'4" MIDI concert grand piano, Greengate DS4 16-bit sampler w/24 secs of memory, Roland S-50 sampler, Emulator sampler, Yamaha DX7, (2) Yamaha TX7, Roland Jupiter-8, Roland D-550, Sequential Circuits Prophet-VS, Roland MKS-70, Roland MKS-20, 360 Systems MIDI Bass, LinnDrum II w/MIDI and 32k chips. Other MIDI Equipment: Macintosh SE (radius 80 meg HD) Performer 2.3, Linn sequencer, (2) Zaphod 4 x 8 MIDI switchers, Garfield Dr. Click. Video Equipment: JVC VR-7700, Fostex 4030/4035.

—CONTINUED ON NEXT PAGE

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[24+] MIXMASTERS RECORDING STUDIO; also REMOTE RECORDING; 4877 Mercury St.; San Diego, CA 92111; (619) 569-7367. Owner: Charles DeFazio Sr. Studio Manager: Jeff Jester

[24+] MUSIC GRINDER RECORDING STUDIOS; 7460 Melrose Ave.; Los Angeles, CA 90046; (213) 655-2996. Owner: Gary Skardina. Ron Fiecia. Studio Manager: Ron Fiecia. Engineers: Gary Skardina, Casey McMackin. Dimensions: Room 1: studio 40 x 65, control room 15 x 20. Room 2: studio 30 x 15. Mixing Consoles: Neve 8128 48 x 32 modified w/GML moving fader automation. Audio Recorders: Studer A800 MkII 24-track, MCI JH-116 24-track (modified 4-sp.), Ampex ATR-102 2-track w/1/2" heads, MCI JH-110 2-track. Cassette Recorders/Duplicators: (4) Awa ADS40 Synchronization Systems: (2) Lynx TimeLine Echo, Reverb, & Delay Systems: AMS RMX 16, Lexicon PCM70 w/version 3 software, Lexicon 224 digital reverb, Roland SRV-2000, Yamaha REV7 digital reverb, Eventide H-3000 Ultra-Harmonizer, TC Electronic 2290 delay w/24 sec. sampling, (2) Roland SDE-3000 digital delay, Bel BD-80 sampling delay, ADA STD-1 stereo tapped delay. Other Outboard Equipment: EMT 240 Gold Foil reverb, Yamaha SPX90 FX processor, (2) Pultec EQP-1 EQ, Teletronix LA-2 limiter, (2) UREI 1176 limiter, (2) dbx 165 compressor, (6) Drawmer 201 gate, (2) Valley People Dyna-Mite compressor/gate, Drawmer LX-20 stereo compressor, Eventide 910 Harmonizer. Microphones: (3) AKG 414EB, (4) AKG C-452, AKG D-12E, Neumann M49 tube, Neumann U47 tube, Neumann U47 FET, Neumann U67 tube, (4) Neumann U87, (6) Sennheiser 421-MU, (6) Shure SM56, Telefunken ELM-251 tube, E-V, Sony, Crown PZM. Monitor Amplifiers: JBL 6233 ice cube, (3) HH Electronic V500 amp, Crown DC-300. Monitor Speakers: Custom mains w/UREI 6048G Time Align components, (6) Yamaha NS-10, Auratone 5C, Tannoy 10M, JBL 4311 studio, Adventure SM4800 Studio Musical Instruments: Yamaha G2 acoustic piano. Video Equipment: Toshiba M4220 1/2" VHS VCR, RCA 19" monitor. Other: Custom mic stands w/Keith Monk booms, headphones by Fostex, AKG and Sennheiser, Magnavox CDB650 CD player w/remote. Rates: Call for quotes

[24+] NORWICH STUDIOS INC.; also REMOTE RECORDING; 105 S. Sparks St.; Burbank, CA 91506; (818) 980-2615. Owner: Norwich Studios Inc. Studio Manager: Ann Parr

[24+] NRG RECORDING SERVICES; 3960 Laurel Canyon Blvd., Ste. 106; Studio City, CA 91604; (818) 760-7841. Owner: Jay C. Baumgardner. Studio Manager: Jeff Robert. Engineers: Jay Baumgardner. Dimensions: Studio 20 x 30, control room 18 x 22. Mixing Consoles: Neve 8058 MkII 28 x 16, Neve Melbourne 12 x 4. Audio Recorders: Otari MTR-90 24-track, Otari MTR-20 2-1/4-track 1/2", Otari MTR-10 2-track 1/4". Cassette Recorders/Duplicators: (2) Yamaha C300 Echo, Reverb, & Delay Systems: Lexicon 480L, AMS DMX 15-80S digital delay, AMS RMX 16X, Publication America Internal Machine 90, EMT 250, Eventide H3000, Eventide SP2016, TC Electronic 2290, Yamaha REV7, (2) Yamaha SPX90. Other Outboard Equipment: (4) dbx 160X, (2) UREI 1176LN, (2) Neve comp/limiter, (2) Valley People Gain Brain, (2) Valley People DSP, (6) Valley People Kexpe II, (2) GML 8200 parametrics, (5) API 550A, (3) API 560, BEB 802. Microphones: (2) AKG C-12, (2) Neumann U87, (2) Neumann M49, (2) AKG C-451, (3) AKG 414, (5) Sennheiser 421, (5) Shure SM57, Sennheiser 441, Neumann KM54. Monitor Amplifiers: Perreux 9000B, Perreux 6000B, Nakamichi Stasis. Monitor Speakers: (2) TAD Westlake, (2) Yamaha NS-10M studio. Musical Instruments: E-mu Emu 16 sampler, Yamaha DX7II, Roland D-50, Roland digital piano, Yamaha KX88, (2) Wendel, Jr., Ampeg B15 bass amp, Vox AC30 guitar amp, Alesis drum machine. Other MIDI Equipment: Macintosh Plus, Jam Box/4 MIDI interface. Rates: \$75/hr. Block rates available

[24+] ONE ON ONE RECORDING; 5253 Lankershim Blvd.; North Hollywood, CA 91601; (818) 761-3882. Owner: James David. Studio Manager: James David.

[24+] PACIFIC RECORDING; 9626 Lurline, Unit K; Chatsworth, CA 91311; (818) 883-6922. Owner: Scott Borden. Studio Manager: Matthew Spindel. Engineers: Matthew Spindel, Robert Stamps, Scott Campbell. Dimensions: Studio 35 x 30, control room 25 x 30. Mixing Consoles: Trident Series 80 40 x 24. Audio Recorders: Otari MTR-90 MkII 24-track, Studer A80 2-track, Studer A810 2-track. Cassette Recorders/Duplicators: Yamaha Echo, Reverb, & Delay Systems: EMT 240 Gold Foil, Yamaha REV7, (2) Yamaha SPX90, Roland SRV-2000, Yamaha REV5. Other Outboard Equipment: dbx compressors, UREI compressors, Drawmer gates, Roland SDE-3000. Microphones: AKG C-12, Neumann M49, Neumann U47, Sennheiser, AKG, etc. Monitor Amplifiers: Perreux, Acoustat. Monitor Speakers: JBL 4435, Yamaha NS-10, Auratone. Rates: Call for rates, block rates available

SOUTHERN CALIFORNIA 24+ TRACK STUDIOS



PACIFIQUE RECORDING STUDIOS
North Hollywood, CA

[24+] PACIFIQUE RECORDING STUDIOS; 10616 Magnolia Blvd.; North Hollywood, CA 91601; (818) 761-8042. Owner: Vasken Inc. Studio Manager: Joe Derantenasian. Engineers: Ken Derantenasian, Dennis Moody. Dimensions: Room 1: studio 35 x 30, control room 25 x 25. Room 2: studio 20 x 20, control room 25 x 25. Mixing Consoles: Neve V Series 60 60-input, Trident 80B 32-input. Audio Recorders: Studer A820 24-track, Otari MTR-90 II 24-track, Studer A820 2-track 1/2", Otari MTR-12 2-track 1/2", Otari MTR-12 2-track 1/4". Cassette Recorders/Duplicators: (2) Nakamichi MR-1 Synchronization Systems: Adams-Smith Echo, Reverb, & Delay Systems: Lexicon 224XL, AMS RMX 16, (3) Lexicon PCM70, (4) Roland SRV-2000, (3) Yamaha SPX90, Yamaha REV7. Lexicon Prime Time, Roland SDE-300C, (2) TC Electronic. Other Outboard Equipment: (5) Kexpe II noise gate, (5) dbx 160X, dbx 65A, (3) UREI 1176, Teletronix LA-2A, (2) Orban Microphones: Neumann TLM170, Neumann U89, Neumann U87, AKG 414, AKG 460, Neumann KM84, Sennheiser 421, AKG D-12, AKG 224, Shure SM81, Shure SM57. Monitor Amplifiers: Crown, Perreux, Forte. Monitor Speakers: JBL 4435, Yamaha NS-10, Tannoy. Musical Instruments: Yamaha DX7, Roland S-50, Yamaha RX5. Rates: On request. Extras & Direction: In the two years we've been open, we have managed to attract some of the world's finest recording artists including The Jets, George Benson, The Desert Rose Band, The Wipers, Maurice White, Dweezil Zappa, Debbie Reynolds, Tracy Austin, Brandon Fields, Free Flight, The Fowler Brothers, Osamu Kitajima, Lucia Mendes, Ned Neeson, Ute Lumper and Jun Yamagishi.

[24+] PARAMOUNT RECORDING STUDIOS; 6245 Santa Monica Blvd.; Hollywood, CA 90038; (213) 465-4000. Owner: KBF Inc. Studio Manager: Michael Kerr, Adam Bell. Engineers: Larry Goetz, Robb Xenon, Edw'n Deshazo, Bernard Mathews, Steve Conn, Ken Sutherland. Dimensions: Room 1: studio 45 x 50, control room 25 x 23. Room 2: studio 10 x 15, control room 23 x 21. Room 3: studio 20 x 15, control room 25 x 18. Room 4: studio 10 x 15, control room 15 x 12. Mixing Consoles: Harrison 32/C 40 x 40, (2) Sony/MCI 500 32 x 32, (3) Amek 2028 32 x 24, (4) Soundcraft 400 26 x 24. Audio Recorders: Studer A80 24-track, (3) Sony/MCI JH-24 24-track, (3) 3M 79 24-track, (3) Studer A80 2-track, Studer A80 4-track, (2) Fostex B-16 16-track. Cassette Recorders/Duplicators: (3) Nakamichi, (3) TEAC 3300 Noise Reduction Equipment: (2) Dolby A, (2) Dolby SR. Synchronization Systems: (3) BTX 4500, (2) Fostex 4035 Echo, Reverb, & Delay Systems: (2) AMS RMX 16, (2) AMS 15-80, Lexicon 224, Lexicon 200, (2) Lexicon PCM70, (2) EMT 140 stereo plates, (10) Yamaha REV7, (10) Yamaha SPX90, (6) Roland SDE-3000, (3) Lexicon PCM41. Other Outboard Equipment: (6) Drawmer gate, (10) Kexpe gate, (6) Pultec tube EQ, (4) Lang EQ, (4) API 550A EQ, (2) LA-2A comp, (10) 1176, (5) dbx 165/160X, (4) Massenburg mic preamps. Microphones: Telefunken Elam 251, (2) AKG C-24 stereo tube, (2) Neumann M49, (10) Neumann U87, (10) AKG 414, (2) Neumann U47 tube and FET, (4) Neumann KM84, (10) Sennheiser 421, (20) Shure SM57, (5) AKG 451, Neumann U67. Monitor Amplifiers: (3) UREI 813, UREI 815, (5) Yamaha NS-10. Monitor Speakers: (10) Yamaha 2200, (5) BGW 750, (5) Crown DC-150. Musical Instruments: (2) Synclavier music systems, (2) Roland D-50, (2) Yamaha DX7, (2) Macintosh SE computers, (2) Akai S900, Yamaha TX816, (2) E-mu SP-12 drum computer, Ensoniq Mirage Stein-

way grand piano. Video Equipment: Sony BVU-800 3/4", (2) JVC 6600 3/4", Sony VHS, Sony Beta. Rates: A = \$70, B = \$50, C = \$40, D = \$30

[24+] PEACE IN THE VALLEY RECORDING; also REMOTE RECORDING; PO Box 905; South Pasadena, CA 91030; (818) 897-2249. Owner: Joe Bellamy. Studio Manager: Joe Bellamy

[24+] POST LOGIC; 6363 Sunset Blvd., Ste. 830; Los Angeles, CA 90039; (213) 461-7887. Owner: Miles Christensen, Michael Busby. Studio Manager: Charlotte Bowen

[24+] POWERHOUSE STUDIOS; 19347 Londelius St.; Northridge, CA 91324; (818) 993-4778. Owner: Paul & Jeff Stillman. Studio Manager: Paul & Jeff Stillman

[24+] PREFERRED SOUND; 22700 Margarita Dr.; Woodland Hills, CA 91364; (818) 883-9733. Owner: Scott Borden. Studio Manager: Matthew Spindel. Engineers: Matthew Spindel, Robert Stamps, Scott Campbell, Leon Johnson, various independents. Dimensions: Studio 18 x 23, control room 16 x 18, booths 9 x 10 and 11 x 12. Mixing Consoles: Trident 80B 30 x 24 w/54 remix channels. Audio Recorders: Otari MTR-90 MkII 24-track, Studer A80 2-track, Studer A810 2-track. Cassette Recorders/Duplicators: (2) Hitachi D2200M Echo, Reverb, & Delay Systems: AMS RMX 16 digital reverb, Lexicon 224 digital reverb, Cunningham Ecoplate II, AMS DMX 15-80S digital delay and pitch, (2) Lexicon Prime Time, Roland SDE-3000 digital delay, Eventide Harmonizer, Yamaha REV7. Other Outboard Equipment: (4) Kexpe II, (2) UREI 1176 limiter, LA-4 comp/limiter, (2) dbx 165 limiter, Teletronix LA-2A tube limiter, UREI digital metronome, MXR flanger/doubler, Roland stereo flanger, (8) Simon Systems RDB-400 integrated direct box. Microphones: Neumann U47 tube, Neumann U87, Neumann KM84, Neumann KM88, AKG 414, Sennheiser 421, Sennheiser MKH-405, AKG D-12E, AKG C-451E, Shure SM57, Shure SM58, Shure SM81, Sennheiser 441, Sony ECM-22P, Sony C-37A, Crown PZM, Beyer M 88, Beyer M 500, E-V RE20 etc. Monitor Amplifiers: Acoustat, SCS, Perreux. Monitor Speakers: UREI 811 time aligned, Yamaha NS-10M, JBL 4401, Auratone. Musical Instruments: Ampeg B-15 bass amp, Fender guitar amp, Kawai baby grand piano, various percussion instruments, numerous guitars and amps available through Norm's Rare Guitars. Rates: Call for rates, block rates available.

[24+] RAIN RECORDING; also REMOTE RECORDING; PO Box 297; Mountain View, HI 96771; (808) 968-6346. Owner: Ken Chikasyue. Studio Manager: Ean Chikasyue

[24+] RECORD PLANT INC.; also REMOTE RECORDING; 1032 N. Sycamore Ave.; Hollywood, CA 90038; (213) 653-0240. Owner: Christopher Stone. Studio Manager: Rose Mann. Extras & Direction: Record Plant has two facilities offering video, film and record recording studios plus two remote trucks. Our Academy Award-winning scoring stage is located at Paramount Pictures Stage M in Hollywood. In addition we are proud to announce the reopening of Studio "L," also at the Paramount Pictures location, with a 56-input SSL G Series console equipped with Total Recall. We also offer the finest equipment available for rent through Livingsone Audio and specialize in the sale of digital equipment through Audio Interval Design (A.I.D.), both of which are located in our Sycamore facility. The Hilkey-designed control rooms at Sycamore measure 29 x 32, are designed for synthesizer recording and feature video projection as well as the new 60-input V Series Neve console with GML automation (Studio 1), a 56-input SSL 4000 Series with G computer automation and Total Recall (Studio 2). Studer analog and Sony digital tape machines. Our two remote recording trucks continue to provide faultless audio for award shows as well as live recording for the world's most successful artists

[24+] RED ZONE STUDIOS; 623 S. Glenwood Pl.; Burbank, CA 91506; (818) 955-8030. Owner: Denis Degher, Frank Riesen. Studio Manager: Darius Degher

[24+] RUMBO RECORDERS; 20215 Satcoy St.; Canoga Park, CA 91306; (818) 709-8080. Owner: Daryl Dragon, Toni Tennille. Studio Manager: John Carsello. Engineers: Julian Stoll, Todd Wilson, David Gordon, Gina Immel. Dimensions: Room 1: studio 2,500 sq. ft., control room 500 sq. ft. Room 2: studio 1,000 sq. ft., control room 400 sq. ft. Room 3: studio 150 sq. ft., control room 750 sq. ft. Mixing Consoles: Neve 8088 56 x 48 w/Necam, Trident 80 56 x 24 modified, Helios 32 x 24 28 monitor w/60 inputs available for mixing, Quad Eigh 12 x 24. Audio Recorders: (2) Studer A800 MkII w/MkIII updates, (2) Otari MTR-90 MkII, Otari MTR-90 MkII, (2) Ampex ATR-104, (2) Ampex ATR-102, (2) Studer A80RC. Cassette Recorders/Duplicators: (5) Yamaha K1000, (4) Awa F-660, (2) Technics RM-85 Noise Reduction Equipment: Dolby System M24H w/CAT 22 cards. Synchronization Systems: C lock 210, Fostex 4030/4035 Echo, Reverb, & Delay Systems: (2) Ecoplate (tube), (2) EMT 140, Lexicon 224, AMS RMX 16, Lexicon Super Prime Time, (2) Yamaha REV7, Lexicon PCM70, (2) Yamaha SPX90. Other Outboard Equipment: (2) LA-2A limiter, (6) LA4 limiter, (4) dbx 160 comp/limiter, (4) dbx 160X comp/limiter, (2) Tube-Tech PEQ-1A tube EQ, (4) UREI 1176LN limiter, (2) Scamp racks (loaded), (4) API 560A EQ, (2) API 550A EQ, TC2290 sampler delay. This is just part of our

outboard inventory. Microphones: Neumann U49 tube, (4) Neumann U47 FET, (2) Neumann U87, (2) Neumann U89, (10) AKG C-414, (10) AKG C-451, (2) Neumann KM84, (2) Neumann M49, (6) Sennheiser MD-421, (12) Shure SM57. This is just a sampler, more available. Monitor Amplifiers: (12) Yamaha P2200, (8) Yamaha P2100, (4) Yamaha P2201. Monitor Speakers: (2) custom enclosures each containing (2) Gauss 4583-A w/TAD 4001 driver mounted on a N.W.S.C 340 horn, (2) custom Gauss/TAD 4001 system, (6) Yamaha NS-10, (2) Tannoy SRM-12B, (4) Altec 604-E, (4) JBL 4311WX, (2) custom enclosures loaded w/all TAD components and N.W.S.C 340 horn. Musical Instruments: (2) Yamaha C7 grand piano, Hammond A100 w/147 Leslie, Hammond B3 w/122 Leslie, LinnDrum, Oberheim DMX drum machine, almost any synth available upon request, vintage guitars available. Video Equipment: All rooms wired for video. Other: A selection of vintage guitars and bass amps. Rates: Available upon request. Extras & Direction: Studio A is very large with a 16' ceiling, suitable for large tracking dates. A 60-piece orchestra fits easily. We do low-cost pre-production work in Studio C. Both studios A and B have large comfortable lounges. Studio A's lounge also has a full kitchen along with a private patio with tiki lamps and barbecue facilities for those warm summer evenings, as well as a regulation basketball half court. Studio D is an excellent choice for mixing, overdubs and video post-production due to its enormous control and 60-input Helios console. The staff and atmosphere at Rumbo is very professional yet personal making it a very comfortable and enjoyable place to work.

[24+] **RUSK SOUND STUDIOS**; 1556 N. LaBrea Ave.; Hollywood, CA 90028; (213) 462-6477. Studio Manager: Elton Ahl. Dimensions: Room 1 studio 40 x 30, control room 17 x 16. Room 2 studio 17 x 14. Mixing Consoles: Harrison 3232B/C automated w/sonic improvements and extra sends, 32 in/out plus eight echo returns, Amek Matchless 28 x 24. Audio Recorders: Otari MTR-90 MkII 24-track, Ampex ATR-104 4-track, (2) Ampex ATR-102 2-track 1/2" and 1/4" Cassette Recorders/Duplicators: Nakamichi. Synchronization Systems: (2) Otari EC-101 sync w/SMPTE reader and generators, complete SMPTE synchronization system. Echo, Reverb, & Delay Systems: EMT 251, EMT 250 digital reverb, Lexicon 224X w/LARC 8.2, AMS RMX 16 digital reverb, Lexicon PCM60, AKG BX10, AMS 15-80S, Eventide 949 and Eventide 910 Harmonizers, Lexicon Prime Time, (2) Roland SDE-3000, programmable delay, Marshall time modulator, DeltaLab 1024 and DL1 (3 out) delays, (3) Yamaha SPX90, Yamaha REV7. Other Outboard Equipment: Teletronix LA-2 (tube) limiter, (2) UREI 1176LN, (2) dbx 161, dbx 160, Drawmer gates, Aphex

gates, (4) Valley People Dyna-Mite, Omni Craft gates, Dolby 361, dbx 154, Dynaflex, Eventide Instant Flanger, MXR doubler/flanger, MXR auto flanger, MXR pitch changer, Orban and Furman parametric EQs, (2) B+B EQF-1 EQ, SAE 20-band graphic EQ, Orban 3-channel de-esser. Microphones: Telefunken 251E, (3) Neumann U67, (3) Neumann U87, (3) Neumann U47 FET, Neumann KM84, (4) Neumann KM85, (6) AKG 414EB, (4) AKG 451EB, AKG D-1000E, AKG D-190, RCA 77DX, Sony C-37A, (2) Sony ECM-22P, Sennheiser 441, Sennheiser 421, MK40, E-V RE20, E-V RE15, E-V 666, (2) Crown PZM, (5) Shure SM57, Shure SM53. Monitor Amplifiers: Bryston, BGW Monitor Speakers: Sierra/Eastlake, 604E, JBL 4311, Yamaha NS-10, Auratone, UREI Time Align. Musical Instruments: Yamaha C7 7'6" grand piano, Yamaha DX7, Emulator II, LinnDrum MIDI, Roland Super Jupiter, Yamaha TX rack, various guitars and amps, (2) Roland S-50, Roland D-50 synth, Yamaha DX7FDII. Other MIDI Equipment: Macintosh computer w/Performer software, Opcode DX/TX, D-50 and Super Jupiter editor/librarian, Roland MC-500 sequencer. Video Equipment: Video lockup, Sony 5800 3/4" video machine, Sony XBR 25", JVC 25" monitor, JVC 13" monitor.

[24+] **SALTY DOG RECORDING AKA S.D.R. STUDIOS**; 14511 Delano St.; Van Nuys, CA 91411; (818) 994-9973. Owner: Fred J. Munch. Studio Manager: Craig W. Durst.

[24+] **SKIP SAYLOR RECORDING**; 506 N. Larchmont; Hollywood, CA 90004; (213) 467-3515. Owner: Skip Saylor. Studio Manager: Andrew McCari. Engineers: Skip Saylor, Cliff Jones, Joe Shay, Pat MacDougall, independents. Dimensions: Room 1 studio 9 x 12 (overdub booth), control room 18 x 20 w/two iso booths, control room 20 x 22. Mixing Consoles: SSL 4000 72-input frame 66 loaded, E&G Series computer, API 32-ch w/Necam automation. Audio Recorders: (2) Studer 800 24-track, Sony/MCI JH-24 24-track, (2) Ampex ATR-104 2- or 4-track headstack 1/2", (2) Ampex ATR-102 2-track 1/2" or 1/4", Ampex ATR-800 1/4" 7.5, 15, 30 ips, 32-track digital rented upon request. Cassette Recorders/Duplicators: Nakamichi MR-1, Denon DR-M44 Noise Reduction Equipment: Dolby A 24-track rented upon request. Synchronization Systems: Lynx Echo, Reverb, & Delay Systems: AMS dig rev/delay (9.2 sec), TC Electronic (32 sec), Lexicon 480L (rental), Lexicon 224XL, (3) Lexicon PCM70, Lexicon PCM60, (3) Lexicon PCM42, Lexicon Super Prime Time, Lexicon Super Prime Time II, Yamaha REV7, Yamaha SPX90, Eventide SP2016 processor, Eventide 910 Harmonizer, Eventide 949 Harmonizer, (2) Roland SRV-2000 reverb, (2) Roland SDE-3000, Roland SDE-2000, Roland SRE-555 analog chorus/echo, Ibanez SDR-1000, Effectron III. Other Outboard Equipment:

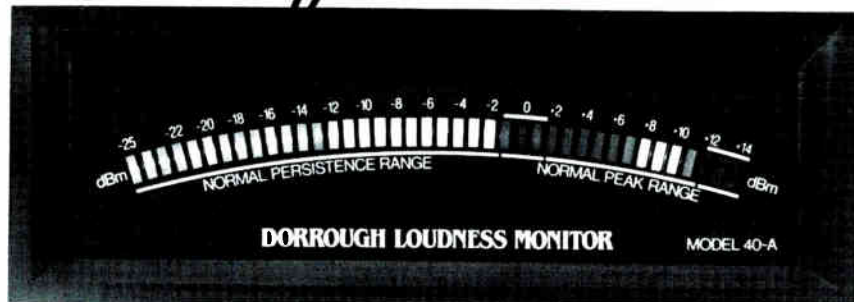


SKIP SAYLOR RECORDING
Hollywood, CA

(10) Neve Prism EQ rack, (10) API 550A EQ, (6) B&B para EQ, Focusrite EQ rack, Valley People Maxi-Q, Orban para EQ, (3) LA-2A limiter, Summit Audio tube limiter, (5) UREI 1176LN limiter, (2) Valley People Dyna-Mite limiter, (2) dbx 160X limiter, UREI LA-4 limiter, (2) dbx 903 limiter, (4) Drawmer gate, (4) dbx 904 gate, Kepex rack, (6) dbx de-esser, Orban de-esser, (2) Dynaflex noise eliminator, Aphex Exciter, Roland phaser, Roland flanger, Roland analog chorus, Roland Dimension D dbx flanger, UREI Little Dipper, (3) Studio Technologies stereo expander, UREI digital metronome, SMPTE and 60-cycle sync, ATR VSO, AKG headphones, Koss headphones. Microphones: AKG 414, AKG 452, AKG D-12E, Neumann U87, Neumann U47, Neumann KM88, Neumann TLM170, Sennheiser 421, Sennheiser 441, E-V RE15, E-V RE20, E-V 666, Beyer M 400, Shure SM5B, Shure SM57 and more. Monitor Amplifiers: Perreux, Crown. Monitor Speakers: TAD, Yamaha NS-10, Tannoy SRM-10B, Auratone T-6, Auratone cubes, Hemispheres. Musical Instruments: Rental equipment available. Other MIDI Equipment: Rental equipment available. Video Equipment: Rental equipment available. Rates: Please call for

—CONTINUED ON NEXT PAGE

The Dorrrough Loudness Meter



Dimensions: 8 1/4" x 2 7/8" x 6 1/2"

Model 40-A

Simultaneous Display of Peak and Average on a Single Scale

Never before has a gain riding display been able to show what is taking place acoustically and electronically. Through its unique electronics, the 40-A allows the eye to see a one-half cycle excursion at 15kHz, thus helping to keep the audio peaks within the headroom of the equipment.

This meter correlates all types of program material and has led the way to open and clean programming throughout the system.

Specifications

Scale: 40 units in 1dB steps
Input Level: -30 to +20dBm
Input Impedance: 20k bal, 10k unbal.
Power: 120V/220-240V/50-60Hz

dorrrough

Dorrrough Electronics • 5221 Collier Place • Woodland Hills, CA 91364 • (818) 999-1132

Circle #116 on Reader Service Card

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rates Extras & Direction: In business since 1980, Skip Saylor Recording offers a two-room facility in Hollywood, California. Saylor Recording is dedicated to providing quality service in an accurate and comfortable environment. "Attention for Detail" is our motto, and from the entire staff we promote a highly professional atmosphere. Our service and our personal commitment to excellence will make a difference in your final product. Our clients include: Kenny Loggins, Peter Cetera, Morris Day, Howard Hewitt, Manhattan Transfer, Bryan Ferry, The Whispers, Gary Taylor, The Bangles, Cheap Trick, Dan Siegel, Jody Watley, The Bus Boys, The Fitt, Bert Robinson, Teena Marie, Stephen Dante, Al Stewart, Timbuk3, The Louters, Jeffrey Osborne, Michael McDonald, Pebbles, The Boyz, The Jets, Perri Sisters, Chico DeBarge, Stacy Lattisaw, Vanessa Williams, The Pointer Sisters, Boy George, Feargal Sharkey, Scarlett and Black, Brian Malouf, Humberto Gatica, David Bianco, Taavi Mole, Bill Drescher, Keith Cohen and Chris Sheldon. Our ranch dressing is the best in town!

[24+] **SCORE ONE RECORDING, INC.**: 5500 Cahuenga Blvd.; North Hollywood, CA 91601; (818) 762-6902. Studio Manager: Al Johnson. Mixing Consoles: Amek/TAC Matchless 26 x 24 x 8 x 2, Hill Multimix 16 x 4 x 2. Audio Recorders: MCI JH-24 24-track, Otari MTR-12 2-track w/center-tk SMPTE, Otari 5050 8-track, (2) Otari 5050 2-track, Otari MTR-12 4-track 1/2". Cassette Recorders/Duplicators: Yamaha, Akai, TEAC. Synchronization Systems: Q-Link 3.10 synchronizer Echo, Reverb, & Delay Systems: Lexicon 200, Yamaha REV7, Yamaha SPX90, Master-Room XL-305 MICMIX, Roland SDE-3000, Eventide 910 Harmonizer. Other Outboard Equipment: (2) ElectroSpace Gates, (2) EXR IV exciter, (3) UREI 1176LN comp/limiter, Dynalex MICMIX, (2) Symetrix lim/comp, Orban stereo synth, Orban sibilance controller, UREI bandpass filter, (2) UREI notch filters, BBE 802. Microphones: Neumann, AKG, Sennheiser, E-V, Sony, Audio-Technica, Shure. Monitor Amplifiers: Yamaha, Crown, Phase Linear. Monitor Speakers: UREI 813, (2) Yamaha NS-10M, Auratone. Musical Instruments: Yamaha C7 grand piano, Ensoniq Mirage, Yamaha RX11 drum machine, guitars, amps. Video Equipment: JVC CR-850U 3/4" video, Advent 3-gun 6" TV, Q-Link 3.10c synchronizer, Otari EC-401 universal resolver. Other: Sony CD player, 16/35mm mag transfer. Rates: 8-track \$50/hr., 24-track \$75/hr., video/audio \$150/hr.

[24+] **SEA-WEST STUDIOS/HAWAII**; also **REMOTE RECORDING**; Box 729; Hauula, HI 96717; (808) 293-1800. Owner: Sea-West Corporation. Studio Manager: Donna Alexa Keeler.

[24+] **SECRET SOUND L.A.**: 4836 Queen Victoria Rd.; Woodland Hills, CA 91364; (818) 999-6160. Owner: Chas Sandford Studio Manager: Lisa M. Allen. Engineers: Gary McGachan, Daren Chadwick, Chas Sandford. Mixing Consoles: SSL 6048 60 x 32 +ABC bus w/Total Recall, G Series computer, plasma meters, modified all discrete outputs, sync package and events controller. Audio Recorders: Otari DTR-900 32-track digital, Studer A820M 24-track 2" analog, Otari MTR-901 24-track 2" analog, Stephens 811D-16 16-track 2" analog, Studer A820 2-track 1/2", Ampex ATR 2-track 1/2" and 1/4". Cassette Recorders/Duplicators: Studer A721, Revov B215, Sony PCM-2500 Pro DAT player. Synchronization Systems: Adams-Smith 2600 3 modules and SSL interface, Adams-Smith Zeta 3 w/MIDI Echo, Reverb, & Delay Systems: Lexicon 224XL, Lexicon 224 w/4.4 software, EMT 251, Quantec room simulator, EMT 140 stereo plate, Eventide H3000 Harmonizer/FX processor, Lexicon PCM70, Yamaha REV5, (2) Yamaha REV7, (10) Lexicon AMS, Roland, Yamaha, Ibanez. Other Outboard Equipment: (4) dbx 160 limiter/compressor, dbx 160X limiter/compressor, (8) UREI 1176 limiter/compressor, UREI LA-3A limiter/compressor, UREI LA-4 limiter/compressor, (2) Teletronix LA-2A limiter/compressor, Fairchild limiter/compressor, Neve stereo limiter/compressor, (8) Pultec EQ, (2) Lang EQ, (2) ITI EQ, (4) API EQ, (10) assorted outboard equalizers. Microphones: Telefunken 251 tube, AKG C-24 stereo tube, Neumann SM2 stereo tube, Neumann U67 tube, (10) AKG 451 condenser, AKG 452 condenser, Sanken SU-41, (4) Neumann KM84 condenser, (2) AKG 414EB condenser, (24) various Shure, E-V, Sony, AKG, Beyer, Monitor Amplifiers: (2) Perreux, (4) Haller, (4) Yamaha, HH Electronic. Monitor Speakers: Tannoy Super Reds, Fourier, (3) Auratone, (3) Yamaha NS-10M, AR Rock Partners, (2) Tannoy 6.5. Musical Instruments: (14) electric and acoustic 6- and 12-string guitars, Fender Jazz bass, Emulator II w/Digidesign editing librarian w/Softsynth and digital editing, Akai S900 sampler, Mirage sampler, Oberheim Matrix-6 synth, Oberheim OBX synth, (2) Yamaha DX7 synth, Casio CZ-101, (2) Mesa/Boogie amp, Seymour Duncan convertible amp, LinnDrum w/128K mod and extensive library, Roland JC-120 Jazz Chorus amp, (8) assorted Marshall, Acoustic Research, Scholz Rockman amps. Other MIDI Equipment: Apple Mac+ w/45 Mb hard disk, Opcode Studio Plus II, Performer (2.31 software) sequencer, Turbo mouse, editor/librarian for all synths, with over 15,000 sounds, Adams-Smith SMPTE-to-MIDI interface. Other: (4) Massenburg mic preamp, (22) Neve mic line preamp, (10) API mic line preamp, (2) Focusrite mic line preamp w/EQ, (8) Drawmer noise gate. Rates: Upon request.

[24+] **7TH STREET SOUND**: 688 S. Santa Fe, #105; Los Angeles, CA 90021; (213) 627-5392. Owner: Ed Sanders. Studio Manager: Ed Sanders.

SOUTHERN CALIFORNIA

24+ TRACK

STUDIOS

[24+] **SILVERLAKE SOUND STUDIO**: 2413 Hyperion Ave.; Los Angeles, CA 90027; (213) 663-7664. Owner: Steve Milang. Studio Manager: R. Milang. Engineers: Jon Guggenheim, Walter Spencer, Robert Biles. Dimensions: Studio 30 x 35, control room 10 x 10. Mixing Consoles: Trident Series 808 32 x 24. Audio Recorders: Otari MTR-901 24-track, MCI JH-110A. Cassette Recorders/Duplicators: Technics RS-B85 Echo, Reverb, & Delay Systems: (2) Lexicon PCM70, Yamaha REV7, Yamaha SPX90, Prime Time II, TC Electronic 2290 (32-sec sampling), Eventide H910 Harmonizer. Other Outboard Equipment: (4) dbx 160, (2) dbx 165A, (2) dbx 902, (2) UREI 1176, Orban de-esser, (4) Kepex II, (2) Drawmer DSR-201. Microphones: Neumann U47 FET, Neumann U47 tube, (2) Neumann U87, AKG 414/P48, (2) AKG 414EB, (2) AKG 452, (5) Shure SM57, Sennheiser 422, E-V RE20, (3) RCA 77. Monitor Amplifiers: BGW 150, HH Electronic. Monitor Speakers: (2) JBL 4430 studio, (2) Yamaha NS-10M, (2) Auratone.

[24+] **SMOKETREE**: 9752 Baden Ave.; Chatsworth, CA 91311; (818) 998-2097. Owner: Smoketree Prod. Studio Manager: B. Hamel. Dimensions: Studio 17 x 30, control room 23 x 18. Mixing Consoles: Neve 8078A custom 72 x 24 w/GML automation (56 Servo fader). Audio Recorders: (2) Studer A800 24-track, (2) Ampex ATR-100 2-track, Mitsubishi X-850 32-track digital, Studer A820 2-track, (2) MCI JH-110 4-track Cassette Recorders/Duplicators: (4) Sony K-777, Nakamichi DMP-100 (F1) Noise Reduction Equipment: (2) Dolby B, Synchronization Systems: BTX Softouch, BTX Shadow Echo, Reverb, & Delay Systems: EMT 251/250, Lexicon 224XL, (3) Lexicon PCM70, (2) EMT 140TS plates, (2) Yamaha REV7, (2) Yamaha SPX90, Publison America Internal 90, Roland DEP-5, Roland SRV-2000, (2) Roland SDE-3000. Other Outboard Equipment: Aphex rack, dbx rack, (40) Neve 1073 EQ/outboard, GML EQ, Sontec EQ, TC Electronic 2290 delay, (3) Teletronix LA-2A, (4) UREI 1176LN, UREI LA-3A, (2) Strat gate, Scamp rack. Microphones: (2) Telefunken 251, (2) AKG C-12, (2) Neumann M49, (12) AKG 414EB, (10) Neumann U87, (3) Neumann U47 tube, (2) Neumann U47 FET, (8) AKG 451, (8) Neumann KM84. Monitor Amplifiers: HH Electronic V-800, HH Electronic V-500, McIntosh 275, BGW. Monitor Speakers: TAD custom system, Yamaha, JBL, ADS. Musical Instruments: Emulator II, Oberheim Matrix-12, (2) Yamaha TX816 rack, Roland Jupiter-8, Roland JX-8P, Sequential Circuits Prophet-Vector, Linn 9000, Korg DDSI, (2) Apple Mac II computers, Akai samplers, Moog Minimoog, Hammond B3, Yamaha KX88. Video Equipment: Sony BVU-800 3/4", Sony 5800 3/4", JVC 8200 1/2". Other: Mason Hamlin 7" grand (w/MIDI). Rates: Please call.

[24+] **SOUND AFFAIR RECORDING, LTD.**: 2727 Crodgy Way, Ste. G; Santa Ana, CA 92704; (714) 540-0063. Owner: Ron J. Leeper. Studio Manager: Robin Leeper. Engineers: Ron Leeper, Allan Blazek, Barry Keenan, Trey Solberg, Brian Burns, Brian Webster, Steve Anderson, Matt Harmon. Dimensions: Room 1. studio 36 x 30, control room 20 x 18, drum isolation 12 x 9, vocal isolation 8 x 5. Room 2. studio 26 x 24, control room 18 x 14. Mixing Consoles: MCI JH-600 automated 32 x 32, Amek/TAC Matchless 26 x 24. Audio Recorders: Ampex MM-1200 24-track, Ampex MM-1200 16-track, Ampex ATR-102 2-track 1/2" and 1/4", Ampex 440-C 2-track 1/4", Ampex VSQ. Cassette Recorders/Duplicators: Nakamichi MR-1, Nakamichi MR-2, Sony PCM-F1, Technics RS-T80R, Echo, Reverb, & Delay Systems: Lexicon Super Prime Time, Eventide Ultra-Harmonizer, Eventide SP2016 digital processor, Lexicon PCM70 digital effects processor, Yamaha SPX90 digital effects processor, Klark-Teknik DN780 digital reverb and effects processor, Ecoplate reverb, Lexicon Prime Time, ART digital reverb. Other Outboard Equipment: UREI dual 10-band graphic equalizer, Bascus-Berry Aural Exciter, Scamp noise gates, limiters, time shape-modules, de-esser, auto-panner, Teletronix LA2 tube limiter, UREI 1176 LN peak limiter, UREI LA-4 stereo comp/limiters, dbx 166 dual comp/limiters, Hewlett Packard 1208B XY display, Furman parametric equalizer, EXR Aural Exciter, Drawmer DS-201 dual noise gate, Eventide instant phaser, Brooke-Siren FDS 320 crossover, Klark-Teknik dual 30-band 1/3-octave graphic room equalizer. Microphones: AKG 414, AKG 451, AKG 452, AKG D-112, AKG D-12E, Neumann U48 (tube), Neumann U87, Neumann U89, Neumann KM84, Neumann KM83, Sennheiser MD-441, Sennheiser MD-421, Sennheiser MKH-405, Crown PZM, E-V RE20, RCA 77-DX, Altec 195-A, Sultan V-200, Shure SM56, Shure SM57, Shure SM60, Calrec CC-56. Monitor Amplifiers: UREI 6500, UREI 6250, UREI 6150, BGW 210. Monitor Speakers: JBL 4430 Bi-radials, Tannoy SRM-12B, Yamaha NS-10M, Auratone 5C, JBL 4312, JBL mini monitors and UREI 809 Time Aligns. Musical Instruments: Yamaha C-7E 7'4" grand piano, Yamaha DX7 synthe-

sizer, Linn 9000 digital drum machine, Fender Rhodes electric piano, Rogers drums, percussion kit. Rates: Please call or write for brochure.

[24+] **SOUND CHAMBER RECORDERS**: 27 S. El Molino Ave.; Pasadena, CA 91101; (818) 449-8133. Owner: Richard McIlvery. Randy Farrar. Studio Manager: Richard McIlvery. Engineers: Independents. Dimensions: Studio 40 x 18, control room 17 x 18. Mixing Consoles: SSL 4000E 40 x 32 w/studio computer. Audio Recorders: Mitsubishi X850 32-track digital, Stephens 821B 24-track, Ampex ATR-102 2-track w/1/4" and 1/2" heads, Technics 1500 2-track. Cassette Recorders/Duplicators: Yamaha KX1200 2-track. Noise Reduction Equipment: (2) Dolby A. Synchronization Systems: BTX Shadow Echo, Reverb, & Delay Systems: Lexicon 224XL reverb, Roland SVR-2000, EMT 140ST stereo tube plate, EMT 140S stereo solid state plate, Lexicon 95 Prime Time II digital delay, Eventide 949 Harmonizer. Other Outboard Equipment: Teletronix LA-2A limiter, (2) UREI 1176, (2) UREI LA-4, (4) Aphex gate, (2) Aphex EQ, (4) Gatebox gate, Yamaha REV7, Yamaha SPX90. Microphones: (3) Neumann U87, (2) AKG C-414EB, (4) Neumann KM84, (2) AKG C-451, (8) Shure SM57, (4) Sennheiser MD-421. Monitor Amplifiers: HH Electronic 1200, Metron 400, Cerwin-Vega 1800. Monitor Speakers: (2) UREI 813C, (2) Yamaha NS-10, (2) JBL 4311, (2) JBL 4401. Musical Instruments: Yamaha C7 grand piano, Hammond B3 organ, Roland D-50, Yamaha DX7, Sequential Circuits Prophet-2002 sampler, Yamaha TX7. Other MIDI Equipment: Macintosh w/Performer software and SMPTE. Video Equipment: JVC 6550 3/4" U-matic video recorder, Sony KV-2511 CR video monitor, Sony 19" monitor. Rates: Call for current rates.

[24+] **SOUND CITY INC.**: 15456 Cabrito Rd.; Van Nuys, CA 91406; (818) 787-3722; (818) 873-2842. Owner: Joe Gottfried, Tom Skeeter. Studio Manager: Paula Salvatore. Engineers: Bruce Barris, Dave Eaton, Allen Isaacs, Bret Newman, Brian Jenkins. Dimensions: Room 1. studio 40 x 50, control room 26 x 20. Room 2. studio 40 x 30, control room 20 x 20. Mixing Consoles: Neve 8028 w/Necam computer mix 28 x 24, Neve 8068 32 x 24. Audio Recorders: Studer A800 24-track, Studer A80 MkII 24-track, Studer A80 1/2", (2) Studer A80 1/4", (2) B67 2-track. Noise Reduction Equipment: Dolby M24, Dolby 361, Dolby 301. Synchronization Systems: Lynx Echo, Reverb, & Delay Systems: EMT, AKG, Lexicon, DeltaLab T digital delay, (2) Eventide 949 Harmonizer, Eventide flanger, Orban de-esser, Eventide digital delay, AMS RMX 16 digital reverb, Yamaha REV7, Yamaha SPX90. Other Outboard Equipment: Parametric EQ, dbx 165A, Pultec EQs, Lang EQs, filters, Teletronix LA-2A limiters, Neve limiters, UREI 1176. Microphones: Neumann U47 FET, Neumann U89, Neumann U87, Neumann KM84, Neumann KM86, Neumann M49, AKG 541E, AKG C-451E, AKG C-24, AKG 460, E-V RE20, E-V RE15, E-V 635, Shure 545, Shure SM57, Shure SM58, Sennheiser MD-421, Sony C-37, Sony EC-50, Sony Shotgun. Monitor Amplifiers: HH Electronic, Eagle, Yamaha P2201. Monitor Speakers: JBL bi-amped system (custom designed by George Augspurger). Musical Instruments: Hammond B3 organ w/Leslie, (2) Steinway grand piano. Rates: Call for rates.

[24+] **SOUND DESIGN**: 33 W. Halsey St.; Santa Barbara, CA 93101; (805) 965-3404. Owner: Affiliated Concepts Corp. Studio Manager: Dom Camardella. Engineers: Terry Nelson, Dom Camardella, Daniel Protheroe, Anders Johannson. Dimensions: Studio 1,400 sq.ft. w/22' ceiling and two iso booths, control room 400 sq.ft. Mixing Consoles: Neve 8038 36 x 24 (16 bus) custom desk, Hlt 16 x 2 keyboard submixer. Audio Recorders: Sony PCM-3324 24-track digital/analog/time-code w/remote, Studer A80 MkII 24-track analog w/Audio Kinetics autolocator, Studer A80RC 2-track analog w/remote, Sony PCM-3402 2-track digital w/remote, (2) CompuSonics DSP1500 2-track disc recorder w/MIDI. Cassette Recorders/Duplicators: Tascam 122MK, (3) Onkyo. Synchronization Systems: (2) Lynx TimeLine chase lock/synchronizer, Roland SBX-80 sync box (MIDI, SMPTE). Echo, Reverb, & Delay Systems: EMT 140ST plate reverb, Lexicon 200, Eventide SP2016, (2) Lexicon PCM70, Lexicon Super Prime Time, Roland SDE-2500, (2) Yamaha REV7, (2) Yamaha SPX90, Eventide 910. Other Outboard Equipment: Pultec EQP1A, Lang PEQ1, Sontec stereo EQ, UREI 1178, Teletronix LA-2A, Universal Audio LA-3A, (2) RCA tube limiter, (4) Valley People Keppex gate, dbx 160 compressor/limiter, (2) dbx 463X noise gate, dbx 263X de-esser. Microphones: Neumann U47, (2) B&K, Telefunken U47, (3) Neumann U87, Neumann U67, (5) Neumann KM84, (4) AKG 414, AKG C-60, AKG C-24 stereo tube, (2) AKG C-12A, (5) AKG 452, (2) Beyer MKB301, Sony C-500, (2) Sony ECM-50, (3) Sennheiser 421, Sennheiser 441, (4) E-V RE20, E-V RE15, Shure SM58, Shure SM57, (2) Shure 545. Monitor Amplifiers: (8) Accuphase (3-M300, 5-M60), Phase Linear 700B, Roland SRA-2400. Monitor Speakers: (2) UREI 813, (4) Yamaha NS-10, (2) JBL 4310, (2) JBL 4311, (2) Auratone, (8) Fostex T-20 headphones. Musical Instruments: Yamaha C3 grand piano, Fairlight Series III computer musical instrument, E-mu Emulator II, Yamaha DX7, Yamaha TX816, Roland Super Jupiter w/programmer, Roland MKS-30, Roland JX-8P, Roland D-50, Roland TR-707, Roland TR-727, Korg sampling grand piano, Hammond B3 organ w/Leslie, Moog Minimoog, classic 1951 Fender Telecaster guitar, Roland MKB-300 keyboard controller. Other MIDI Equipment: Roland Octapad, (2) Megamix automated mixing system 32-ch, Simmons MTM (trigger, MIDI) processor, Yamaha MIDI multi box (2-in, 8-out). Video Equipment: Sony

BUV-950 3/4" VCR w/Time Code option, Mitsubishi TV w/remote (Studio A), Sony TV. Other: IBM PC clone w/MIDI (Texture, Composer software), Macintosh SE w/MIDI (Performer, MacSonics software), Tascam CD-501 (CD player w/+4 output and remote). Rates: Call for brochure, inquiries and price quotes.

SOUND MASTER



Audio/Video RECORDING STUDIOS

SOUND MASTER AUDIO/VIDEO STUDIOS
North Hollywood, CA

[24+] **SOUND MASTER AUDIO/VIDEO STUDIOS**; also **REMOTE RECORDING**; 10747 Magnolia Blvd.; North Hollywood, CA 91601; (213) 650-8000. Owner: Brian D. Ingoldsby. Studio Manager: Barbara Ingoldsby. Engineers: Brian Ingoldsby, Ian Ingoldsby, Dan Shimmaier, Ken Ingoldsby. Dimensions: Room 1: studio 35 x 40, control room 30 x 30. Room 2: studio 35 x 40, control room 20 x 25. Room 3: studio 15 x 15, control room 25 x 25. Mixing Consoles: Mitsubishi 36 x 36 Quad Eight automated, TAC Scorpion 28 x 24. Audio Recorders: (2) Sony/MCI JH-24 24-track, 3M 79 24-track, 3M 79 16-track, (3) Sony JH-110 4-track, (12) Ampex 2-track, Sony/MCI 2-track, Otari 2-track, (2) 3M 56 8-track. Cassette Recorders/Duplicators: (2) Aiwa, (2) Technics, (2) Realistic. Noise Reduction Equipment: (56) dbx, (28) Dolby, (16) dbx 2-track, Dolby 2-track. Synchronization Systems: (2) Lynx. Echo, Reverb, & Delay Systems: Lexicon 224, (2) Yamaha REV7, Yamaha SPX90, Roland SRV-2000, Lexicon Prime Time, Ursula Major, Lexicon PCM41, (3) Advance Audio D-250, (8) MXR, TC Electronic 2290. Other Outboard Equipment: D250 Advanced Audio Design, (40) limiters, (57) misc. effects devices, phasers, flangers, harmonizers, etc., Orban de-essers, Autolocator 3, Lexicon Prime Time, Lexicon PCM41, Eventide Harmonizer, 265 Dynalanger, dbx 165 limiter, UREI 1176 limiter, dbx 161, Quad Eight compressor/expander, Quad Eight de-esser, (16) Quad Eight noise gate, (16) Kepex noise gate, Orban parametric, UREI 527A MXR phaser, Eventide instant phaser, Eventide DDL 1745, (2) CDT MC-8, UREI 1/3-octave EQs. Microphones: (59) AKG tube, Neumann, Altec, (100) Dynamic, (15) Ribbon, Beyer, RCA, (30) condenser, (20) PZM, (10) wireless. Monitor Amplifiers: (10) Soundcraft, (14) Carvin, (6) BGW Monitor Speakers: (4) Custom Sound Master, (38) Carvin/EV, (2) Renkus-Heinz. Musical Instruments: Steinway "B" 7'7" grand, Yamaha grand, Hammond B3 w/Leslie, string machine, channel chimes, vibes, (2) drum sets, misc. hand percussion, misc. keyboards. Video Equipment: Hitachi C format 1", Crosspoint latch, Grass Valley, Ikegami, microwave, camera crane truck, computer A/B roll editing, Chyron, ENG and EFP trucks, (8) cameras, (7) 3/4" VTRs. Other: Complete disc mastering service, mobile recording trucks, 24- and 48-track sound reinforcement, complete production video trucks with microwave. Rates: Call Barbara Ingoldsby, studio manager. Extras & Direction: On-site disc mastering studio with Total Recall console and Ortolon cutting system. In addition complete video production 3/4" and 1" format, pre- and post-, 30 remote 24- and 48-track recording trucks, 31" remote video trucks. We do it all! Our aim is to provide you with professional technical sophistication as well as personal attention.

[24+] **SOUND SOLUTION RECORDING**; also **REMOTE RECORDING**; Office: 1505 11th St.; Studio: 1211 4th St.; Santa Monica, CA 90401; (213) 393-5332. Owner: Solutions Enterprises, Inc. Studio Manager: Keith Wechsler. Engineers: Keith Wechsler, Steve Barnard, Richard Jalliss, David Blade, Rod Clark, Robin Lamble. Dimensions: Studio 32 x 14, control room 14 x 16, plus iso booth 4 x 8. Mixing Consoles: MCI JH-428 modified 28 x 24 w/Aphex VCA DC subgroups and mutes, Biamp 8 x 2 effects mixer. Audio Recorders: MCI JH-114 24-/16-/8-track w/A/L & V.S.O., Ampex ATR-102 2-track 1/2" and 1/4", MCI JH-110 1/2-track w/V.S.O., Studer Revox A-700 2-track, Sony TC-854 4-track. Cassette Recorders/Duplicators: (2) Sony TC-K777, (2) JVC KDV-400, Sony TC-D5M. Echo, Reverb, & Delay Systems: Lexicon 224X LARC 8.2 digital reverb, Yamaha SPX90 digital reverb/effects, EMT 140ST stereo tube plate reverb, Ecoplate III reverb, AKG BX-10E reverb, (2) Lexicon Prime Time 93 digital delay, Delta-Lab ADM 1024II digital delay, Marshall Time Modulator, Roland 555 chorus echo. Other Outboard Equipment: (2) UREI

1176LN limiter, (2) UREI LA-3A limiter, (3) Drawmer 2-channel gate, (2) Orban 622B dual-channel parametric EQ, Klark-Teknik DN27 and Klark-Teknik DN22 graphic EQs, Systech flanger, Orban 3-channel de-esser. Microphones: Over 60 mics: Neumann, Sennheiser, Shure, Sony, E-V, RCA, AKG, Crown, etc. (including tube and ribbon types). Monitor Amplifiers: (4) Haller P-225, BGW 100B, QSC MX-1500. Monitor Speakers: Altec/Mastering Lab, 604E, Yamaha NS-10M, Sony APM-700, Fostex RM-780, Auratone. Musical Instruments: Yamaha C7 7'4" grand piano, Yamaha DX7 digital synth, Moog Minimoog, LinnDrum computer w/chip library, Yamaha, Fender and Gibson guitars, bass and amplifiers, Scholz Rockman X-100, misc. drums, cymbals, hand percussion, etc., misc. effects pedals, Fairlight CMI and Emulator II available at additional cost. Video Equipment: 3/4" video lockup available. Rates: Basic rate includes all equipment, instruments and house engineer. Please call for specific quote. Extras & Direction: Producers, musicians, arrangers, composers, programmers and rentals of any type available. Our primary focus is service and the satisfaction of our clients. We are located four blocks from the beach in sunny Santa Monica. Free Parking. The purpose of Sound Solution Recording is to provide an environment where people are inspired to perform to their absolute limits and beyond—effortlessly. Album, film and TV projects include: Beach Boys, Fat Boys, George Clinton, Tony Elman, Otis Day & the Knights, Opal, Permanent Record, Cocktail, Survival Quest, Midnight Star, Little Richard, Tac-heads, The Tracy Ullman Show, The Telephone, Beach Boys ABC Special 25 Years Together.

[24+] **SOUND VENDORS, INC.**; 10707 Magnolia Blvd.; North Hollywood, CA 91601; (818) 985-9774. Owner: Larry W. Gonhue. Studio Manager: Jeffrey Kallested. Engineers: Larry Gonhue, Jeffrey Kallested, Timothy Regan, David Marten. Dimensions: Room 1: studio 18 x 18, control room 19 x 18. Room 2: studio 14 x 16, control room 14 x 18. Mixing Consoles: Harrison Raven 20 x 16, Quantum 12 x 4. Audio Recorders: Otari MTR-90 24-/16-track, Otari MTR-12 4-track, Otari MTR-12 2-track, Ampex A440 4-track, Ampex A440 2-track, (3) Ampex 350 2-track. Cassette Recorders/Duplicators: (2) Sony 501. Synchronization Systems: BTX Softouch. Echo, Reverb, & Delay Systems: Lexicon 200, AKG BX-10. Other Outboard Equipment: (2) dbx 160X comp./limiter, (4) Valley People Kepex, Orban de-esser, (2) Technics 520 CD player. Microphones: Neumann U47 FET, AKG 414EB, Sennheiser 416, Sennheiser 421. Monitor Amplifiers: (3) Haller, (2) BGW, Crown. Monitor Speakers: (2) UREI 813, (2) UREI 811, (2) Yamaha NS-10, (2) Auratone 5C. Video Equipment: Sony BVH-2000 1", Sony BVU-800 3/4", Sony BVU-5850 3/4", NEC 1/2" VHS.



(213) 665-5201

SOUNDCASTLE
Los Angeles, CA

[24+] **SOUNDCASTLE**; 2840 Rowena Ave.; Los Angeles, CA 90039; (213) 665-5201. Owner: Buddy King. Studio Manager: Nancie Boykiss.

[24+] **SOUNDER RECORDING**; 17021 Chatsworth St.; Granada Hills, CA 91344; (818) 366-0995. Owner: Brian Mann. Studio Manager: John Slattery.

[24+] **STUDIO MASTERS**; 8312 Beverly Blvd.; Los Angeles, CA 90048; (213) 653-1988. Owner: Randolph C. Wood. Studio Manager: Larry & John Wood. Engineers: Tim Jaquette, Robert Brown, Richard Platt. Mixing Consoles: Neve 8128 48 x 32 w/Necam 96 automation, Harrison 36 x 24. Audio Recorders: (3) Ampex MM-1200 24-track, Studer A820 2-track 1/4" and 1/2" formats, (3) Studer A80 2-track. Cassette Recorders/Duplicators: (2) Technics RS-M85, (2) Nakamichi MR-1. Noise Reduction Equipment: Dolby M-24, dbx. Synchronization Systems: Audio Kinetics Q lock, Adams-Smith, Sigma Master sync generator. Echo, Reverb, & Delay Systems: (2) AMS RMX 16 digital reverb, AMS DMX 15-80S digital delay, (3) Yamaha REV7 digital reverb, Prime Time digital delay, (2) Yamaha SPX90, Lexicon PCM70, Eventide DDL, EMT, Master-

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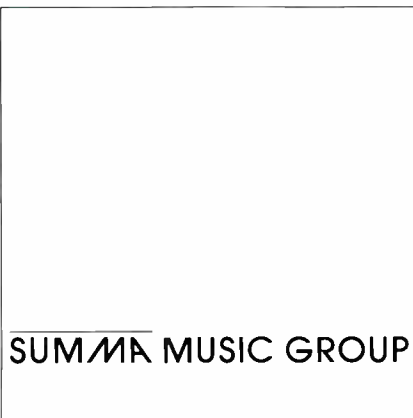
Room Other Outboard Equipment: (6) dbx 165 limiter, (6) UREI 1176 limiter, Orban parametric equalizers, (16) Kepex II noise gate, (3) Drawmer DL DS-201 noise gate, (4) API 535 equalizer. Microphones: AKG 414, Neumann KM84, Shure SM57, AKG 452, Sony CP-37, Neumann U67, Neumann U87, E-V RE20 and others. Monitor Amplifiers: HH Electronic V800, (2) Quicksilver audio tube, Crown 300A. Monitor Speakers: (2) Westlake TM-1, (2) George Augspurger Video Equipment JVC CR-850-U 3/4" video recorder. Other: Neumann disk mastering Rates: Available upon request

[24+] **STUDIO II** (Affiliate of Indigo Ranch); 9733 Culver Blvd.; Culver City, CA 90230; (213) 558-8832. Owner: Richard Kaplan, Jason Wolchin. Studio Manager: Jason Wolchin. Engineers: Richard Kaplan, Jason Wolchin, various others. Mixing Consoles: Jensen/Aengus custom 48 x 24, (8) additional tube mic preamps. Audio Recorders: Stephens 821A 24-track, Stephens 821A 4-track 1/2", 3M 79 2-track 1/4" and 1/2" (transformerless), Scully 280 2-track 1/4" 15-30 ips, Scully 280B 2-track 1/4" Cassette Recorders/Duplicators: (4) Sony TC-K777 Noise Reduction Equipment: Available to suit your needs. Synchronization Systems: Available to suit your needs. Echo, Reverb, & Delay Systems: Yamaha SPX90, AMS and EMT 250, Roland DEP-5, (2) EMT 140 stereo plates, Publison America Internal 90 stereo audio computer, Roland SRV-2000 digital reverb, MXR ART 01 digital reverb, (2) Yamaha REV7 digital reverb, Alesis XT digital reverb, Ursa Major Space Station, Ecoplate, Master-Room reverb, Sennheiser reverb, Telefunken reverb, Eventide 1745A, Eventide 1745M, (2) Eventide H910 Harmonizer, (2) Roland SDE-3000 digital delay, Yamaha 1500 digital delay, Bel digital delay/flanger, Marshall Time Modulator, (2) J.L. Cooper Time Cubes, Lexicon Prime Time, Loft 440 stereo flanger, (3) MXR DDL, MXR pitch shift/doubler, MXR flanger doubler, Mutron stereo Bi-Phase, Eventide Instant Phaser. Other Outboard Equipment: (8) Drawmer Electro Space Srate gate, EXR exciter, Aphex, dbx 900 rack w/de-esser. Limiters: LA1 (tube), LA-2A (tube), EMT 156 stereo, dbx 162 stereo, Eventide Omnipressor, Inovonics limiter, UREI 175 tube, UA-176 tube, Altec 436C tube, (3) RCA tube limiter, Orban de-esser, EQ Pultec SAE graphics, API B&B, Aengus graphics, Collins and Cinema Engineering, Pultec boosters, Altec filters. Gates: (4) Symetrix gates, (8) Kepex, (4) RM noise gates, Roland guitar preamp, White 140 analyzer, dbx Boom Box bass synthesizer. Microphones: Neumann U47, Neumann M49 tube, Telefunken 251 tube, (3) Sennheiser 421, Telefunken 251 tube, Neumann U47 tube, Neumann KM53 tube, Neumann KM54 tube, Neumann KM56 tube, Neumann KM64 tube, Neumann KM84, Neumann KM86, Neumann U64 Neuvistor, Neumann U67 tube, Neumann U87, Neumann SM69 stereo, Neumann M269 tube, AKG C-12A, AKG C-60, AKG C-61, AKG C-28, AKG C-451, AKG C-452, AKG C-414, E-V RE20, E-V 666, E-V CS-15, E-V 731, E-V 670, Calrec 1050, Sony C-37P, Sony C-220, Sony ECM-16, Sony ECM-22, Sony ECM-56, Sony ECM-65, Sony ECM-54, Shure SM56, Shure SM57, Shure SM58, Shure 545, Shure 565, Altec 22, Altec 29A, Altec 150A, Altec 175A tubes, etc. Monitor Amplifiers: BGW 750C, Crown DC300A, Technics 400W Class A to small speakers, Mattes 100. Monitor Speakers: Visonik 9000, JBL Control Ones, JBL 4312, JBL custom 4-way, Yamaha NS-10 Musical Instruments: Sequential Circuits Prophet-600, AR-10 Quadra, Korg DDD-1000 (digital drum machine), Moog Minimoog, Fender Strat, Kawai grand piano, Peavey Decade guitar amp, Scholz Rockman, Gorilla amp. Other MIDI Equipment: IBM AT w/Roger Powell Texture 2.2 5 MIDI sequencer software, Roland MPU-1 MIDI processor, Publison America 90 stereo digital MIDI sampler and processor. Rates: Available upon request

[24+] **STUDIO ULTIMO**; 1900 Sepulveda; West Los Angeles, CA 90025; (213) 479-6010. Owner: KSH Corp. Studio Manager: Michael Schuman. Engineers: Michael Schuman, Mitch Zeleny, Dave Clark, Brandon Arthur. Dimensions: Room 1 studio 49 x 35 (acoustically variable), control room 29 x 30. Mixing Consoles: Neve 8108 48 x 32 (modified), Necam automation w/40 additional mix inputs. Audio Recorders: (2) Ampex ATR-124 24-track modified, Ampex ATR-104 4-track 1/2", (3) Ampex ATR-102 2-track 1/2" and 1/4", digital machines available. Cassette Recorders/Duplicators: Technics, (2) Aiwa Noise Reduction Equipment: Available. Synchronization Systems: TimeLine Lynx. Echo, Reverb, & Delay Systems: EMT 251 w/250 program, AMS RMX 16, Lexicon PCM70, Lexicon 200, (2) Yamaha REV7, Yamaha SPX90, Roland SDE-3000, Roland SRV-2000, Eventide 949 Harmonizer, AMS DMX 15 sampling stereo harmonizer. Other Outboard Equipment: Lexicon Prime Time II w/memory, (4) Drawmer gate, (4) Kepex II, ADR Vocal Stresser, (2) Neve limiter/compressor, (2) dbx 160 compressor, (2) dbx 165 limiter/compressor, (2) UREI 1176 limiter, LA-2A limiter/compressor, Orban de-esser, Orban stereo synthesizer, more on the way. Microphones: AKG C-12, AKG 414, AKG 451, AKG D-12, Neumann U89, Neumann U47 tube, Neumann U47, Neumann U67, Shure SM57, Shure SM81, Sennheiser 421, Crown PZM. Monitor Amplifiers: (2) Bryston 4B, Bryston 3B, Bryston 2B, BGW. Monitor Speakers: Custom system w/TAD components, (2) Yamaha NS-10, Visonik, (4) Auratone, E-V. Musical Instruments: Yamaha grand piano, Fairlight available, Simmons drums, Yamaha DX7, Fender amp, many more instruments available. Video Equipment: TimeLine Lynx synchronizer, Sony BVU 3/4", Sony XBR 25" mounted monitor, other moni-

SOUTHERN CALIFORNIA 24+ TRACK STUDIOS

tors, etc. Rates: Please call. Extras & Direction: Located in West Los Angeles, we are in the "heartbeat" of the record and movie industry, catering to the exclusive needs of our clients. We offer the state-of-the-art facility with excellent surroundings that provides a special environment conducive to creativity. Our staff includes gold and platinum record engineers and personnel that make the difference between a good studio and a great one! Our elegant studio can provide up to four rooms of isolation and is large enough for a 40+ piece orchestra. The control room is one of the largest in the world, offering plenty of room for anything you could possibly want to do. Our control room is a tracking room! So come to us with your next project, where we have an excellent staff, the best equipment and the ultimate sound



SUMMA MUSIC GROUP

SUMMA MUSIC GROUP
West Hollywood, CA

[24+] **SUMMA MUSIC GROUP**; 8507 Sunset Blvd.; West Hollywood, CA 90069; (213) 854-6300. Owner: Rick Stevens. Studio Manager: Kimberly Frank. Engineers: Tim Weidner. Dimensions: Room 1 studio 12 x 21, control room 16 x 28. Room 2: control room 18 x 18 (approx.). Mixing Consoles: SSL SL4000 G Series 56-input Total Recall board and computer, API De Medio custom 36-input w/original API 550A EQs. Audio Recorders: Studer A820 24-track, Studer A800 24-track, (2) Mitsubishi X-850 32-track Cassette Recorders/Duplicators: (2) Nakamichi MR-1, (2) Sony DAT. Synchronization Systems: (2) Lynx TimeLine. Echo, Reverb, & Delay Systems: (2) Lexicon 480L, (2) AMS RMX 16, EMT 140 plate reverb, (2) Yamaha SPX90II, (2) Lexicon PCM70, (2) TC Electronic 2290 w/32-sec stereo link and FTR, (2) Roland SDE-3000 DDL, Bel BD-80 DDL, (4) dbx 160, Eventide 3000 Ultra-Harmonizer. Other Outboard Equipment: (2) Drawmer DS-201X gate, (4) Focusrite EQ/mc preamp, (2) Alesis MIDi-verb II, Eventide 910 Harmonizer, Dynacord CLS 222 Leslie simulator, Roland Vocoder, Garfield Masterbeat. Microphones: (2) AKG C-12, (2) AKG 451, (2) Shure SM57, Neumann U87, (2) Sennheiser MD-421. Monitor Amplifiers: (2) Perreux 9000B, (2) Boulder. Monitor Speakers: George Augspurger custom main monitors. Musical Instruments: (2) Yamaha DX7, Prophet-VS, Emulator I, Emulator II, Emulator III, Roland D-50, PPG Wave, Linn, Linn 9000, Roland Juno-106, Roland Jupiter-6. Other MIDI Equipment: Sycologic switching system. Video Equipment: Available upon request. Rates: Call for quotes. Extras & Direction: Summa's new Lakeside-designed Studio A/SSL Room is a world-class mixing/tracking studio that features a 64 mainframe Solid State Logic SL4000 G Series Master Studio System, SSL's newest model console and computer system. A custom main monitor system designed by George Augspurger, the finest Mogami and Monster cabling, new Studer A820 and industry standard A800 analog multi-tracks, classic ART-102 2-track, Mitsubishi 32-track digital and a top-level array of outboard gear are all included as part of Summa's creative package. This room includes a specially soundproofed one-way window looking onto Sunset Boulevard and the L.A. basin, because we know that the environment is important too. Summa's Studio B/API Room is a world-class tracking/overdub and MIDI studio that features a 36-input custom De Medio API console. Original API 550A EQs, 321-5 mic preamps and 960 ladders are available on all channels. Studio B functions both as a major tracking/overdub room and as L.A.'s best MIDI/synth room, with a complete selection of synths and sequencing/MIDI devices available in-house.

[24+] **SUNSET SOUND FACTORY**; 6357 Selma Ave.; Hollywood, CA 90028; (213) 467-2500. Owner: Paul Camarata. Studio Manager: Phil MacConnell, Catharina Masters. Engineers: Jeff Bork, Tchad Blake, David Knight, independents. Dimensions: Room 1 studio 26 x 16, control room 19 x 13. Room 2 studio 20 x 22, control room 18 x 16. Iso rooms: #1 20 x 12.5, #2 12 x 7. Mixing Consoles: (2) API 36 x 32. Audio Recorders: Ampex MM-1200 24-track, Ampex ATR-104 4-track, (3) Ampex ATR-102 2-track 1/4" and 1/2", Technics 1500 1/4" and 1/2-track, (2) Studer A80VU MkIV 24-track, Otari DTR-900 digital Cassette Recorders/Duplicators: (3) Aiwa F660, (2) Aiwa F770U Noise Reduction Equipment: Dolby A, 36 channels. Synchronization Systems: Audio Kinetics 310 Q Lock, Lynx Echo, Reverb, & Delay Systems: (4) EMT 140 stereo plate, EMT 251 digital reverb, Lexicon 224XL digital reverb, (2) Lexicon PCM70, (4) Roland SDE-3000 DDL, (2) Lexicon Prime Time II, (2) Eventide 1745 DDL, (2) Eventide H949, (2) J.L. Cooper Time Cubes, AMS DMX 15-80S. Quantec QRS. Other Outboard Equipment: (12) Valley People Kepex II, (4) Drawmer DS-201, (6) Lang PEO-2, (4) dbx 160X, (2) Teletronix LA-2A, (8) UREI LA-3A, (4) UREI 1176LN, ITI MEP230 PEO, (4) dbx 902, (4) dbx 903, (6) dbx 904, (2) Pultec EQP-1A, Dynatronics CS-5 chorus and much more. Microphones: (10) Neumann U67, (3) Neumann U47 FET, (2) Neumann M49, (3) Neumann U87, (3) Neumann KM84, (3) Telefunken BLAM 251, (6) AKG C-12A, (6) AKG 452EB, (4) Sennheiser 441, (3) Sennheiser 421, (7) Shure SM57, and much more. Monitor Amplifiers: (4) Hill DX 1000A, (4) Phase Linear 700B, (2) McIntosh MC2105, Hill DX 3000A. Monitor Speakers: (2) Altec 604E w/Mastering Lab crossovers, (2) Yamaha NS-10, (2) Auratone 5C, Auratone T6, JBL 4310. Musical Instruments: (2) Steinway B grand piano, Hammond B3 w/Leslie speaker. Rates: Call for rates.

[24+] **SUNSET SOUND RECORDERS, INC.**; 6650 Sunset Blvd.; Hollywood, CA 90028; (213) 469-1186. Owner: Paul Camarata. Studio Manager: Craig Hubler. Engineers: Stephen Shelton, David Glover, Mike Kloster, Brian Soucy, George Binder, Jeffrey Landgraf, Neal Avron, Scott Woodman, Mike Piersante. Dimensions: Room 1 studio 22 x 36, control room 19 x 20. Room 2 studio 30 x 40, control room 16 x 23. Room 3 studio 20 x 50, control room 18 x 21. Mixing Consoles: Sunset Ind 56 x 56 custom w/Necam II automation, Sunset Ind 32 x 24 custom, Sunset Ind. 8 x 8 custom console, Sunset Ind. 12 x 16 custom console, Amek APC-1000 64 x 64 custom w/GML automation. Audio Recorders: (3) Studer A800 MkIII 24-track analog, Ampex MM-1200 24- or 16-track, (7) Ampex ATR-100 2-track, Ampex ATR-100 4-track, Studer A820 24-track analog, Otari DTR-900 32-track digital, Cassette Recorders/Duplicators: (7) Aiwa F-660U, Aiwa AD-S40 Noise Reduction Equipment: Dolby 361 Type A 72 channels. Synchronization Systems: (5) Lynx TimeLine synchronizer, Q Lock 3.10 synchronizer. Echo, Reverb, & Delay Systems: (3) AMS RMX 16 reverb, (3) AMS RMX 15-80S digital delay, Quantec room simulator, (2) Publison America Internal 90 audio computer, EMT 250 digital reverb, (4) EMT 140 Ecoplate, (3) Lexicon Prime Time II digital delay, (2) Roland SDE-3000 delay, (2) Lexicon PCM70 reverb unit, (3) live chambers. Other Outboard Equipment: (16) Pultec equalizer, (4) Eventide 949 Harmonizer, (5) UREI/Teletronix LA-2A limiter, (14) UREI 1176LN limiter, (6) dbx 903 comp/limiter, (6) dbx 902 de-esser, (4) dbx 905 equalizer, (7) API 560 graphic equalizer, (3) Drawmer DS-201 noise gate, (24) Kepex II, (10) API 550A equalizer. Microphones: (3) Telefunken 251, (9) AKG 414, (7) AKG 451, (6) Neumann U47 tube, (10) Neumann U47, (7) Neumann U67 tube, (10) Sennheiser 421, (6) Sennheiser 441, AKG "The Tube", AKG C-12A, Shure SM7. Monitor Amplifiers: (6) HH Electronic, (9) BGW, (5) Crown. Monitor Speakers: JBL/TAD custom 3-way bi-amp system (studio 1), (2) JBL custom 3-way bi-amp system (studios 2 and 3), (8) Yamaha NS-10, (8) Auratone 5C, (2) Auratone T6, Marantz HD-44 Musical Instruments: (3) Steinway B-7 concert grand piano, LinnDrum machine, Yamaha DX7, miscellaneous percussion. Other MIDI Equipment: (2) Steinway B-7 MIDI converted grand piano, (studios 2 and 3) Video Equipment: Sony BVU-800 U-matic 3/4" videocassette machine, Sony KV-2510 video monitor, Sony KV-25XBR video monitor. Rates: Available upon request. Extras & Direction: We are proud to have acquired the new Amek APC-1000 digitally assignable recording console for Studio 2. Though this marks a distinctive change from our history of designing and building our own consoles, we have every confidence that Amek has provided us with a desk that maintains our reputation for superior signal integrity and sonic excellence. We, of course, have added our own proprietary electronic modifications to further enhance its performance. And, with the integral addition of the GML Automation System, we believe we provide our clients with an exceptionally versatile and elegantly operational tracking and mixing console superior to any other design. We invite all to experience its stunning capabilities.

[24+] **SUPER SCORE STUDIOS**; 3420 Wrightview Dr.; Studio City, CA 91604; (818) 506-4832. Owner: Ray Colcord. Engineers: Ray Colcord, Avi Kipper. Dimensions: Control room 24 x 24, live room 24 x 24. Mixing Consoles: Soundcraft TS-24 40-input Audio Recorders: JH-24 24-track, Sony 8002 2-track, Otari 5050B 2-track, Sony PCM-501 2-track, TEAC 3440 4-track, Otari MTR-10 4-track Cassette Recorders/Duplicators: (2) JVC KD-V5 Noise Reduction Equipment: Drawmer DS201 gates, (2) Symetrix 522 gate/compressor/

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BACK ISSUES

- ☐ **1985 August, Studio Design Issue: Listings of Designers & Suppliers.** Control Room Acoustics. Thomas Dolby. Orchestral Recording. On the Road with Prince. Neil Young.
- ☐ **1985 September, Southern California Studios.** Film & TV Sound. Frank Zappa. Digital '86 Supplement. *Mishima* Sound. David Foster.
- ☐ **1985 October, New Products for AES.** Maintenance & Testing. Abbey Road Studios. Ambisonics. Ben Burtt on Imax. Nile Rogers.
- ☐ **1985 November, North Central & Canadian Studios.** George Massenburg. Video Supplement. Alligator Records. Women in Media Production.
- ☐ **1985 December, Tape-to-Disc Listings.** Mastering. Pressing & Duplication. TFC Award Winners. Sound for the *Twilight Zone*. Tom Waits.
- ☐ **1986 January, Northwest Studios.** Equipping Home Studios. Paul Winter. SMPTE-MIDI Connection. Yoko Ono.
- ☐ **1986 February, Independent Engineers & Producers.** Microphone Special Report. Laurie Spiegel. Budgeting for Sessions. Joni Mitchell.
- 1986 March — SOLD OUT**
- 1986 April — SOLD OUT**
- ☐ **1986 May, Northeast Studios.** Digital Supplement. Sampling Primer. CD Facilities. Future of Console Design. Steve Lillywhite.
- ☐ **1986 June, Remote Recording & Sound Reinforcement Listings.** Roadability. Russ Titelman. CD-ROM & CD-I. Ry Cooder.
- 1986 July — SOLD OUT**
- 1986 August — SOLD OUT**
- ☐ **1986 September, Southern California Studios.** Film Sound. Telecommunications.

Production Music Libraries. David Byrne's *True Stories*.

1986 October — SOLD OUT

- ☐ **1986 November, New Products Directory.** CD-I Supplement. Kenny Loggins Tour Sound. Daryl Hall. Grounding Primer. Rupert Neve.

1986 December — SOLD OUT

1987 January — SOLD OUT

- ☐ **1987 February, Independent Engineers & Producers.** International Recording Supplement. APRS Studio Directory. Bruce Landvall. DMM for CD. Kitaro.

- ☐ **1987 March, Southeast Studios.** Digital Recording Supplement. Tom Jung. CD Mastering Forum. Richard Thompson.

- ☐ **1987 April, Video Production & Post-Production Facilities.** Location Mic Techniques. Adrian Belaw. Synchronizer Survey. Pee-wee's Playhouse.

- ☐ **1987 May, Northeast Studios.** Stevie Wonder & Nile Rodgers Record by Satellite. Programmable Signal Processors. GRP Records. Digital Video Interactive. George Martin.

- ☐ **1987 June, Remote Recording & Sound Reinforcement Listings.** Touring Consoles. Video's Stephen Johnson. Women in Sound Reinforcement. Paul Simon Live in Zimbabwe.

1987 July — SOLD OUT

1987 August — SOLD OUT

- ☐ **1987 September, Southern California Studios.** Recording in Hawaii. The Doors. Analog 2-tracks. Phil Spector.

- ☐ **1987 October, New Products Directory.** Producers' Forum. John Hiatt. Tape Recorder Maintenance. Laurie Anderson.

- ☐ **1987 November, North Central and Canadian Studios.** George Harrison. Pioneers and Trends in Film Sound. Localization. Maurice Jarre.

1987 December — SOLD OUT

- ☐ **1988 January, Northwest Studios.** Music Software Programs. On the Road with Pink Floyd. CD Video. Mick Jagger.

- ☐ **1988 February, Independent Engineers & Producers.** International Recording. Automation & Control Systems. Remixing with Alan Parsons.

- ☐ **1988 March, Southeast Studios.** Optical Storage Methods. Stax Records. Studio Monitors. Branford Marsalis.

- ☐ **1988 April, Video Production & Post-Production Facilities.** Sound Effects for Video. Saul Zaentz. RCA Studios. Jon Astley.

- ☐ **1988 May, Northeast Studios.** Sound at the Winter Olympics. Lee Herschberg. New Age Music Production. Brian and Edward Holland.

- ☐ **1988 June, Remote Recording & Sound Reinforcement Directory.** Sound at the Grammy Awards. Joni Mitchell. Tina Turner Live From Rio. Jimmy Webb.

- ☐ **1988 July, Recording Schools Directory and Southwest Studios.** Education Supplement. Interactive Production Update. Talking Heads.

- ☐ **1988 August, Studio Designers & Suppliers.** Australian Recording Supplement. Lucasfilm's Skywalker Ranch. Bobby McFerrin.

- ☐ **1988 September, Southern California & Hawaiian Studios.** Huey Lewis. LA Recording Supplement. Second Generation CD Mastering.

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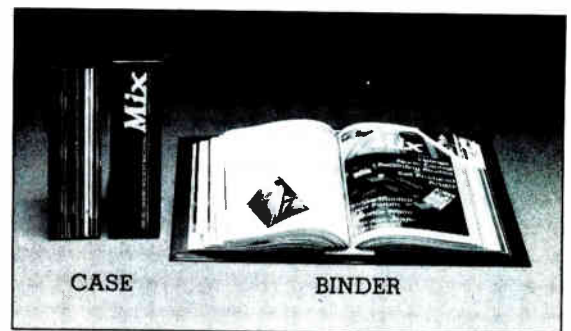
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SOUTHERN CALIFORNIA 24+ TRACK STUDIOS

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Systems: Adams-Smith Zeta III, Garfield Masterbeat, Echo, Reverb, & Delay Systems: Lexicon 224, Roland SDE-2500, Effectron digital delay, Ibanez HD-1000, Eventide Instant Flanger, Eventide 910 Harmonizer, Yamaha 1010 analog delay, Lexicon PCM70, (2) Yamaha SPX900. Other Outboard Equipment: (2) Symetrix ST200 signal gate, Orban Parasound 622B para EQ. Microphones: (5) Neumann U87, (2) Neumann P48, (5) Neumann U89, (6) Sennheiser 421, (6) AKG C-414, AKG C-414EB, (10) AKG C-452EB, (4) E-V Monitor Amplifiers: (2) Yamaha P2200, (2) Crown D-60, (2) Hafler Monitor Speakers: (4) Westlake BBSM-12, (4) Yamaha NS-10M, (4) Auratone, (4) JBL 4311, (4) JBL 4313. Musical Instruments: Yamaha DX7, Yamaha RX5, Roland D-50, Roland JX-8P, LinnDrum, Oberheim DX, Sequential Circuits Prophet-Vector, Sequential Circuits Prophet-2000 sampling keyboard, Sequential Circuits Prophet-600, Moog Memorymoog, Moog Minimoog, Oberheim OB-SX, Yamaha RX11. Other MIDI Equipment: Macintosh 512e w/Performer software, Commodore 64 w/Sonus software, Opcode Plus MIDI converter. Video Equipment: Portland 19" monitor.

[24+] **WESTLAKE AUDIO, INC.**; 7265 Santa Monica Blvd.; and 8447 Beverly Blvd., Los Angeles, CA 90048; (213) 851-9800. Owner: Glenn Phoenix. Studio Manager: Chris Carey. Anne DeVenzo. Engineers: Alex Welli, Jim McMahon, John Sacchetti, Debbie Johnson, Ben Carr, Mark Hagen, Brad Sundberg, Darryl Dobson, Ric Butz, Dennis Stefani, Greg Loskorn. Dimensions: Room 1 studio 25 x 48, control room 25 x 20. Room 2 studio 20 x 35, control room 21 x 19. Room 3 studio 27 x 38, control room 23 x 19. Room 4 studio 30 x 50, control room 25 x 25. Room 5 control room 21 x 15. Mixing Consoles: (2) Neve V-Series custom 50 x 48 (Necam 96), Trident 80C 72 x 24 (MasterMix), Harrison MR-2 custom 56 x 48 (MasterMix), Harrison Series X 96 x 32. Audio Recorders: Mitsubishi X-850 32-track, Sony 3324 24-track, 3M 32- and 4-track digital, Sony JH-24 24-track, Studer A800 24-track, Ampex ATR 2 and 4-track. Cassette Recorders/Duplicators: Nakamichi MR-1, Awa 770 Noise Reduction Equipment: Dolby A, Dolby SR, dbx, Telcom. Synchronization Systems: Cipher Digital 4800. Echo, Reverb, & Delay Systems: Quantec QRS-XL, EMT 250, EMT 251, EMT 252, EMT 140, EMT 240, Lexicon 224, Eventide 2016, AMS RMX 16, Klark-Teknik DN-780, Yamaha REV1, Yamaha REV5, Yamaha REV7. Other Outboard Equipment: Publison America Internal 90, Eventide H3000, Lexicon PCM70, Drawmer, dbx, UREI Monitor Speakers: Westlake SM-1, Westlake HR-1, (selection of near field monitors). Musical Instruments: Yamaha pianos (MIDI), drumsticks. Other: Large screen projection. Rates: Please call 9 a.m. - 6 p.m., Monday through Friday.

[24+] **WHITE FIELD STUDIO**; 2902 W. Garry Ave.; Santa Ana, CA 92704; (714) 546-9210. Studio Manager: Thom Roy. Dimensions: Room 1 studio 25 x 25, control room 20 x 25. Room 2 studio 20 x 25 w/two isolation booths, control room 15 x 20. Video 40 x 40 (lighting grid at 18"). Mixing Consoles: ADA 36 x 32 split style w/moving fader automation, Ford Audio 32 x 24 custom w/Valley automation. Audio Recorders: Otari DTR-900 32-track digital, Stephens 821 24-track, Fostex B16D 16-track, Otari MTR-20Q 4-track, Otari MTR-20 2-track 1/2" and 1/4", (2) Ampex ATR-102 2-track 1/2" and 1/4". Noise Reduction Equipment: Dolby SR, Dolby A, Echo, Reverb, & Delay Systems: EMT 240, Lexicon 224, Ecoplate II, Lexicon PCM60, Eventide H949, DL-2, Loft 450, Lexicon 93, Ibanez SDR-1000, Roland, Korg, Ibanez. Other Outboard Equipment: UREI LA-2A, UREI LA-3A, Universal Audio 175, Universal Audio 1176, Orban de-esser, Stephens de-esser, Kepex, dbx 902, dbx 903, dbx 907, Aphex, Boulder Microphones: Neumann tube mics, Tele Elam-251, Sony tubes, Sennheiser, Shure, AKG, Beyer, E-V. Monitor Amplifiers: AB, Spectra Sonics, Crown, Yamaha, Hafler. Monitor Speakers: Altec Mastering Lab, Yamaha, Fostex, JBL, Tannoy. Musical Instruments: Steinway 9' grand, Hammond B3, Leslies, guitar amps, drums. Video Equipment: Crosspoint switchers, Sony M-3, Convergence, JVC, Apert Herzog, Fortel V688, 3/4" production remote and post-services, A/B roll edit, Chyron, SMPTE, Prop Shop, 24-channel 2-scene lights, 3-wall hard cove. Rates: Digital \$120/hr., 24-track \$80/hr.

[24+] **WILDCAT STUDIOS**; 5815 Pico Blvd.; Los Angeles, CA 90019; (213) 931-3411. Owner: John Ross. Studio Manager: Nancy Ross. Engineers: Mark Coffin, John Ross, Josh Schneider. Dimensions: Studio 16 x 18, control room 18 x 20. Mixing Consoles: Trident 80B 32 x 24. Audio Recorders: Otari MTR-900L 24-track, Otari MTR-12 2- and 4-track, Tascam Model 42 2-track. Cassette Recorders/Duplicators: Yamaha K1020. Synchronization Systems: Fostex 4030, Fostex 4035, Fostex 4010. Echo, Reverb, & Delay Systems: Lexicon 224XL, Lexicon PCM60, Yamaha REV7, Yamaha SPX900, Effectron II, ADA 640, Roland SDE-1000, Lexicon Prime Time, ART Pro-

Verb. Other Outboard Equipment: Symetrix 522, Eventide Omnipressor, Omni Craft GT4 gates, Roger Mayer gates, Kepex gates. Microphones: (2) Neumann U87, (2) AKG 451, (4) Sennheiser MD-421, (2) Shure SM58, (4) Fender P1/P2, (8) Fender D1/D2/D3, Fostex M88. Monitor Amplifiers: Ramsa 350-watt (per channel), (2) Fender 2240, Fender 2220. Monitor Speakers: (2) Tannoy SRM-15, (2) Yamaha NS-10, (2) Auratone. Musical Instruments: Fairlight Series III, Kurzweil 250, Kurzweil MIDBoard, Kurzweil 1000 PX, Kurzweil 1000 SX, Kurzweil 1000HX, Yamaha TX816, Yamaha DX7, Sequential Circuits Prophet-5, Moog 55 modular, Roland MKS-10, Linn 9000, Chroma Polaris, (2) Korg EX-800, Korg DSM-1. Other MIDI Equipment: Macintosh Plus 140 meg hard drive, J.L. Cooper 16/20, Roland SBX-80, Southworth Jam Box/4+. Video Equipment: JVC 6650 3/4" machine, Kloss overhead video projector, Magnavox 26" video monitor, NEC 13" video monitor. Other: Atari 800XL computer, Mark of the Unicorn Performer, Master Tracks Pro, Hybrid Arts DX/TX librarian. Rates: \$70/hr. (studio and synths) \$90/hr. (same with lockup).

[24+] **WIZARD PRODUCTIONS**; also **REMOTE RECORDING**; 900 Toro Canyon; Montecito, CA 93108; (805) 680-0113; 969-7630DATA. Owner: The Wiz. Studio Manager: Kevin Crossley. Engineers: Richard Buxton, Wayne Sabbak, Jim Wood. Dimensions: Room 1 studio/control room 24 x 14. Room 2 studio/control room 20 x 16. Mixing Consoles: Trident T-24 36 x 24 x 24, Hill Multimix 16 x 4 x 2, Tascam M-30 8 x 4 x 2. Audio Recorders: Sony/MCI JH-24 24-track, Nagra IV 2-track, Sony 8mm 2-track, (2) Sony R-DAT 2-track TC, Sony 5850 2-track U-matic, Sony PCM-1630 2-track. Cassette Recorders/Duplicators: Technics, B&O Synchronization Systems: Fostex. Echo, Reverb, & Delay Systems: (2) Yamaha REV5, Korg SDD-2000, (2) MIDVerb, TC Electronic delay. Other Outboard Equipment: (2) dbx 160X comp/lim. Microphones: Beyer M 88N, AKG C-522, Sennheiser 421, E-V ND308, Sennheiser shotgun, (2) Audio-Technica 818, ATM-41A. Monitor Amplifiers: Bryston 4B, (2) Bryston 3B. Monitor Speakers: Tannoy LGM (both rooms), Yamaha MS-10G, UREI FSM. Musical Instruments: Steinway Hamburg B MIDI mentor, Yamaha G1, Yamaha DX7 Centennial w/El, Korg SG-1D, Korg DS-8, Korg DW-8000, Korg DRM-1, Korg EX-800, 360 Systems Professional MIDIBass, (2) Mirage, Yamaha TX7, Yamaha DX7IIe, Yamaha RX5, Roland S-550, Roland D-550, Akai S900, Oberheim Matrix-6, E-mu Emu II HD, E-mu SP-1200, Kurzweil 1000, Oberheim DPX-1, assorted percussion, congas, vibes (Musser). Other MIDI Equipment: (2) Macintosh II w/80 meg HD and 5 meg RAM, (2) Jam Box. SBX80. Video Equipment: Sony Mini-Cam, Sony 7" projector, (4) various monitors, Sony BVU-5850/5800. Rates: On a project by project basis.

[24+] **WONDERLAND STUDIOS**; also **REMOTE RECORDING**; 729 S. Western Ave.; Los Angeles, CA 90005; (213) 386-2954. Owner: Steviand Morris. Studio Manager: Stephanie Andrews. Mixing Consoles: Neve 8128 48-input w/Necam II, SSL 4000E mobile 40-input w/Total Recall. Audio Recorders: (2) Sony 3324 24-track, (3) 3M 32-track digital, Sony 1630, (2) Sony DMR-4000, (2) Sony DAE-1100. Cassette Recorders/Duplicators: (2) Studer A710 (control room), (2) Studer A710 (mobile). Synchronization Systems: Adams-Smith System 2600, (4) Lynx. Echo, Reverb, & Delay Systems: (2) EMT 250, (2) Sony DRE-2000, Lexicon 200, (3) AMS, (4) Yamaha REV7, Publison America Internal machine. Other Outboard Equipment: Massenberg EQ, Scamp, Summit Audio tube limiter, UREI 1176, Orban Parametric Microphones: Sanken, Neumann, Sennheiser, E-V, Crown, Sony, Shure, Calrec, AKG. Monitor Amplifiers: John Meyer, John Meyer (mobile). Monitor Speakers: John Meyer 833 (control room), John Meyer 833 (mobile). Rates: Call for quote.

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BACK ISSUES

- ☐ **1985 August, Studio Design Issue: Listings of Designers & Suppliers.** Control Room Acoustics. Thomas Dolby. Orchestral Recording. On the Road with Prince. Neil Young.
- ☐ **1985 September, Southern California Studios.** Film & TV Sound. Frank Zappa. Digital '86 Supplement. *Mishima* Sound. David Foster.
- ☐ **1985 October, New Products for AES.** Maintenance & Testing. Abbey Road Studios. Ambisonics. Ben Burt on Imax. Nile Rogers.
- ☐ **1985 November, North Central & Canadian Studios.** George Massenburg. Video Supplement. Alligator Records. Women in Media Production.
- ☐ **1985 December, Tape-to-Disc Listings.** Mastering. Pressing & Duplication. TEC Award Winners. Sound for the *Twilight Zone*. Tom Waits.
- ☐ **1986 January, Northwest Studios.** Equipping Home Studios. Paul Winter. SMPTE/MIDI Connection. Yoko Ono.
- ☐ **1986 February, Independent Engineers & Producers.** Microphone Special Report. Laurie Spiegel. Budgeting for Sessions. Joni Mitchell.
- 1986 March — SOLD OUT**
- 1986 April — SOLD OUT**
- ☐ **1986 May, Northeast Studios.** Digital Supplement. Sampling Primer. CD Facilities. Future of Console Design. Steve Lillywhite.
- ☐ **1986 June, Remote Recording & Sound Reinforcement Listings.** Readability. Russ Titelman. CD-ROM & CD-I. By Cooder.
- 1986 July — SOLD OUT**
- 1986 August — SOLD OUT**
- ☐ **1986 September, Southern California Studios.** Film Sound. Telecommunications.

Production Music Libraries. David Byrne's *True Stories*.

1986 October — SOLD OUT

- ☐ **1986 November, New Products Directory.** CD I Supplement. Kenny Loggins Tour Sound. Daryl Hall. Grounding Primer. Rupert Neve.

1986 December — SOLD OUT

1987 January — SOLD OUT

- ☐ **1987 February, Independent Engineers & Producers.** International Recording Supplement. APRS Studio Directory. Bruce Lundvall. DMM for CD. Kitaro.

- ☐ **1987 March, Southeast Studios.** Digital Recording Supplement. Tom Jung. CD Mastering Forum. Richard Thompson.

- ☐ **1987 April, Video Production & Post-Production Facilities.** Location Mic Techniques. Adrian Belew. Synchronizer Survey. Pee-wee's Playhouse.

- ☐ **1987 May, Northeast Studios.** Stevie Wonder & Nile Rodgers Record by Satellite. Programmable Signal Processors. GRP Records. Digital Video Interactive. George Martin.

- ☐ **1987 June, Remote Recording & Sound Reinforcement Listings.** Touring Consoles. Video's Stephen Johnson. Women in Sound Reinforcement. Paul Simon Live in Zimbabwe.

1987 July — SOLD OUT

1987 August — SOLD OUT

- ☐ **1987 September, Southern California Studios.** Recording in Hawaii. The Doors. Analog 2 tracks. Phil Spector.

- ☐ **1987 October, New Products Directory.** Producers' Forum. John Hiatt. Tape Recorder Maintenance. Laurie Anderson.

- ☐ **1987 November, North Central and Canadian Studios.** George Harrison. Pioneers and Trends in Film Sound. Localization. Maurice Jarre.

1987 December — SOLD OUT

- ☐ **1988 January, Northwest Studios.** Music Software Programs. On the Road with Pink Floyd. CD Video. Mick Jagger.

- ☐ **1988 February, Independent Engineers & Producers.** International Recording. Automation & Control Systems. Remixing with Alan Parsons.

- ☐ **1988 March, Southeast Studios.** Optical Storage Methods. Stax Records. Studio Monitors. Branford Marsalis.

- ☐ **1988 April, Video Production & Post-Production Facilities.** Sound Effects for Video. Saul Zaentz. RCA Studios. Jon Astley.

- ☐ **1988 May, Northeast Studios.** Sound at the Winter Olympics. Lee Herschberg. New Age Music Production. Brian and Edward Holland.

- ☐ **1988 June, Remote Recording & Sound Reinforcement Directory.** Sound at the Grammy Awards. Joni Mitchell. Tina Turner Live From Rio. Jimmy Webb.

- ☐ **1988 July, Recording Schools Directory and Southwest Studios.** Education Supplement. Interactive Production Update. Talking Heads.

- ☐ **1988 August, Studio Designers & Suppliers.** Australian Recording Supplement. Lucasfilm's Skywalker Ranch. Bobby McFerrin.

- ☐ **1988 September, Southern California & Hawaiian Studios.** Huey Lewis. LA Recording Supplement. Second Generation CD Mastering.

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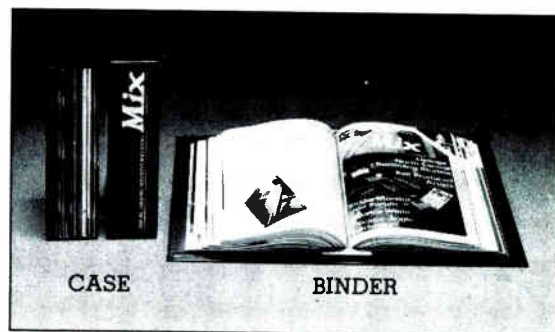
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limiter Synchronization Systems: (3) Lynx module, 8002 self-contained synchronizer. Echo, Reverb, & Delay Systems: Lexicon PCM70, Lexicon PCM60, Yamaha REV7, Roland SDE-3000, (2) Roland SDE-1000, MXR delay system II. Other Outboard Equipment: Scamp, (4) EQ, (2) gate, rack, UREI 565 filter set, Songbird tri-stereo chorus, UREI 964 digital metronome, Aphex Aural Exciter, Dynacord electronic Leslie, Boss CE-300 super chorus, Korg digital voice processor-1, Dr. Click 2. Microphones: RE20, Neumann U87. Monitor Amplifiers: (2) Crown DC-300, QMI GC-500. Monitor Speakers: (2) Westlake dual 15, (2) Yamaha NS-10, (2) Auratone. Musical Instruments: Oberheim Matrix-12, Yamaha DX7IFD, Yamaha DX7, Yamaha TX816 rack, Emulator II, Oberheim OB-8, Moog Memorymoog, Korg EX-8000, Roland MKS-80 Super Jupiter, Linn 9000, Fazer piano, Roland D-50, Roland D-550. Other MIDI Equipment: Commodore SX-64, 360 Systems mini patcher, Auricle scoring software. Video Equipment: JVC 6650U 3/4" video deck, Sony Trinitron 25" monitor. Rates: \$90/hr.

[24+] **SUTTON SOUND STUDIO**; also **REMOTE RECORDING**; 8390 Curbaril, Atascadero, CA 93422; (805) 466-1833. Owner: Rick Sutton.

[24+] **TAKE ONE RECORDING STUDIOS INC.**; 619 B.S. Glenwood Pl.; Burbank, CA 91506; (818) 841-8697. Owner: Steven D. Smith. Studio Manager: Candace Corn.

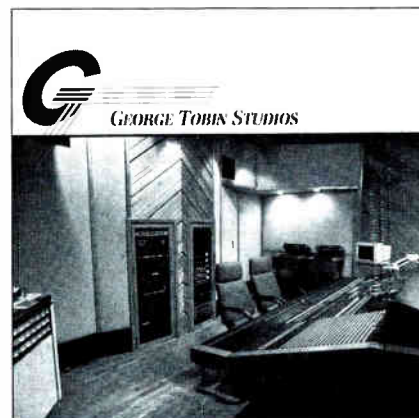


THAT STUDIO RECORDING SERVICES
North Hollywood, CA

[24+] **THAT STUDIO RECORDING SERVICES**; also **REMOTE RECORDING**; PO Box 958, North Hollywood, CA 91603; (818) 764-1421. Owner: That Studio, Inc. Studio Manager: Shannon Holbrook. Richard Holbrook. Engineers: Richard Holbrook, Robert Pfeiffer, Denny McLane, Steve Seboldt, independents. Dimensions: Studio 30 x 20 w/extensive trapping (live and dead areas). Control room 14 x 9, truck control room 12 x 8. Live isolation room/chamber 8 x 9. Mixing Consoles: Studio. Harrison MR-4 28 x 24 (automated). Truck. Audionics 110-8 24 x 8 x 2. Audio Recorders: Otari MTR-90 24- and 16-track, Otari MTR-12 2-track, Otari MX-5050 2-track, Otari MX-5050 8-track, TEAC 3340 4-track, Sony DTC-M100 DAT Cassette Recorders/Duplicators: (2) Technics M85, Awa F770 Echo, Reverb, & Delay Systems: Lexicon 224XL, Lexicon 200, Lexicon PCM70, (3) Yamaha SPX90, DeltaLab CompuEffectron, DeltaLab Effectron 3, Lexicon Prime Time DDLs, Master-Room MICMIX plate, Sound Workshop reverb, Ibanez SDR-1000 digital reverb. Other Outboard Equipment: Eventide 910 Harmonizer, dbx 900 de-esser, dbx 160, dbx 161, dbx 162, dbx 160X, Kepex II noise gates, Dynatronics Trichorus, (8) Gatebox noise gate, dbx noise reduction, Boulder 2-channel mix preamp, Sontec equalizer, Drawmer noise gates. Microphones: Neumann, AKG, Crown, PZM, Beyer, Sennheiser, PML, Sony, E-V, Shure. Monitor Amplifiers: Crown, BGW, Yamaha, QSC, Altec. Monitor Speakers: JBL 4315, JBL 4313, Altec 604, Yamaha NS-10, Auratone, E-V Sentry 100A. Musical Instruments: Yamaha C7 grand piano, Akai MPC60 Integrated MIDI sequencer/drum sampler, Hammond B3 w/Leslie, Sonor drum kit, G&L bass guitar, Fender Rhodes mono and stereo, assorted acoustic guitars and amps, Roland Juno-6 synth, Yamaha DX7 synth, Roland JX-8P synth, LinnDrum, a wide range of percussion instruments and other toys when reserved in advance. Video Equipment: Available upon request. Rates: Please call for color studio brochure and rate card. Extras & Direction: Live isolation booth/small chamber for tracking and overdubs. There is a client lounge, coffee and kitchenette area, storage, video games and TV. That Studio also offers a wide range of audio services, including custom record and disc production, sound reinforcement, audio consultation and installation and demo production assistance. Please call us and see how we can fill your needs in recording.

[24+] **3RD WAVE RECORDING**; 1425 Marcelina Ave. (in rear); Torrance, CA 90501; (213) 212-0947. Owner: SO & So Productions. Studio Manager: Adrian Cook.

SOUTHERN CALIFORNIA 24+ TRACK STUDIOS



GEORGE TOBIN STUDIOS

GEORGE TOBIN STUDIOS
North Hollywood, CA

[24+] **GEORGE TOBIN STUDIOS**; 11337 Burbank Blvd.; North Hollywood, CA 91601; (818) 506-HITS(4487); FAX: (818) 506-5905. Owner: George Tobin. Studio Manager: Tom DiCandia, Brenda Ferrell. Dimensions: Room 1. studio 30 x 13 x 10, control room 21 x 17 x 10. Room 2. studio 26 x 20 x 20, control room 20 x 18 x 10, isolation booth #1 10 x 8 x 10, isolation booth #2 12 x 8 x 9. Mixing Consoles: Trident DI-AN 72 x 32 x 2 fully automated w/72 moving faders, total console resatability/all parameters, Trident 80B 32 x 24 x 24 w/Optifile disk-based VCA automation. Audio Recorders: Otari DTR-900 32-track digital, (2) Otari MTR-90 24-track w/Otari sync, (2) Ampex ATR-102 2-track w/1/4" and 1/2" capability, (2) Otari MTR-90 24-track w/Otari sync, Ampex MM1200 (all mods), (2) Ampex ATR-102 1/4" and 1/2" capability. Cassette Recorders/Duplicators: (2) Nakamichi MR-1, (2) Yamaha K2000. Synchronization Systems: Adams-Smith Zeta III (MIDI synchronizer), Echo, Reverb, & Delay Systems: (2) AMS RMX 16, (2) Yamaha REV5, Korg DRV-3000, (2) Yamaha SPX90II, (2) Roland SDE-3000, (2) Lexicon 224, (2) Yamaha D1500 DDL, EMT 251, EMT 240 Gold Foil plate reverb, Lexicon Prime Time. Other Outboard Equipment: Eventide Harmonizer, (2) UREI 1176 comp/lim, (3) dbx 165X comp/lim, (2) dbx 160X comp/lim, Pultec mid-range EQ, (2) Pultec program EQ, GML 4-ch para EQ, GML 4-ch preamp, API 550A 20-ch EQ, Massenburg 10-ch preamp, Eventide Harmonizer, dbx 165 comp/lim, dbx 160X, UREI 1176, (2) Drawmer dual gate, (4) Kepex gate, Klark-Teknik graphic EQ, ADP Compex limiter. Microphones: Telefunken Eham 251 tube, Neumann U47 tube, Neumann U67 tube, (2) Neumann KM86, (4) Neumann U87, (4) AKG 414, (4) AKG C-452, AKG DM-500, AKG DM-700, (2) AKG D-1000E, AKG D-12E, Beyer M 500, Beyer M 160, (2) Sennheiser 421, Sennheiser 441, Sennheiser MD-416U, Sennheiser MD-409, (6) Shure SM57, Shure SM58, (2) E-V RE20, E-V RE11, (2) E-V RE10, (2) E-V 635A, (2) E-V 1750, Fostex M77RP, Fostex M55RP. Monitor Amplifiers: HH Electronic M900 MOS-FET, BGW 750D, (2) BGW 50A, (2) HH Electronic V800 MOS-FET, Haller 225, Haller Monitor Speakers: (2) UREI 813, (2) Yamaha NS-10, (2) Auratone. Musical Instruments: Kawai grand piano, Fender Rhodes, Hammond organ w/Leslie. Video Equipment: Sony 5850 3/4" VCR Sony 5800 3/4" VCR, Videomedia Professional editing system "Mickey", Sony PVM-122 monitor, (2) Videotek monitors fully SMPTE synchronized to all tape machines. Extras & Direction: George Tobin Studios offers the absolute latest in digital and analog technologies. The Trident DI-AN digitally controlled analog console and the Otari DTR-900 digital 32-track George Tobin Studios clearly redefines the term "state-of-the-art." The DI-AN offers the legendary Trident sound in a totally automated environment. Equipped with 72 moving faders, the DI-AN delivers total console resatability and absolute level accuracy. Along with our huge complement of outboard gear and qualified, friendly staff, George Tobin Studios offers you a truly world-class studio at sensible booking rates. Contact Tom DiCandia or Brenda Ferrell at (818) 506-HITS(4487).

[24+] **THE TOLEDO STUDIO**; also **REMOTE RECORDING**; 5131 The Toledo; Long Beach, CA 90803; (213) 438-0498. Owner: Wade Wilkinson, Don Koller. Studio Manager: Clayton Bybee. Engineers: On request. Dimensions: Room 1. studio 18 x 18, control room 16 x 16. Room 2. studio 18 x 18, control

room 12 x 8. Mixing Consoles: Hill Concept Series 32 x 24, Soundcraft Series II 16 x 8, Audio Recorders: Ampex MM1200 24-track, Scully 8-track, TEAC 80-8 8-track, Technics 1500 2-track, Sony PCM-F1 2-track digital, Tascam 3340, 4-track. Cassette Recorders/Duplicators: (10) Nakamichi MR-2, Portastudio, JVC dubbing deck. Noise Reduction Equipment: Dolby A, Dolby C, dbx. Synchronization Systems: Fostex, Mini-sync controller, Macintosh SE sync. Echo, Reverb, & Delay Systems: AMS 1620, Lexicon reverb, Roland SDE-1000, Biamp MR-140, DeltaLab DL-2, Eventide delay, MXR 01A digital reverb, Fostex 3050. Other Outboard Equipment: Scamp rack/de-esser/gate/Vari-Q, Compex limiter, (2) Eventide 910 Harmonizer w/keyboard, (2) Neumann 1176LN, UREI digital metronome, Valley People rack w/Kepex, Gain Brain, Maxi-Q, (2) Valley People Dyna-Mite, dbx 163, Altec graphic EQ. Microphones: (2) Neumann U87, AKG C-12A, (2) Neumann KM84, (2) Neumann U47 FET, (2) Sennheiser MD-421, (2) Sennheiser MD-441, (2) E-V PLM20, (2) AKG D-12E, (2) Beyer M 500, (2) Shure SM57, RCA 77DX. Monitor Amplifiers: (2) Yamaha, JBL Bedini, (2) McIntosh. Monitor Speakers: (2) JBL 4311, (2) Tannoy monitor Gold, (2) Yamaha NS-10M, (2) E-V Sentry 100, (2) Auratone cubes, (2) ART mini boxes. Musical Instruments: Roland 300S digital piano, Philip Kubicki "Strat" w/shock wave p/u, Fender 1957 blonde Twin amp, Gibson L5S w/Kahler tremolo, Washburn bass w/EMG p/u, Ampeg B-15 bass amp, Carvin guitar amp, misc. percussion, Fender Coronado guitar, Ovation acoustic guitar, Hofner bass, Gibson 175, Gallien-Krueger 400B. Other MIDI Equipment: Macintosh SE MIDI-equipped, IBM AT MIDI-equipped, QMS Post-Script laser printer, Tops Network and MIDI interfaces. Video Equipment: (2) VHS Hi-Fi VCRs, Sony Pro 8mm camcorder, Sony editor, misc. lighting, tripods. Other: Complete photographic facility, computer workstation, music and graphic publishing, printing facility, booking and management databases. Rates: Varies with project and your needs, call for rates or bids.

[24+] **TOTAL ACCESS RECORDING**; 612 Meyer Ln., #18 A, B, C; Redondo Beach, CA 90278; (213) 376-0404. Owner: Allan W. Davis, Allan H. Jukes. Studio Manager: Tyana Parr, Wyn Davis. Engineers: Eddie Ashworth, Wyn Davis, independent. Mike Lardie. Dimensions: Studio 25 x 30, control room 25 x 20, live chamber 25 x 32 x 16. Mixing Consoles: Amek G2520 58 x 48 x 104 w/automation. Audio Recorders: Ampex ATR-124 analog, Sony multi-track digital, Mitsubishi multi-track digital, Ampex ATR-102/4, Sony 3402 2-track digital. Cassette Recorders/Duplicators: Nakamichi ZX-7, Nakamichi M-2. Noise Reduction Equipment: Drawmer 10-ch audio gates, Aphex CX-1. Synchronization Systems: Lynx. Echo, Reverb, & Delay Systems: Lexicon 480L w/sampling option, Lexicon 224XL, Klark-Teknik DN-780, AMS 15-80S, Yamaha REV7, Yamaha SPX90, Roland SRV-2000, Lexicon 95, Lexicon 93, Lexicon PCM70, EMT 240 Gold Foil, AKG BX-20, Roland SDE-3000. Other Outboard Equipment: Sontec para EQ, GML para EQ, dbx 165A, dbx 160, UREI 1176, UREI LA-3A, ADR Vocal Stresser, Lang tube EQ, (6) Boulder mic preamp. Microphones: AKG C-12, AKG 414, AKG 451, Schoeps, Neumann U87, Neumann KM86, Neumann KM88, Neumann KM84, Neumann U67, Shure SM57, Shure SM58, Countryman, Beyer, Crown PZM many more. Monitor Amplifiers: (3) Boulder 500, Crown, BGW, Phase Linear. Monitor Speakers: UREI 813, Canton, Yamaha, E-V, Tannoy, JBL, Auratone. Musical Instruments: LinnDrum 9000, Steinway grand, Fender Strats, Gibson Les Pauls, Roland synth, superb collection of vintage acoustic guitars including Guild, Gibson, Martin and others. Video Equipment: Beta and VHS 1/2", Sony 3/4", JVC 3/4", Sony monitor. Rates: Hourly and lookout rates are negotiable. Please call. Extras & Direction: Total Access provides technically advanced recording systems coupled with a warm atmosphere and skilled staff. We can arrange for accommodations and anything else needed to accomplish any project. We are located one mile from the Pacific Ocean in beautiful Redondo Beach. World-wide clientele includes Guns 'N' Roses, Ken Scott, Dokken, Gary Wright, Michael Wagener, Great White, Tears for Fears, White Lion, Alice Cooper, Will and the Kill, Terry Bozzio and many others.

[24+] **TRACK RECORD, INC.**; also **REMOTE RECORDING**; 5102 Vineland Ave.; North Hollywood, CA 91601; (818) 761-0511. Owner: Thomas M. Murphy. Studio Manager: Alan Morphew. Engineers: Tom Murphy, John Carter, Ken Paulakovich, Bryan Carlstrom, Pete Magdaleno, Alan Morphew. Dimensions: Room 1. studio 40 x 40, control room 20 x 22. Room 2. studio 30 x 30, control room 20 x 25. Room 3. studio 8 x 8, control room 15 x 20. Room 4. control room 12 x 20. Mixing Consoles: Trident Series 80 40 x 24, Neve 8232 32 x 24, Trident 8 x 2 submixer, Soundcraft 6000 32 x 16. Audio Recorders: Sony JH-24 24-track, (2) Ampex ATR-102 2-track, Ampex ATR-104 4-track, Otari MTR-12 2-track, Studer A80 MkIV 24-track, Studer A80 2-track, 3M 79 24-track. Cassette Recorders/Duplicators: (3) Hitachi D-2200M, (3) Technics, Akai GX-912. Noise Reduction Equipment: (2) Dolby 361 Synchronization Systems: Audio Kinetics 3 1/2 Qlock, Echo, Reverb, & Delay Systems: (2) Lexicon 224XL, Lexicon 224, Lexicon 480, AMS RMX 16, AMS 15-80S, (3) Ecoplate (I and II), (2) Roland SRV-2000, (3) Roland SDE-3000, DeltaLab Acousticcomputer, DeltaLab Delta-T, DeltaLab DL-1, (2) Lexicon Prime Time, Bel BD-80 8-sec. sampler, TC Electronic 2290 11-sec. sampler. Other Outboard Equipment: Pultec EQ-H2 EQ, Pultec MEQ-5 EQ, (2) Lang tube program EQ, (2) Massenburg preamp, (2) Massenburg EQ, (2) Eventide H910

Harmonizer, (6) Drawmer gate, (6) Kepex II gate, (3) Teletronix LA-2A, (5) UREI 1176 limiter, (2) Yamaha SPX90 Microphones: (2) Telefunken U47 tube Neumann U47 tube, (2) AKG C-12 tube, Telefunken 251 tube, (2) Neumann KM64 tube, AKG 414EB, AKG 414EB/P48, AKG 414B/ULS TL, (3) Neumann U87, (8) Sennheiser 421, (7) AKG 451, Neumann U47 FET, (2) E-V RE20, (2) Neumann KM84. Monitor Amplifiers: HH Electronic, SAE, Phase Linear. Monitor Speakers: TAD, Yamaha NS-10M, Yamaha NS-10M studio, E-V Sentry-100, Auratone Musical Instruments: Kawai 7' grand piano, Steinway "B" grand piano, Kurzweil 250 (SBA, B, C, D, Super RAM II), Yamaha DX7 (E1 Opcode lib/ed), Sequential Circuits Prophet-VS, Oberheim DPX-1 (E II, S900, 2000 and Mirage playback), Oberheim OB-8, Yamaha TX816, Hammond B1 w/Leslie, Moog Minimoog, Moog Memorymoog, Kurzweil 1000SX string expander, Oberheim Xpander. Other MIDI Equipment: Apple Mac+ (w/hard disk), Yamaha QX1 sequencer, Garfield Master Beat J.L. Cooper Expression Plus (MIDI 8 VCA's). Video Equipment: JVC CR6650U ¼" cassette recorder, (2) Panasonic monitor, stereo ½" VHS w/Dolby. Other: Roland CPE-800 (15-ch SMPTE-based automation), custom tube Dis. tube preamps, effects generators, stereo Aural Exciter, 40' remote recording trailer, fully equipped w/40-ch Sphere console. Rates: Block rates starting at \$55/hr



TRAX RECORDING
Hollywood, CA

[24+] **TRAX RECORDING**; 1433 Cole Pl.; Hollywood, CA 90028; (213)856-TRAX (8729). Owner: Michael McDonald. Studio Manager: Robyn Whitney. Engineers: Russ Iadevava, Michael McDonald, Mike Edwards, Jim Bailey. Dimensions: Room 1: studio 32 x 38, control room 18 x 23. Room 2: control room 10 x 16. Mixing Consoles: Soundcraft 2400 56-input mixdown w/Hill 40 x 16 submixer, Audioarts R-16 27 x 16. Audio Recorders: Otari MX-80 24-track, (2) Tascam 85-16B 16-track, (3) Otari/R-TEK MX-5050 2-track 30 ips. Cassette Recorders/Duplicators: Aiwa F660, (8) Technics RS-B12 Noise Reduction Equipment: dbx 16-ch on ea Tascam 16-track Echo, Reverb, & Delay Systems: (2) Lexicon PCM60, (2) Roland SRV-2000, (2) Yamaha REV7, (3) Yamaha SPX90, (2) Ecoplate III plate reverb, Eventide H910 Harmonizer, (2) Roland SDE-3000 digital delay, (1) DeltaLab Effectron digital delay. Other Outboard Equipment: BBE 802 processor, (2) Aphex Aural Exciter, (4) dbx 160X limiter/compressor, (4) dbx 160 comp, dbx 165 comp, dbx 166 comp, Drawmer 4-ch gate, (2) Kepex II gate, Omni Craft 12-ch gate, (3) Symetrix 522 6-ch gate/compressor, Innovative audio tube mic preamps and DI boxes. Microphones: (2) Neumann U87, (5) AKG 414EB, (5) AKG 452, Sony C-37 tube, Sony C-48, (2) Sennheiser 441, (2) Sennheiser 421, RCA 77DX ribbon, AKG D-12E, (3) E-V RE20, (10) Shure SM57, Crown PZM. Monitor Amplifiers: SCS MOSFET, AB Systems, Crown, BGW, G.A.S., Nakamichi. Monitor Speakers: (2) UREI 811 (modified) w/18" E-V subwoofers, (2) UREI 811, (4) Yamaha NS-10, (2) Auratone Musical Instruments: Yamaha C7 grand piano, (2) Scholz Rockman guitar processor. Video Equipment: 19" video monitor, Fisher VHS video playback. Rates: \$27/hr to \$50/hr for 16- or 24-track, engineer included. Extras & Direction: Our clients include: CBS Records, Walt Disney Prod., Lorimar Pictures, Chrysalis Records, Malaco Records, Warner Bros. Records, Chappell Music, Geffen Records, Paramount Pictures, Island Records, Motown (Jobete Music) Screen Gems Music, A&M records, Unicity-MCA Music, Roger Corman Films, ABC and NBC television and many others. Largest recording room of any budget studio in Southern California!

[24+] **VALLEY CENTER STUDIOS**; 5928 Van Nuys Blvd.; Van Nuys, CA 91401; (818) 989-0866. Engineers: Dave Jenkins, Steve Miller, Peter Blackman, Kevin Reeves. Dimensions: Studio 20 x 13, control room 18 x 15. Mixing Consoles: Trident 80B 30 x 24 x 24 (54 ch on mix). Audio Recorders: MCI JH-24 24-track, MTR-12C 2-track (½" and ¼") Cassette Recorders/Duplicators: (2) Nakamichi MR-2. Other Outboard Equipment: Roland SRV-2000, Yamaha REV7, (2) Yamaha SPX90, Lexicon Prime Time 93, (4) Drawmer noise gate, (4) Symetrix noise gate, (2) API 550 EQ, Aphex stereo compeller, Aphex

Type C Aural Exciter, Trident stereo comp/limit, UREI LA-2A comp/limit, (2) Yamaha D1500 delay, Symetrix vocal processor, Aphex EQII EQ, Alesis MIDiverb II. Microphones: Neumann TLM170i, Neumann U87, Beyer 88, Beyer 201, Beyer 160, Sennheiser 441, (4) Sennheiser 421, (2) AKG 535, AKG CE1, (4) Shure SM57, (2) AKG 451, AKG 414. Monitor Amplifiers: UREI 813B, Yamaha NS-10, JBL 4133, Auratone

[24+] **THE VILLAGE RECORDER**; 1616 Butler Ave.; West Los Angeles, CA 90025; (213) 478-8227. Owner: George Hormel. Studio Manager: Kathy Konop, Nick Smernan. Engineers: Charlie Brocco, Jeff DeMorris, Rick Caughron, Robert Hart. Mixing Consoles: Solid State Logic 4056E 56 x 32 w/Total Recall, Neve 48 x 32 w/Necam 8108, Neve V Series 60 x 48 w/Necam 96, Trident T24 36 x 24. Audio Recorders: (2) Sony 3324 24-track digital, Sony PCM-1610 2-track digital, Mitsubishi X-800 3-track digital, Mitsubishi X-80 2-track digital, (4) Studer A800 24-track analog, (2) Studer A80 2-track analog, Otari MTR-90 MkII 24-track analog, Ampex ATR-104 4-track analog, (6) Ampex ATR-102 2-track analog, Otari MX-80 24-track, Sony PCM-2500, Sony PCM-F1, Sony PCM-701 DAT. Cassette Recorders/Duplicators: (10) Sony TCK-666 ES, Noise Reduction Equipment: Dolby, dbx, Dynaflex. Synchronization Systems: (9) Lynx TimeLine, Lynx TimeLine controller, BTX 4600 machine controller, Echo, Reverb, & Delay Systems: EMT 250, EMT 240, EMT 140, AMS 15-80, AMS RMX 16, Roland SDE-3000, Eventide 1745M, Eventide H910, Eventide 949, Yamaha SPX90, Yamaha REV7, live chamber, TC Electronic 2290. Other Outboard Equipment: UREI, Teletronix, dbx, Orban, Drawmer, Valley People, ADR Scamp, Aphex, ITI, API, Lang, Pultec, EMT, Neve 10 x 2 mixer, Kepex II, (2) Technics SLP-1200 CD player, CD SFX library. Microphones: Complete Neumann, Neumann TLM170, AKG, Beyer, Shure, RCA, Sennheiser, E-V, Sony, Telefunken, Schoeps, Crown PZM. Monitor Amplifiers: McIntosh, Crown PSA-2. Boulder Monitor Speakers: Village custom design, JBL and TAD components, bi-amped 3-way. Musical Instruments: Yamaha and Steinway grands w/MIDI, Fairlight CMI, Yamaha DX7, Oberheim OBX. Video Equipment: Convergence 103B A/B roll edit bay, (3) Sony 5850, (2) Sony BVU-800, Ampex VPR2-B 1" video, Fairlight CMI, Polaroid freeze frame recorder, video insert stage, (4) Panasonic VHS

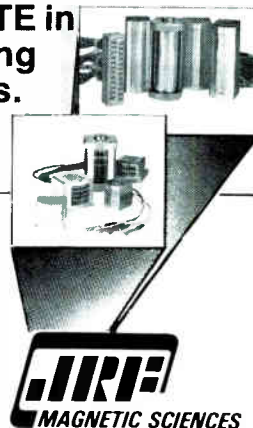
[24+] **VOICE OVER L.A.**; 1717 N. Highland Ave., Ste. 620; Hollywood, CA 90028; (213) 463-8652. Owner: Evelyn Williams. Studio Manager: Pat Torres. Engineers: Pat Torres, Deirdre Dolan. Dimensions: Room 1: studio 15 x 14, control room 15 x 12. Room 2: studio 18 x 12, control room 13 x 12. Mixing Consoles: Soundcraft 1600 24 x 8, TAC Scorpion 16 x 8. Audio Recorders: Otari MTR-90II 24-track, Otari MX-5050 MkII 8-track, Otari MX-5050 MkII 4-track, (4) Otari MX-5050 MkII 2-track. Cassette Recorders/Duplicators: (5) Technics RS-B100 Noise Reduction Equipment: (2) Symetrix 511. Synchronization Systems: Audio Kinetics Eclipse, Echo, Reverb, & Delay Systems: Lexicon PCM digital reverb, Korg SDD-300 digital delay. Other Outboard Equipment: (2) Symetrix TI-101 (telephone interface), (2) dbx 166 (stereo limiter). Microphones: (3) Sennheiser MKH-416, (3) Schoeps CMC-411. Monitor Amplifiers: (3) Haller P-225, (5) Symetrix A-220. Monitor Speakers: (4) JBL 4411, (8) Auratone. Video Equipment: (2) Sony KX-1901A (color monitor), (2) Sony PVM-91 (B&W monitor), JVC CR-850U ¾" VCR, JVC CR-8250 ¾" VCR. Other: Sigma CSG-355A (color sync generator), ESE ES-255 (SMPTE time code reader), Technics SL-P50 CD player, Technics SL-P500 CD player.

[24+] **WAVES SOUND RECORDERS**; also **REMOTE RECORDING**; 1956 N. Cahuenga Blvd.; Hollywood, CA 90068; (213) 466-6141; FAX: 466-3751. Studio Manager: David Green. Engineers: Rich Rauh, Chris Hartt, Tony Mederos, Glenn Barr, Stewart Sloke. Dimensions: Room 1: studio 13 x 15, control room 21 x 15. Room 2: studio 8 x 12, control room 8 x 12. Room 3: studio 11 x 14, control room 20 x 14. Room 4: studio 15 x 12, control room 15 x 15. Mixing Consoles: Anek Matchless 24 x 24, Wheatstone 18 x 8, Tangent 16 x 16, Soundcraft 24 x 16. Audio Recorders: Sony/MCI JH-24 24-track, Sony/MCI JH-110 8-track, Sony/MCI JH-110C 2-track, Revox PR99 2-track, Technics RS1500 2-track. Cassette Recorders/Duplicators: Aiwa GX8, Sony TCK-355. Noise Reduction Equipment: dbx 155, Dolby A. Synchronization Systems: Audio Kinetics 4. Echo, Reverb, & Delay Systems: Lexicon 200, Yamaha REV7, Ecoplate II, ADA D1280. Other Outboard Equipment: dbx 166 limiters, UREI 1176 Microphones: Sony C-48, Sennheiser MD-416, Neumann U87, Neumann U89, Shure SM58, Sennheiser 441, Sennheiser 421, Sennheiser 405, E-V RE20, Beyer D 500, Milab UM-41. Monitor Amplifiers: Haller, Crown, Symetrix. Monitor Speakers: JBL 4411, Auratone 5C. Video Equipment: Sony BVH-3000 1", Sony BVU-800 ¾", Sony VO-5600. Rates: Call Tom

[24+] **WEC RECORDING STUDIO**; 4210 Lankershim Blvd.; Universal City, CA 91602; (818) 505-1775. Owner: Santiano Scott. Studio Manager: Jim Sullivan. Engineers: Independents. Dimensions: Studio 16 x 21, control room 14 x 25. Mixing Consoles: MCI 428 modified w/autolocator III. Audio Recorders: MCI JH-24 24-track, (2) Ampex ATR-102 2-track ½" and ¼" heads, Ampex 440 2-track, 3M 22-track. Cassette Recorders/Duplicators: (5) TEAC CX-315 stereo w/Dolby Noise Reduction Equipment: Dolby 24-track. Synchronization

—CONTINUED ON NEXT PAGE

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SOUTHERN CALIFORNIA 24+ TRACK STUDIOS

—CONTINUED FROM PREVIOUS PAGE

Systems: Adams-Smith Zeta III, Garfield Masterbeat, Echo, Reverb, & Delay Systems: Lexicon 224, Roland SDE-2500, Effectron digital delay, Ibanez HD-1000, Eventide Instant Flanger, Eventide 910 Harmonizer, Yamaha 1010 analog delay, Lexicon PCM70, (2) Yamaha SPX900. Other Outboard Equipment: (2) Symtetrax ST2000 signal gate, Orban Parasound 622B para EQ Microphones: (5) Neumann U87, (2) Neumann P48, (5) Neumann U89, (6) Sennheiser 421, (6) AKG C-414, AKG C-414EB, (10) AKG C-452EB, (4) E-V Monitor Amplifiers: (2) Yamaha P2200, (2) Crown D-60, (2) Haller Monitor Speakers: (4) Westlake BBSM-12, (4) Yamaha NS-10M, (4) Auratone, (4) JBL 4311, (4) JBL 4313. Musical Instruments: Yamaha DX7, Yamaha RX5, Roland D-50, Roland JX-8P, LinnDrum, Oberheim DX, Sequential Circuits Prophet-Vector, Sequential Circuits Prophet-2000 sampling keyboard, Sequential Circuits Prophet-600, Moog Memorymoog, Moog Minimoog, Oberheim OB-SX, Yamaha RX11. Other MIDI Equipment: Macintosh 512e w/Performer software, Commodore 64 w/Sonus software, Opcode Plus MIDI converter Video Equipment: Portland 19" monitor

[24+] **WESTLAKE AUDIO, INC.**; 7265 Santa Monica Blvd.; and 8447 Beverly Blvd.; Los Angeles, CA 90048; (213) 851-9800. Owner: Glenn Phoenix Studio Manager: Chris Carey, Anne DeVenzo Engineers: Alex Weller, Jim McMahon, John Sacchetti, Debbie Johnson, Ben Carr, Mark Hagen, Brad Sundberg, Darryl Dobson, Ric Butz, Dennis Stelani, Greg Loskorn Dimensions: Room 1 studio 25 x 48, control room 25 x 20 Room 2 Studio 20 x 35, control room 21 x 19 Room 3 studio 27 x 38, control room 23 x 19 Room 4 studio 30 x 50, control room 25 x 25 Room 5 control room 21 x 15 Mixing Consoles: (2) Neve V-Series custom 50 x 48 (Necam 96), Trident 80C 72 x 24 (MasterMix), Harrison MR-2 custom 56 x 48 (MasterMix), Harrison Series X 96 x 32 Audio Recorders: Mitsubishi X-850 32-track, Sony 3324 24-track, 3M 32- and 4-track digital, Sony JH-24 24-track, Studer A800 24-track, Ampex ATR 2- and 4-track Cassette Recorders/Duplicators: Nakamichi MR-1, Aiwa 770 Noise Reduction Equipment: Dolby A, Dolby SR, dbx, Telcom Synchronization Systems: Cipher Digital 4800 Echo, Reverb, & Delay Systems: Quantec QRS-XL, EMT 250, EMT 251, EMT 252, EMT 140, EMT 240, Lexicon 224, Eventide 2016, AMS RMX 16, Klark-Teknik DN-780, Yamaha REV1, Yamaha REV5, Yamaha REV7 Other Outboard Equipment: Publison America Internal 90, Eventide H3000, Lexicon PCM70, Drawmer, dbx, UREI Monitor Speakers: Westlake SM-1, Westlake HR-1, (selection of near field monitors) Musical Instruments: Yamaha pianos (MIDI), drumsticks. Other: Large screen projection Rates: Please call 9 a.m.-6 p.m., Monday through Friday

[24+] **WHITE FIELD STUDIO**; 2902 W. Garry Ave.; Santa Ana, CA 92704; (714) 546-9210. Studio Manager: Thom Roy Dimensions: Room 1 studio 25 x 25, control room 20 x 25 Room 2 studio 20 x 25 w/two isolation booths, control room 15 x 20 Video 40 x 40 (lighting grid at 18") Mixing Consoles: DDA 36 x 32 split style w/moving fader automation, Ford Audio 32 x 24 custom w/Valley automation Audio Recorders: Otari DTR-900 32-track digital, Stephens 821 24-track, Fostex B16D 16-track, Otari MTR-20Q 4-track, Otari MTR-20 2-track 1/2" and 1/4", (2) Ampex ATR-102 2-track 1/2" and 1/4" Noise Reduction Equipment: Dolby SR, Dolby A, Echo, Reverb, & Delay Systems: EMT 240, Lexicon 224, Ecoplate II, Lexicon PCM60, Eventide H949, DL-2, Loft 450, Lexicon 93, Ibanez SDR-1000, Roland, Korg, Ibanez Other Outboard Equipment: UREI LA-2A, UREI LA-3A, Universal Audio 175, Universal Audio 1176, Orban de-esser, Stephens de-esser, Kepex, dbx 902, dbx 903, dbx 907, Aphex, Boulder Microphones: Neumann tube mics, Tele Elam-251, Sony tubes, Sennheiser, Shure, AKG, Beyer, E-V Monitor Amplifiers: AB, Spectra Sonics, Crown, Yamaha, Haller Monitor Speakers: Altec Mastering Lab, Yamaha, Fostex, JBL, Tannoy Musical Instruments: Steinway 9 grand, Hammond B3, Leslies, guitar amps, drums Video Equipment: Crosspoint switchers, Sony M-3, Convergence, JVC, Apert Services, Fortel V688, 3/4" production remote and post-services, A/B roll edit, Chyron, SMPTE, Prop Shop, 24-channel 2-scene lights, 3-wall hard cove Rates: Digital \$120/hr., 24-track \$80/hr.

[24+] **WILDCAT STUDIOS**; 5815 Pico Blvd.; Los Angeles, CA 90019; (213) 931-3411. Owner: John Ross Studio Manager: Nancy Ross Engineers: Mark Coffin, John Ross, Josh Schneider Dimensions: Studio 16 x 18, control room 18 x 20 Mixing Consoles: Trident 80B 32 x 24 Audio Recorders: Otari MTR-900II 24-track, Otari MTR-12 2- and 4-track, Tascam Model 42 2-track Cassette Recorders/Duplicators: Yamaha K1020 Synchronization Systems: Fostex 4030, Fostex 4035, Fostex 4010 Echo, Reverb, & Delay Systems: Lexicon 224XL, Lexicon PCM60, Yamaha REV7, Yamaha SPX900II, Effectron II, ADA 640i, Roland SDE-1000, Lexicon Prime Time, ART Pro-

Verb. Other Outboard Equipment: Symtetrax 522, Eventide Omnipressor, Omni Craft GT4 gates, Roger Mayer gates, Kepex gates. Microphones: (2) Neumann U87, (2) AKG 451, (4) Sennheiser MD-421, (2) Shure SM58, (4) Fender P1/P2, (8) Fender D1/D2/D3, Fostex M88 Monitor Amplifiers: Ramsa 350-watt (per channel), (2) Fender 2220, Fender 2220 Monitor Speakers: (2) Tannoy SRM-15, (2) Yamaha NS-10, (2) Auratone Musical Instruments: Fairlight Series III, Kurzweil 250, Kurzweil MIDIboard, Kurzweil 1000 PX, Kurzweil 1000 SX, Kurzweil 1000 HX, Yamaha TX816, Yamaha DX7, Sequential Circuits Prophet-5, Moog 55 modular, Roland MKS-10, Linn 9000, Chroma Polaris, (2) Korg EX-800, Korg DSM-1. Other MIDI Equipment: Macintosh Plus 140 meg hard drive, J.L. Cooper 16/20, Roland SBX-80, Southworth Jam Box/4+ Video Equipment: JVC 6650 3/4" machine, Kloss overhead video projector, Magnavox 26" video monitor, NEC 13" video monitor Other: Atari 800XL computer, Mark of the Unicorn Performer, Master Tracks Pro, Hybrid Arts DX/TX librarian. Rates: \$70/hr (studio and synths) \$90/hr (same with lockup).

[24+] **WIZARD PRODUCTIONS**; also **REMOTE RECORDING**; 900 Toro Canyon; Montecito, CA 93108; (805) 680-0113; 969-7630DATA. Owner: The Wiz Studio Manager: Kevin Crossley Engineers: Richard Buxton, Wayne Sabbak, Jim Wood Dimensions: Room 1 studio/control room 24 x 14 Room 2 studio/control room 20 x 16 Mixing Consoles: Trident T-24 36 x 24 x 24, Hill Multimix 16 x 4 x 2, Tascam M-30 8 x 4 x 2 Audio Recorders: Sony/MCI JH-24 24-track, Nagrav II 2-track, Sony 8mm 2-track, (2) Sony R-DAT 2-track TC, Sony 5850 2-track U-matic, Sony PCM-1630 2-track Cassette Recorders/Duplicators: Technics, B&O Synchronization Systems: Fostex Echo, Reverb, & Delay Systems: (2) Yamaha REV5, Korg SDD-2000, (2) MIDiverb, TC Electronic delay. Other Outboard Equipment: (2) dbx 160X comp/lim. Microphones: Beyer M 88N, AKG C-522, Sennheiser 421, E-V ND308, Sennheiser shotgun, (2) Audio-Technica 818, AT-41A Monitor Amplifiers: Bryston 4B, (2) Bryston 3B Monitor Speakers: Tannoy LGM (both rooms), Yamaha MS-10G, UREI FSM. Musical Instruments: Steinway Hamburg B MIDI mentor, Yamaha G1, Yamaha DX7 Centennial w/EI, Korg SG-1D, Korg DS-8, Korg DW-8000, Korg DMR-1, Korg EX-800, 360 Systems Professional MIDI Bass, (2) Mirage, Yamaha TX7, Yamaha DX7IIIE, Yamaha RX5, Roland S-550, Roland D-550, Akai S900, Oberheim Matrix-6, E-mu Emu II HD, E-mu SP-1200, Kurzweil 1000, Oberheim DPX-1, assorted percussion, congas, vibes (Musser). Other MIDI Equipment: (2) Macintosh II w/80 meg HD and 5 meg RAM, (2) Jam Box, SBX80 Video Equipment: Sony Mini-Cam, Sony 7 projector, (4) various monitors, Sony BVU-5850/5800 Rates: On a project by project basis

[24+] **WONDERLAND STUDIOS**; also **REMOTE RECORDING**; 729 S. Western Ave.; Los Angeles, CA 90005; (213) 386-2954. Owner: Stevland Morris Studio Manager: Stephanie Andrews Mixing Consoles: Neve 8128 48-input w/Necam II, SSL 4000E mobile 40-input w/Total Recall Audio Recorders: (2) Sony 3324 24-track, (3) 3M 32-track digital, Sony 1630, (2) Sony DMR-4000, (2) Sony DAE-1100 Cassette Recorders/Duplicators: (2) Studer A710 (control room), (2) Studer A710 (mobile) Synchronization Systems: Adams-Smith System 2600, (4) Lynx Echo, Reverb, & Delay Systems: (2) EMT 250, (2) Sony DRE-2000, Lexicon 200, (3) AMS, (4) Yamaha REV7, Publison America Internal machine Other Outboard Equipment: Massenburg EQ, Scamp Summit Audio tube limiter, UREI 1176, Orban Parametric Microphones: Sanken, Neumann, Sennheiser, E-V, Crown, Sony, Shure, Calrec, AKG Monitor Amplifiers: John Meyer, John Meyer (mobile) Monitor Speakers: John Meyer 833 (control room), John Meyer 833 (mobile) Rates: Call for quote

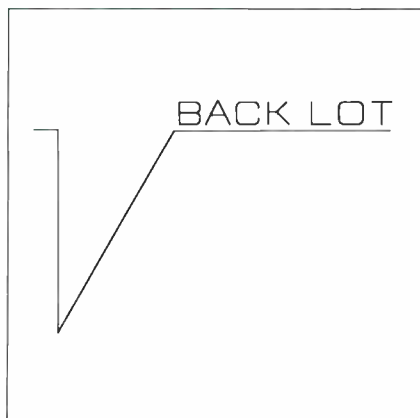
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SOUTHERN CALIFORNIA

12&16 TRACK

STUDIOS

[16] **ABC/WATERMARK STUDIOS**; 3575 Cahuenga Blvd. W., Ste. 555; Los Angeles, CA 90068; (818) 980-9490. Owner: ABC/Capital Cities, Inc. Studio Manager: Stuart Jacobs.



BACK LOT
North Hollywood, CA

[16] **BACK LOT**; also *REMOTE RECORDING*; PO Box 194; 5300 Laurel Canyon Blvd.; North Hollywood, CA 91607; (818) 506-8516. Owner: Greg Geddes. Studio Manager: Scott Fraser. Engineers: Greg Geddes. Scott Fraser, James Geddes. Dimensions: Studio 18 x 16, control room 14 x 12. Mixing Consoles: Tascam Model 600 32 x 16 x 32. Audio Recorders: Tascam ATR-60-16 16-track (seamless/gapless) 1". Sony PCM-701ES 2-track digital, Tascam 1520 2-track analog, all machine formats available on request, including 24-track. Cassette Recorders/Duplicators: Technics Noise Reduction Equipment: dbx 16-ch., dbx 2-ch. Synchronization Systems: Tascam ES-50. Tascam ES-51 controller Echo, Reverb, & Delay Systems: (3) Alesis Microverbs, Alesis MIDverb, Alesis MIDverb II, (2) Digitech DSP-128, Effectron. Other Outboard Equipment: UREI 1176, (2) UREI LA-3A, Eventide Omnipressor, (8) API 550A EQ, (8) Jensen custom mic preamps, SAE stereo graphic EQ, Burwen dynamic noise filter (ste'eo), Allison 36 db/oct filter set, (4) Audio Logic gates. Microphones: (2) Neumann U87, (3) Neumann KM84, (2) AKG C-451, (2) Crown PZM, Countryman EM101, (2) Sennheiser MD-421, (2) AKG D-224, (6) Shure SM57, (4) Shure SM58. Monitor Amplifiers: BGW 750, Adcom 555 Pro, (2) Crown D-60. Monitor Speakers: (2) Altec 604E w/Mastering Lab crossovers, (2) Yamaha NS-10. Musical Instruments: Emulator II+, E-mu SP-12, Korg DSM-1 sampler, Sequential Circuits Prophet-600, Yamaha TX7, Yamaha TX81Z, Professional MIDI Bass. Other MIDI Equipment: IVL Pitchrider, Southworth Jam Box/4, PPS 1, Phi Tech Translator and Triggers, MX-8 MIDI processor, (2) MIDmix 9 MIDI mixers. Video Equipment: (2) Panasonic AG-1950 VHS, Panasonic AG-95 editor controller, (2) color monitor. Other: Macintosh Plus 486, direct drive 80 hard drive, software Sound Designer, Softsynth, Cue Sheet, Blank Drum File, MIDipaint, Master Tracks Pro, Performer, Hyperstudio. Rates: Available on request. Extras & Direction: Synchronization is the key word of our facility. From mixing the usual and unusual acoustic instrument to implementing a full MIDI performance, our staff's experience and knowledge make it possible to coordinate quality audio in perfect frame-accurate synchronization, be it video, ATR (digital or analog), computer (automation and sequences), or the lining of events. Our climate-controlled environment is very conducive to the creative spirit and comfortable to work in while still maintaining an efficient air of production. The sound of the facility is best judged by the ear, but we feel and our clients tell us "This is a good sounding room." Whether you are doing a film score, a record production, sound effects or the conforming of film elements to picture, call us to see how great sound and synchronization can help you do things you didn't think were possible. Rate card and brochure available on request.

[16] **COCHRAN PRODUCTIONS**; PO Box 37; Norwalk, CA 90650; (213) 863-4605. Owner: Bobby Cochran.

[16] **COMMUNICATION SERVICES GROUP AT ANNENBERG CENTER FOR HEALTH SCIENCES**; also *REMOTE RECORDING*; 39000 Bob Hope Dr.; Rancho Mirage, CA 92270; (800) 321-3690. Engineers: Grady Price, Jr., Ted Foldvary, Jeff Verlenich. Dimensions: Room 1 studio 25 x 30, control room 15 x 16. Room 2 studio 7 x 9. Mixing Consoles: Sony/MCI JH-618 18 x 24, (2) Yamaha 512 12 x 4. Audio Recorders: Sony/MCI JH-24 16-track, Otari 5050B, (6) Revox PR-99. Cassette Recorders/Duplicators: Pyramid duplicator, (7) TEAC C3RX, (3) Nakamichi MR-1. Noise Reduction Equipment: (16) dbx, Burwen 1201A, Burwen DNF-7000. Synchronization Systems: Adams-Smith 2600. Echo, Reverb, & Delay Systems: Lexicon 200, (2) Orban reverbs, ADM 1024. Other Outboard Equipment: dbx 900 rack, (2) UREI LA-4, Aphex Type B Microphones: AKG, Shure, E-V, Crown PZM, Sony, Countryman, Audio-Technica. Monitor Amplifiers: BGW 8000, Hafler 220, Yamaha 2200. Monitor Speakers: (2) Westlake BBSM-10, (2) JBL 4435, (6) JBL 4310, (2) Yamaha NS-10, (2) Auratone 5-C. Video Equipment: (3) Ikegami HL-79 cameras, (3) Sony BVU-800 1/4" tape machines, Sony BVU-110 3/4" tape machine, Grass Valley 1600 switcher. Other: NEC System 10 DVE, Paltex Vanguard editor, Chyron RGU-2 character generator, transportable KU uplink, Barber baby boom. Rates: Call or write for quote.

[16] **DEMO HELPERS**; 7741 Beck Ave.; North Hollywood, CA 91605; (818) 503-0806. Owner: Angela Riggio, Scott Kolden. Studio Manager: Scott Kolden.

[16] **DOYLE VANGOR VIDEO PRODUCTIONS**; also *REMOTE RECORDING*; 9825 Independence Ave.; Chatsworth, CA 91311; (818) 341-8100. Owner: Vince Doyle, Evan Gordon. Studio Manager: John Dagnen.

[16] **FLIGHT 19 STUDIO**; 5245 Avenida Encinas, Ste. F; Carlsbad, CA 92008; (619) 931-8093. Owner: Flight 19 Inc. Studio Manager: Valery Safilundov.

[16] **FORTUNATE SUN RECORDING STUDIO**; 720 Iwilei Rd., Box 1; Honolulu, HI 96817; (808) 531-5744. Owner: David Tucciarone. Studio Manager: David Tucciarone. Engineers: David Tucciarone, Steve Kramer. Dimensions: Studio 20 x 20, control room 10 x 17. Mixing Consoles: Trident 24 28 x 24. Audio Recorders: Tascam MS16 16-track w/dbx, Fostex E-2 2-track 30 ips 1/4", Sony Beta Hi-Fi. Cassette Recorders/Duplicators: Nakamichi MR-1 2-track, Akai GX-7 2-track. Synchronization Systems: Roland SBX-80 SMPTE to MIDI converter Echo, Reverb, & Delay Systems: (3) Yamaha REV7, (2) Lexicon PCM42, Lexicon PCM70, Lexicon SPX90, (3) ADM Effectron 1024, MIDverb II. Other Outboard Equipment: Aphex Compeller, Aphex Type C Aural Exciter, (3) dbx 160X comp/limiters, dbx 166 comp/limiter, Valley People Dyna-Mite limiter/expander, Orban 622B parametric EQ, TEAC GE-20 graphic EQ, Valley People Gate quad expander/gate. Microphones: AKG The Tube, Neumann U87, (2) AKG C-414, (3) Sennheiser MD-421, Sennheiser MD-431, (3) Shure SM57, Crown PCC-160, AKG D-12E, (2) Countryman Isomax II hypercardioid. Monitor Amplifiers: AB Systems 6220, AB Systems Series 900, OSC 1200. Monitor Speakers: (2) JBL 4430, (2) JBL 4406, (2) Auratone 5C, (2) JBL 4311. Musical Instruments: Yamaha DX711FD, Yamaha DX7, Yamaha TX7, Yamaha RX5 drum machine, Linn LM-1 drum machine, Oberheim Matrix-6, Toyo 5" 8" baby grand, Fender Stratocaster, Fender Precision bass, Martin D-35 acoustic, Sequential Circuits Prophet-600, Oberheim Matrix-6R, Casio FZ-1, Roland D-50. Other MIDI Equipment: Apple Mac Plus computer w/Performer sequencing software and Opcode ed/lib program, MSB plus, 1200 Baud modem. Rates: Available upon request.

[16] **HARK'S SOUND STUDIO**; also *REMOTE RECORDING*; 1041 N. Orange Dr.; Hollywood, CA 90038; (213) 463-3288. Owner: Dick Bogert. Studio Manager: Jim Belcher.

[16] **DON HARPER PRODUCTIONS, INC.**; 730 E. Third St.; Long Beach, CA 90802; (213) 436-5053. Owner: Don Harper. Engineers: Don Harper, Toby Foster. Dimensions: Room 1: studio 30 x 12 x 13, control room 23 x 21 x 9. Room 2: studio

20 x 21 x 9. Mixing Consoles: Trident 65 Series 20 x 8 x 16. Audio Recorders: Otari MX-70 16-track, Otari MX-5050 2-track, Technics 1506 2-track Echo, Reverb, & Delay Systems: Lexicon PCM60 reverb, Lexicon PCM41 delay, Lexicon PCM-70, Roland SDE-1000. Other Outboard Equipment: Yamaha SPX90, Dynaflex DX-2 noise reduction, UREI LA-4 compressor/limiters. Microphones: Neumann, AKG, Sennheiser, E-V, Shure. Monitor Amplifiers: (3) Hafler, (2) Crown D-75. Monitor Speakers: UREI 811B, Yamaha NS-10, Auratone. Musical Instruments: Yamaha C7 grand piano, Yamaha DX7, Sequential Circuits Prophet-5, Oberheim Xpander, Roland Super Jupiter, Moog Minimoog, Yamaha RX11 drum machine. Other MIDI Equipment: Apple IIe w/sequencer software. Rates: Available upon request.

[16] **HOT MIX RECORDING**; 5892 Los Molinos Dr.; Buena Park, CA 90620; (714) 761-2621. Owner: Bob Chance. Studio Manager: Robert Wahlsteen, Tracy Sands, Wayne "Fat Rat" Copeland.

[16] **KPSL**; also *REMOTE RECORDING*; 303 N. Indian Ave.; Palm Springs, CA 92262; (619) 323-1010. Owner: Vista Communications, Inc. Studio Manager: Vincent Genato.

[16] **LIVINGSTON MUSICAL SERVICES**; 332 N. Azusa; City of Industry, CA 91744; (818) 964-9578. Owner: John Livingston. Studio Manager: John Livingston.



MASTERSOUND STUDIO
Newport Beach, CA

[16] **MASTERSOUND STUDIO**; 400 Colton; Newport Beach, CA 92663; (714) 646-1199. Owner: Robin Akins, Bryan Foster. Studio Manager: Robin Akins. Engineers: Bryan Foster. Dimensions: Studio 24 x 20, control room 24 x 20. Mixing Consoles: Soundcraft Series 600 24 x 8. Audio Recorders: Tascam MS16 16-track w/AQ65 autolocator, Nakamichi PS10 2-track digital converter w/Sony Beta I. Cassette Recorders/Duplicators: Nakamichi BX-1, Nakamichi 480. Noise Reduction Equipment: dbx 1 16 channels Synchronization Systems: E-mu SP-12 SMPTE/MIDI sync-to-tape, Roland MC-500 SMPTE/MIDI sync-to-tape Echo, Reverb, & Delay Systems: Yamaha REV7, Roland SDE-3000 digital delay, Yamaha E1005 analog delay. Other Outboard Equipment: Yamaha GC2020 compressor/limiter (stereo) Microphones: AKG 414EB, Sony ECM-33P, Beyer M500N, (4) Shure SM58. Monitor Amplifiers: Ramsa VWP 9055. Monitor Speakers: E-V Sentry 100, Yamaha NS-10. Musical Instruments: E-mu SP-12 sampling drum machine, Dynacord elec. drum pads, Roland Octapad, Sequential Circuits Prophet-2002 sampler, Oberheim Matrix-6, Roland MKS-20 digital piano, Yamaha TX7, Fender Precision bass (mid-'60s), Gibson ES-335 (mid-'60s), Ibanez Artist (early '70s), Gibson Hummingbird (mid-'60s). Other MIDI Equipment: Roland MKB-1000 MIDI controller (88-key), Roland MC-500 Microcomposer (sequencer). Other: Leslie 330, Mesa/Boogie (60-watt) amp, Hi-Watt (100-watt) amp. Rates: Call for quote, block rates available. Extras & Direction: Mastersound was designed originally as a songwriter's facility. The control room and studio are in one god-sized room. Keyboards, synths, samplers and sequencer are located behind the board for optimum monitoring. Sampled drums mean no open mics, except for vocals. We do have a small isolation booth for amplifiers when necessary. We offer a wide range of services to all our clients, including arranging and production, even assistance in packaging records or demos. One thing almost all our clients notice, and usually comment on at some point, is our commitment to each artist, new or well-known, to produce the best possible product at an affordable price. Almost all of our earlier clients are still with us and, not surprisingly, our best advertising is by word-of-mouth. Even so, we feel we may as well be Southern California's best kept secret!

[16] **MAUI RECORDERS**; also *REMOTE RECORDING*; 380 Dairy Rd.; Kahului, HI 96732; (808) 877-0677. Owner: John Neff. Studio Manager: John Neff.

[16] **MICRO PLANT:** 1032 N. Sycamore Ave.; Hollywood, CA 90038; (213) 653-0240; (213) 461-5147. Owner: Steve Deutsch. Studio Manager: Steve Deutsch.

[16] **MIKRON PROD.:** 15465 Seneca Rd.; Victorville, CA 92392; (619) 241-STAR. Owner: Ron Morgan, Mike Shellhammer. Studio Manager: Ron Morgan, Mike Shellhammer.

[16] **THE NOTE FACTORY:** 5714 Columbus Ave.; Van Nuys, CA 91411; (818) 994-3133. Owner: Richard Barron. Studio Manager: Chris Pett.

[16] **LISA ROSE PRODUCTIONS:** 19725 Sherman Way, Ste. 160; Canoga Park, CA 91306; (818) 709-4671. Owner: Ken Rose. Studio Manager: Randy Alberts, Drew Fuss.

[16] **S.F. AUDIO SOUND & RECORDING; also REMOTE RECORDING:** 5290 E. Hunter Ave.; Anaheim, CA 92807; (714) 779-6677. Owner: Steven W. Forster. Studio Manager: S. Forster. Engineers: Steven W. Forster, Parrish Rowland, David Slay, independents. Dimensions: Studio 23 x 25 x 12, control room 25 x 11 x 8. Modified Live End/Dead End™. Mixing Consoles: Tascam M520 20 x 16 x 8, Tapco 5216 16 x 2, TAC Scorpion. Audio Recorders: Otari MX-70, Tascam 42 2-track Cassette Recorders/Duplicators: Nakamichi MR-2, Awa WX 220 for duplication. Noise Reduction Equipment: Tascam DX2D, dbx 1 Echo, Reverb, & Delay Systems: Yamaha REV7, Ibanez DM-2000, Lexicon PCM70, MIDiverb II, Roland SDE-2500. Other Outboard Equipment: Aphex Aural Exciter B, dbx 166 8-ch compressor, Symetrix 544 8-ch gates. Microphones: E-V PL20, (3) Sennheiser 421, (3) Shure SM58, Shure SM57, Whirlwind direct boxes, (4) Audio-Technica ATM-33R, Stewart D1 boxes. Monitor Amplifiers: Yamaha CA1010, BGW 7000B, Rane HC6. Monitor Speakers: Tannoy Little Gold, E-V Sentry 100A, Yamaha NS-10M, JBL 104. Musical Instruments: Tama Swingsitar 7-piece, Charvel Jackson bass, Memphis Strat-style guitar, Roland D-50. Other MIDI Equipment: Macintosh SE w/various programs, Sonus MacLace, Sonus SMX2000, time code reader/generator. Other: Crate, Marshall, Ampeg and KMD amplifiers. Rates: \$35/hr. Rates may vary according to project. Extras & Direction: S.F. Audio Sound & Recording would like to thank all of our clients for this past great year. We have modified our control room, started doing MIDI projects and updated most of our equipment. Thank you. Idle Scene, Imoral Acts, Parrish, Cat Fight, The Withdrawal, Zero Hour and everyone else.

[16] **SOUND GRAPHICS STUDIO:** PO Box 91133; Long Beach, CA 90809; (213) 498-9135. Owner: David & Nicole Eastly. Studio Manager: David Eastly.

[16] **SOUND MIXER RECORDING:** 2301 E. Nutwood; Fullerton, CA 92631; (714) 738-4581. Owner: John Sirca. Studio Manager: Kris Sirca.

[16] **SOUTH COAST RECORDING STUDIO:** 1818½ N. Main St.; Santa Ana, CA 92706; (714) 541-2397. Owner: Jim Dotson. Studio Manager: Jim Dotson. Engineers: Jim Dotson, David Carey. Dimensions: Room 1 studio 15 x 20, control room 9.5 x 17. Room 2 studio 9 x 15.5. Room 3 studio 9.5 x 10. Mixing Consoles: Ramsa WRT820 20 x 8, Ramsa WR8112 12 x 4. Audio Recorders: Fostex E-16 16-track, Tascam 25-2 2-track. Cassette Recorders/Duplicators: Nakamichi 480, JVC TD-X201. Echo, Reverb, & Delay Systems: Alesis XTC digital reverb, Yamaha SPX90 digital multi-effects processor, DeltaLab ADM 1024, Furman RV-1 reverb, Lexicon PCM70. Other Outboard Equipment: (2) dbx 165A compressor/limiter. Microphones: (2) Sennheiser MD-421, E-V RE20, (2) AKG D-224E, (2) Shure SM81, (2) Shure SM57, Shure SM58, (2) Crown PZM, (2) Countryman direct boxes. Monitor Amplifiers: QSC, Rane. Monitor Speakers: E-V Sentry 100A control room monitors, Sennheiser headphones, AKG headphones. Musical Instruments: Roland Juno 1 keyboard, Yamaha RX15 drum machine, Straube baby grand piano. Rates: Competitive rates, please call!

[16] **SPECTRUM STUDIO; also REMOTE RECORDING;** (by appointment only); 664 Camino Campana; Santa Barbara, CA 93111; (805) 967-9494. Owner: Don Ollis. Studio Manager: Don Ollis.

[16] **SPOT RECORDING:** 1700-P Newport Circle; Santa Ana, CA 92705; (714) 432-8310. Owner: Spot Industries. Studio Manager: David Kory II. Engineers: Tom Versen, Rick Legg, David Kory. Dimensions: Room 1 studio 20 x 25, control room 15 x 20. Room 2 studio 6 x 5. Room 3 studio 4 x 5. Mixing Consoles: Studiomasster Series II 40 x 16 automated, Studiomasster MOSFET 8 x 2. Audio Recorders: Tascam MS-16 16-track 1". (2) Tascam 2-track ¼". Cassette Recorders/Duplicators: (12) Nakamichi. Noise Reduction Equipment: (16) dbx Type I, Hush IIC. Synchronization Systems: Cooper SMPTE/MIDI converter generator, Echo, Reverb, & Delay Systems: (9) Lexicon, Yamaha, Roland, Alesis, ADA. Other Outboard Equipment: Compressors, limiters, gates, analog and digital 31-band EQ, Aural Exciters, autolocator, 128 patch bay system. Microphones: (18) Sennheiser, AKG, Neumann, RCA, Shure, Audio-Technica. Monitor Amplifiers: Crown 600, MOSFET 260. Monitor Speakers: (2) JBL 4412, (2) Toa ME-22. Musical Instruments: Roland D-50, Ensoniq ESO-1, Ensoniq Mirage, Roland JX-8P, Yamaha DX7, Korg MP-1, Roland drum machine. Other MIDI Equipment: Macintosh SE w/20-

SOUTHERN CALIFORNIA 12&16 TRACK STUDIOS

meg hard drive, 64-track MIDI sequencing, editing, Roland Octapad, librarians for all keyboards. Other: Macintosh graphic designs/logos, fully air-conditioned studios and control room. Rates: Call for quotes. Block rates available.

[16] **KRIS STEVENS ENTERPRISES:** 14241 Ventura Blvd., #204; Sherman Oaks, CA 91423; (818) 981-8255. Owner: Kris Erik Stevens. Studio Manager: Tom Holdridge.

[16] **SUNBURST RECORDING:** 10313 W. Jefferson Blvd.; Culver City, CA 90230; (213) 204-2222. Owner: Bob Wayne. Studio Manager: David Starns. Engineers: Bob Wayne, David Starns, independents. Dimensions: Studio 22 x 18, ceiling 12'-14". Control room 18 x 15, ceiling 10'-12". Mixing Consoles: Sound Workshop 1280-8 EQ w/expander, 24 x 24 direct x 8 bus out, 16 channels of Super EQ modules, (4) Fostex 8 x 2 line level mixers. Audio Recorders: Tascam 90/16 dbx 16-track, Tascam 80-8/dbx 8-track, Otari 5050 MkIII 2-track 30 ips, Tascam 25-2/dbx 2-track, TEAC A3340S 4-track, (2) TEAC C-3 2-track, Marantz C-205 1-track. Echo, Reverb, & Delay Systems: Lexicon 200 digital reverb w/1/3 software update, Orban 111B spring reverb, Eventide H910 Harmonizer, DeltaLab 1026 DDL, MXR DDL, Roland SDE-1000 DDL. Other Outboard Equipment: dbx noise reduction (26 channels), dbx 165 compressors, dbx 161 compressor, MXR stereo choruses, 31-band graphic EQs, noise gates, flanger, Phase 90, Distortion+, Multion III, (5) direct boxes, electronic metronome, Tom Scholz Rockman. Microphones: Neumann U87, Neumann KM84, AKG 414, AKG 451, AKG 100, E-V RE20, E-V RE15, E-V 676, Crown PZM-30GP, Sony ECM-33P, Sony ECM-21, Sennheiser 421, Shure SM81, Shure 565, Beyer M500 ribbon. Monitor Amplifiers: BGW. Monitor Speakers: E-V Sentry V, Yamaha NS-10M, Auratone cubes, JBL L26. Musical Instruments: Keyboards: Kawai 7'4" grand piano w/MIDI-mod. Model KG 6C, Hammond B3 organ (1958) w/Leslie, various other instruments including synths and full drum kit. Rates: 16-track \$40/hr., 2- and 8-track \$30/hr.

[16] **SYSTEMS EXCLUSIVE RECORDING STUDIO:** 4942 Likini St.; Honolulu, HI 96818; (808) 839-5431. Owner: Lester Gantian. Flynn Hawaiian Productions. Studio Manager: Lester Gantian. Mixing Consoles: Trident Series 65 32 x 16 w/patch bay. Audio Recorders: Otari MX-70 16-track, Sony APR-5003 2-track w/center track time code (¼" or ½"). Sony R-DAT available on request. Cassette Recorders/Duplicators: Sony TC-R503. Echo, Reverb, & Delay Systems: Lexicon PCM70 w/3.0 software, Sony MUR-201 digital reverb, (2) TC Electronic 2290 digital delay w/4 sec. sample, Roland SRV-2000 digital reverb, Roland SDE-1000 digital delay, Yamaha SPX90, tape delay. Other Outboard Equipment: Valley International Model 440 lim/comp/dynamic sibilance processor, (2) Symetrix 522 comp/lim/expander/gate/ducker. Microphones: Neumann U87. Others available on request. Monitor Ampli-

fiers: Hafler P230BR, (2) Hafler P125BR. Monitor Speakers: Professional Audio Systems SM-1, Yamaha NS-10M, Auratone. Musical Instruments: E-mu Emax SE w/hard drive, E-mu Emax, (2) Yamaha TX802, Kurzweil 1000 PX, Roland D-50, Oberheim Xpander, Yamaha RX5 drum machine, Yamaha DX7, Roland Juno-106. Other MIDI Equipment: Macintosh Plus computer, 45 megabyte hard drive w/removable 45 megabyte cartridges, Jam Box/4+ MIDI/SMPTE interface, Mark of the Unicorn Performer 2.31 and Professional Composer 2.0, Digidesign Sound Designer for Emax, Opcode editor/librarians for DX7, D-50 and Xpander, 10,000+ Sound Library for Emax, DX7, D-50 and Xpander. Other: Sony CD player. Rates: Available on request.



THETA SOUND STUDIO
Burbank, CA

[16] **THETA SOUND STUDIO:** Burbank, CA 91506; (818) 9-555-888. Owner: Randy Tobin. Studio Manager: Cyndie Tobin. Engineers: Randy Tobin, Russell Anderson. Dimensions: Studio 20 x 20, control room 10 x 20. Mixing Consoles: Ramsa 40 x 8 x 2 352-point patch bay system. Audio Recorders: Tascam MS-16 16-track w/autolocator, Tascam 38 8-track, Tascam 34 4-track, Technics 1520 2-track, Sony PCM-501ES digital processor, Sony SLHF-900 Beta Hi-Fi VCR. Cassette Recorders/Duplicators: Awa 660, Awa 770, Awa 990. Noise Reduction Equipment: dbx (28-ch.) Synchronization Systems: Fostex 4030/4035 SMPTE Echo, Reverb, & Delay Systems: Lexicon PCM70, Roland SRV-2000, Yamaha REV7, Yamaha SPX90, Korg, MXR, LT Sound. Other Outboard Equipment: dbx, MXR, Symetrix, Valley People Dyna-Mite limiters, Aural Exciter. Microphones: AKG tube, AKG 414, Countryman Isomax, Shure SM57, E-V RE20. Monitor Amplifiers: Kenwood high speed amp, Rane HC6 headphone amp. Monitor Speakers: JBL 4301B, Yamaha NS-10M, Auratone, Sennheiser HD-414, Fostex headphones. Musical Instruments: SCI Drumtraks drum machine, Garfield Dr. Click digital metronome, Oberheim Prommer, Yamaha C5 grand piano w/Forte MIDI mod, Roland S-50, Roland S-550, Ensoniq Mirage sampler system w/extensive sample library, Roland D-50, Jupiter-8, Yamaha DX7, Casio CZ-101 synths, Roland MKS-20 piano module, Slingerland drum set w/Camco snare, Tama hardware, Zildjian cymbals, Paiste cymbals, assorted percussion. Other MIDI Equipment: Atari 1040ST, Atari 520ST computers w/Hybrid Arts SMPTE-track software, 8 x 12 patch matrix. Video Equipment: JVC HD470 VHS Hi-Fi VCR, JVC 850 ¾" editing recorder, JVC 600 ¾" recorder, JVC RM-86U editor, JVC TM9U monitors, Sansui VX-99 special effects generator. Rates: Call for rates. Extras & Direction: Mixing/sweetening, vocal elimination process, studio musicians, complete arrangement and production. Video suite. ¾" cuts only editing with special effects, audio layback to video, ¼" to ½" Hi-Fi copies, art department: professional typed cassette labels, typesetting and graphic design for cassette J-Card inserts, cassette plates, album covers and sleeves, resumes, lyric sheets, live and mobile live sound systems 50 to 5,000 people, remote recording 2- to 24-track, classes and consultation. Understanding recording for singers and musicians, synthesizers, drum machines and MIDI, private consultation and location engineering. Theta Sound has grown from the small 4-track all-in-one-room studio to our new spacious facility featuring all of the services mentioned. Throughout the intervening years, our philosophy has never changed: to provide a safe, comfortable space and the tools necessary for producing recorded products that communicate your intention.

[16] **38-FRESH:** 267 S. Alexandria Ave.; Los Angeles, CA 90004; (213) 383-7374. Owner: Mike Greene. Studio Manager: Mike Greene.

[16] **TRAX RECORDING:** 1433 Cole Pl.; Hollywood, CA 90028; (213) 856-TRAX. Owner: Michael McDonald. Studio Manager: See 24-track listing.

[16] **ZACUTO AUDIO:** 1316 3rd St.; Santa Monica, CA 90401, (213) 394-4932. Owner: Gary Zacuto. Studio Manager: Joel Porter.

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4&8 TRACK

STUDIOS

[8] **AFTERHOURS RECORDING CO. INC.**; 1616 W. Victory Blvd., Ste. 104; Glendale, CA 91201; (818) 246-6583. Studio Manager: William Berkuta. Engineers: William Berkuta, Richard P. Stevens II. Dimensions: Studio 13 x 15 x 24, control room 12 x 12. Mixing Consoles: (2) TEAC Model 38 x 4 x 2, Opampabs ARC 14 x 4 x 2. Audio Recorders: Tascam 80-8 8-track, Tascam 38 8-track, TEAC A-2340-SX 4-track, Otari MX-5050 BII 2-track, Ampex 300 2-track editing. Cassette Recorders/Duplicators: (11) TEAC R505 cassette dup. real time, Technics M222 Noise Reduction Equipment: TEAC, dbx DX-8, (2) Tascam DX4D, dbx, Echo, Reverb, & Delay Systems: DeltaLab Effectron II, ADM 1024 digital delay, Lexicon PCM60 digital reverb. Other Outboard Equipment: dbx 166 compressor limiter noise gate, 12-band stereo EQ, 10-band stereo EQ. Microphones: (2) Neumann KM84, (3) Sennheiser MD-421U5, (2) Crown PZM, (2) AKG D-190E, (2) AKG D-1000E, Shure 300 bi-directional ribbon, Sennheiser KZU shotgun. Monitor Amplifiers: Crown Power Line One. Monitor Speakers: (2) Tannoy Musical Instruments: Simmons SDS-8 electronic drums (advance notice) Yamaha CS01 synth, Casio-tone 202 synth, Crumar Performer, Estey upright grand piano, Rickenbacker 12-string electric guitar, Ibanez "Les Paul" copy 6-string, Yamaha clarinet, violin. Rates: 8-track \$15/hr, 4- and 2-track \$10/hr. Call for other rates. Extras & Direction: Music demo recording; theatrical sound design and consultation, commercial voice tape production, radio drama production, audio cassette mastering. Flexibility, effectiveness and cooperation are the key elements at Afterhours, where resident producers are available to help you realize your project.

[8] **A.J.S. MEDIA CONSULTANTS**; 7038 DeCielis Pl., #9; Van Nuys, CA 91406; (818) 782-4741. Owner: Allan J. Schollnick. Studio Manager: Allan J. Schollnick.

[2] **ATM AUDIO**; only REMOTE RECORDING; 6 Masongate Dr., Rolling Hills Estates, CA 90274; (213) 378-4893; (213) 770-3110. Owner: Andrew T. Martin. Studio Manager: Andrew T. Martin. Engineers: Andrew T. Martin, Robert E. Barnes. Dimensions: One-ton van. Mixing Consoles: Carvin MX1688 (updated) 16 x 8, or as requested. Audio Recorders: As requested. Cassette Recorders/Duplicators: (2) Sony Noise Reduction Equipment: dbx and Dolby Echo, Reverb, & Delay Systems: Roland SRV-2000, Yamaha SPX90, Yamaha R1000, Roland SDR-2000, Lexicon Prime Time. Other Outboard Equipment: Valley People Dyna-Mite, (2) dbx 160X, Eventide clock works omni-processor, Orban 622B, (2) UREI 529, DAX 2709B, Rocktron Hush 2C, Aphex Type C Aural Exciter, (2) dbx 163X, (2) dbx 263X, dbx 244X Microphones: AKG, Shure, Audio-Technica, Crown, B&K. Monitor Amplifiers: (3) Sound Code Systems A-Series. Monitor Speakers: (2) Yamaha NS-10M, (2) Auratone. Other: Canare cabling and splitter boxes, hybrid TRW transformers, Telex RTS system. Rates: Call for bid. Extras & Direction: ATM Audio is a perfect complement, from songwriters trying to get an idea down to remote speech recordings at corporate conventions. We pride ourselves on the quality, value and service which we provide to our clients. Please give us a call and let us work with you. The difference is as clear as black and white.

[8] **CANTRAX RECORDERS**; also REMOTE RECORDING; 2119 Fidler Ave., Long Beach, CA 90815; (213) 498-6492. Owner: Richard Cannata. Studio Manager: Nancy Cannata.

[8] **CARDINAL RECORDING**; 623 Calle Tulipan, Thousand Oaks, CA 91360; (805) 493-2718. Owner: Tom Boyce. Matt Schaffer. Studio Manager: Tom Boyce, Matt Schaffer.

[4] **CREATIVE MEDIA**; 7271 Garden Grove Blvd., Ste. E; Garden Grove, CA 92641; (714) 892-9469. Owner: Tim Keenan. Studio Manager: Linda Keenan.

[2] **DIGIPREP (DIGITAL AUDIO SERVICES) CD PRE-MASTERING**; 1425 N. Cole Pl.; Hollywood, CA 90028; (213) 461-1709. Owner: Dan Hersch, Warren Salyer.

[8] **DOBER RECORDING STUDIO**; also REMOTE RECORDING; 13441 Tobiasson Rd., San Diego (Poway), CA 92064; (619) 748-7022. Owner: Beresford, Armando Sinclair. Studio Manager: Beresford, Michael Sinclair.

[8] **GILLETTE RECORDING SERVICES**; also REMOTE RECORDING; 255 N. El Cielo Rd., Ste. 466; Palm Springs, CA 92263; (619) 323-6073. Owner: Richard Brown, Jr. Studio Manager: M. Martinez.

[8] **MARC GRAUE RECORDING**; 1707 N. Gramercy Pl.; Hollywood, CA 90028; (213) 467-1822. Owner: Marc O. Graue. Studio Manager: Catherine Kilpatrick.

[8] **HEARD SOUND CO.**; also REMOTE RECORDING; 2746 Oak Hill Dr.; Escondido, CA 92027; (619) 746-1833. Owner: Thomas A. Heard. Studio Manager: Thomas A. Heard.

[8] **H.M.E.A.'S "STATE-OF-THE-HEART"**; also REMOTE RECORDING; PO Box 453; Lakewood, CA 90714; (213) 423-0273. Owner: Harpazo Ministries Evangelical Assoc. Studio Manager: Duane Evans.

[8] **JAGS ENTERTAINMENT**; also REMOTE RECORDING; PO Box 935; Captain Cook, HI 96704; (808) 323-3315. Owner: Eric Jaeger. Studio Manager: Eric Jaeger.

[4] **JESUS IS LORD STUDIOS**; 5000 O'Sullivan Dr.; Los Angeles, CA 90032; (213) 222-2304. Owner: Zamar Unlimited. Studio Manager: Richard Zeier.

[8] **K PRODUCTIONS AND RECORDING**; 6436 Malcolm Dr.; San Diego, CA 92115; (619) 583-2717. Owner: Dennis Keith. Studio Manager: Dennis Keith.

[8] **KO'OLAU PRODUCTIONS**; also REMOTE RECORDING; 1826 Alewa Dr.; Honolulu, HI 96817; (808) 595-4870. Owner: Ben Borthwick. Studio Manager: Ben Borthwick.

[8] **NIGHT VISION PRODUCTIONS, INC.**; also REMOTE RECORDING; 8695 Hebrides Dr.; San Diego, CA 92126; (619) 566-8989. Owner: Donald V. Phillips. Studio Manager: Donald V. Phillips.

[8] **RCM PRODUCTIONS**; 12478 Washington Blvd., #5503; Los Angeles, CA 90066; (213) 390-5573. Owner: Bob McNabb. Extras & Direction: Specializing in post-production services for industrial video clientele. 3/4" and 1/2" off-line editing, with full audio/video/MIDI synchronizing capability. Music and sound effects library available. Quality narration and location recording. Window dubs and duplication services. RCM Productions offers a relaxed, creative and affordable environment for the industrial video producer who demands a quality product. Call for current rates.

[4] **REL SOUND MUSIC STUDIO**; also REMOTE RECORDING; 9091 Cerritos Ave., #8; Anaheim, CA 92804; (714) 995-4840. Owner: Robert E. Levesque. Studio Manager: Robert E. Levesque.

[8] **ROGER'S JAMLAND STUDIOS**; 10988 Noble Ave.; Mission Hills, CA 91345; (818) 361-2224. Owner: Roger Curley. Studio Manager: Roger Curley.

[4] **SIDESTREAM SOUND**; also REMOTE RECORDING; 5013 1/2 Narragansett Ave.; San Diego, CA 92107; (619) 222-0238. Owner: Ken Totten. Studio Manager: Ken Totten.

[8] **SOUNDS LIKE**; Box 914; Port Hueneme, CA 93041; (805) 483-0532. Owner: Tim Gillespie.

[2] **STUDIO M PRODUCTIONS UNLTD.**; only REMOTE RECORDING; 16027 Royal Oak Rd.; Encino, CA 91436; (818) 906-8728. Owner: Mike Michaels. Studio Manager: Mike Michaels.

[2] **STUDIO M PRODUCTIONS UNLTD.**; only REMOTE RECORDING; 8715 Waikiki Station; Honolulu, HI 96830; (808) 734-3345. Owner: Mike Michaels. Studio Manager: Mike Michaels.

[8] **SUMMIT VIEW**; 9122 Worth Way; Camarillo, CA 93010; (805) 987-2306. Owner: John Cliff. Studio Manager: John Cliff.

[8] **SUNDIAL RECORDING STUDIO**; PO Box 5426; Montecito, CA 93150; (805) 969-6926. Owner: Don Messick. Studio Manager: Don Messick.

[8] **THUNDER BAY RECORDING STUDIO**; also REMOTE RECORDING; 6412 Thunder Bay Trail; Riverside, CA 92509; (714) 681-6449. Owner: Anthony Covarrubias. Studio Manager: Anthony Covarrubias.

[8] **TRIHEdra PRODUCTIONS**; 1920 E. Foothill Dr., San Bernardino, CA 92404; (714) 886-2569. Owner: David Haggard. Studio Manager: David Haggard. Engineers: David Haggard, Mark Haggard. Dimensions: Studio 22 x 20, control room 12 x 18. Mixing Consoles: Carvin 1688 (modified) 16 x 8 w/patch bay. Audio Recorders: Tascam 38 8-track w/dbx, Tascam 32 2-track w/dbx, Sony TC-355 1/4-track w/dbx 1/4". Cassette Recorders/Duplicators: Aiwa cass. duplicator, (2) Fisher 120 Synchronization Systems: Garfield MiniDoc, Echo, Reverb, & Delay Systems: Ibanez SDR-1000 (digital reverb), Yamaha SPX90 (digital reverb), Yamaha D1500 DDL, Roland SDE-1000 DDL, Yamaha 1005E delay. Other Outboard Equipment: dbx 160X comp./lim., Aphex Aural Exciter, Orban stereo synth, Carvin EQ 2020. Microphones: Sennheiser, Shure, Audio-Technica, AKG, Sony, Neumann. Monitor Amplifiers: Carvin DCA 800, Carvin DCA 300. Monitor Speakers: (2) JBL 4411, (2) Auratone. Musical Instruments: Yamaha DX7, Roland Jupiter-6, Schimmel baby grand, Oberheim DX drum machine, Ludwig 9-piece drum set, xylophone. Other MIDI Equipment: Roland MSQ-700 sequencer, J.L. Cooper MIDI channelizer. Other: Carvin X-100 half-stack guitar amp, Ampex bass amp, Fender and Rickenbacker amps, Yamaha PG1 guitar preamp.

[8] **WALLY'S WEST RECORDING SERVICES**; 5703 Harold Way, #4; Hollywood, CA 90028; (213) 462-2388. Owner: Gerry Rothschild. Studio Manager: Denny Moore.

production, sequencer and synth room of our own. If you can't beat them, join 'em!

"We did find that more and more producers were coming to us for the remix stages, as well as to cover the 'classical' aspects of recording, like adding a live horn or string section in our acoustically treated studio areas."

Another engineer/producer/musician who currently works in a variety of Southern California facilities adds: "Because of the predominance of artists who have made L.A. their home—or at least where they spend time when they aren't touring or away on business—we have seen an explosion in the number of exceedingly well-equipped home studios, with hardware that would put some lower-level commercial facilities to shame."

"Which means that the commercial studios now have to specialize in skills and equipment not readily available to the owners of home setups. The best studios in town only employ engineers who are musicians themselves, and who have worked in major facilities for at least five years—so they appreciate the 'L.A. Creative Mentality,' if you will. Having an appreciation for music and the artistic mentality can help the communication process and be a great incentive for people to go to particular rooms to finish their projects."

"All 'state-of-the-art' Los Angeles facilities have great collections of outboard toys and signal processors, which are often beyond the budget of home studios. They are also more in touch with new technology—time code-to-MIDI synchronization, digital mastering and R-DAT, for instance—which can save independent producers and musicians a great deal of problems on complex dates."

Other areas into which music studios have diversified include broadcast production and commercials. While the voice-over talent for radio and TV spots rarely moves very far from the New York and Chicago advertising agency centers, a growing number of L.A. facilities are being used to record music for jingles and audio/video presentations.

A prominent engineer, who started in TV sound mixing with a major network, then moved to music recording ten years ago, observes: "We began to notice that the more switched-on ad agencies were stylizing the music in more and more commercials, so it

sounded like the music in the Top 20. But when it came time to record those tracks at the normal jingle studios, they couldn't find engineers who were as familiar with the modern genre of sampled drums, gated reverb and compression that rock and roll engineers were extremely familiar with. So we have seen a lot of business come our way over the past half-decade, because radio and jingle producers are looking for that 'L.A. Sound' on their commercials."

Changes in the Recording Environment

Concurrent with the emphasis toward diversification at a growing number of Southern California studios, the recording environment itself has been going through fundamental changes. From the years when most studios boasted virtually identical-looking control rooms and small, acoustically dead recording areas, we are now witnessing a return to larger, more open control rooms and more live-sounding recording areas.

"Acoustic separation is less of a problem for engineers and producers," points out a young engineer who currently works at a major L.A. music recording and post-production facility. "Nowadays the trend is toward capturing an 'ensemble feel,' rather than a collection of sterile, acoustically separate tracks that need a great deal of external processing to put back any sonic life and interest. I much prefer to work in a more live-sounding room. And bigger control rooms mean that we have plenty of space for all the MIDI keyboards and drum machines we see on more and more dates."

A well-known acoustician and studio designer continues, "The acoustics of control rooms and studios are more controlled than ever before. By that I mean we know a lot more about sound propagation and the way sound moves around a closed space. TEF® analyzers and LEDE® theories have advanced the knowledge horizon."

"Southern California studio owners have always been willing to experiment with acoustic designs," he adds. "There is little reverence these days for the older design theories and treatments. This attitude results mainly from the fact that Hollywood always was, and still is, very image- and decor-conscious, but also because the spaces I'm designing these days have to be capable of accommodating a wider va-

riety of sessions."

"Also, the introduction of digital recording systems meant that we needed to pay extra attention to reducing air-conditioning noise and ensuring proper isolation in the outer skin and floating floors. The 96 dB dynamic range of digital multi-tracks and mastering systems—which are used in just about every facility throughout L.A.—meant that we saw a pretty hectic period of upgrading the acoustic treatment in some of the older facilities."

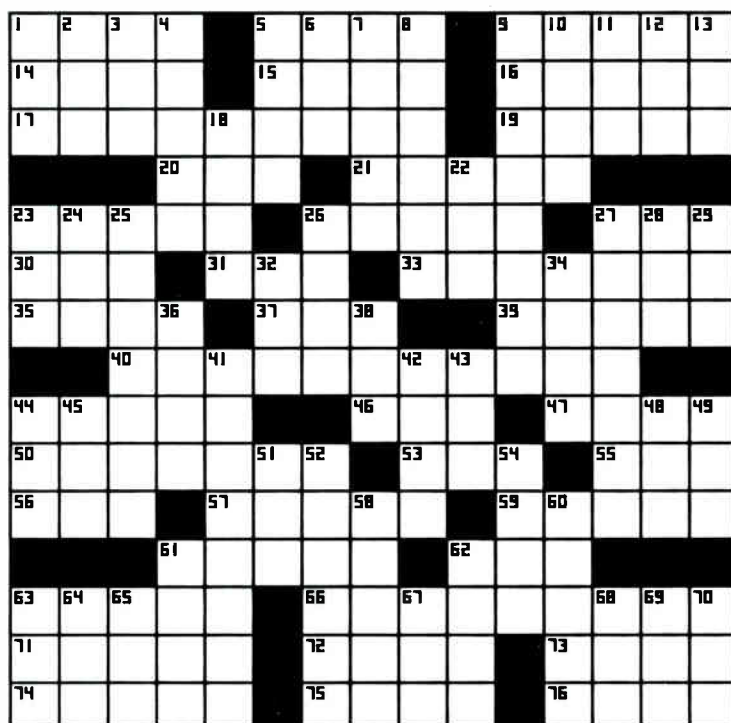
"With few exceptions, we were able to retain the feel and intimacy of those older rooms, which usually had a good amount of space in the control room and studios, and simply upgrade the acoustic isolation and sound locks."

"But fashions in acoustics and decor change. What was okay a decade ago for rock and roll—giant, multi-way boxes in the wall and deep compression ceilings—doesn't cut it these days, when producers and engineers need multi-channel monitoring systems to handle film-style mixes, or audio-for-video and stereo television. These rooms have to be adaptable for an even wider range of sessions."

"In terms of the creative environment, I'm being asked to add more windows and otherwise maintain a light and open feel for the control room, as opposed to the 'high-tech' decor popular not so long ago. Los Angeles has always led the way in going for the latest look and feel."

Toward The Future

As we have seen, just about every type of audio recording and production task—from mobile remotes and film re-recording to audio-for-multimedia and broadcast production—involves skills and equipment that are becoming similar. The era of diversification for Southern California studios has led to a healthy atmosphere of information exchange, as the traditional boundaries, which previously separated one task from another, have become increasingly blurred. While engineers and producers have built enviable reputations through specializing in one area or another, the techniques and technology they use in the recording and production studio are remarkably similar. The future of the Los Angeles studio community, which strives to keep itself better informed and in touch with the changing musical and media fashions, looks very healthy indeed. ■



Sold for a Song

ACROSS

1. Scan
5. Level
9. Brass instrument
14. Der ____
15. Scandinavian city
16. Village ____
17. Show biz capital
19. Not anybody
20. Barefoot boy's cheek
21. Nero
23. Transfer decoration
26. Madrid Mister
27. Interjection of disgust
30. Before
31. Dine
33. Merchants
35. 007
37. Not metric
39. Auriferous king
40. Art ____
44. "Burning Down the ____"

11. Samba central
12. Negating prefix
13. Amerind
18. Lock or school
22. Peak
23. Hair cream quantity
24. Self
25. Disprove
26. 17A sidewalk sight
27. Not local or state
28. Certain acct.
29. A curve
32. ____ rule
34. Retainer
36. Medicinal amount
38. Old English letter
41. 4D art type
42. ____ up
43. Understand
44. Top ten record

45. Best 50A for a 44D
48. The champ
49. Dregs
51. Go wrong
52. Like a parking structure
54. Certain star
58. Rat hair
60. A beer
61. Down or deaf preceder
62. Squeezed
63. Spanish greeting
64. Conjunction
65. Color prefix
67. J.E.B. Stuart allegiance
68. Disturb
69. Anais
70. "...he was such a stupid ____"

46. Rush
47. Having to do with a period
50. Number
53. "Now and ____"
55. Pub quaff
56. Golf device
57. Like a wet hen
59. Iran/contra figure
61. The "Velvet Fog"
62. Hitler's gal
63. "Glass ____"
66. Secret to deals in 17A
71. "____ Doone"
72. Being
73. PA town
74. Shakespear sprite
75. Not the quick
76. Torn

DOWN

1. Cheer
2. 70s art-rock group
3. Oceanic abbr.
4. ____ blues
5. "____ Without Pity"
6. Singular prefix
7. Run off
8. Squirrel, e.g.
9. 60s projection fad in 17A
10. Scent

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- Audio For Video & Film
- Canadian Studio Report
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- Corporate Music Videos

NOVEMBER

- AES Issue with Expanded Distribution
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- Ethics in the Recording Industry
- HyperMedia Update

AD CLOSING:

SEPTEMBER 8

MATERIALS DUE:

SEPTEMBER 15

DECEMBER

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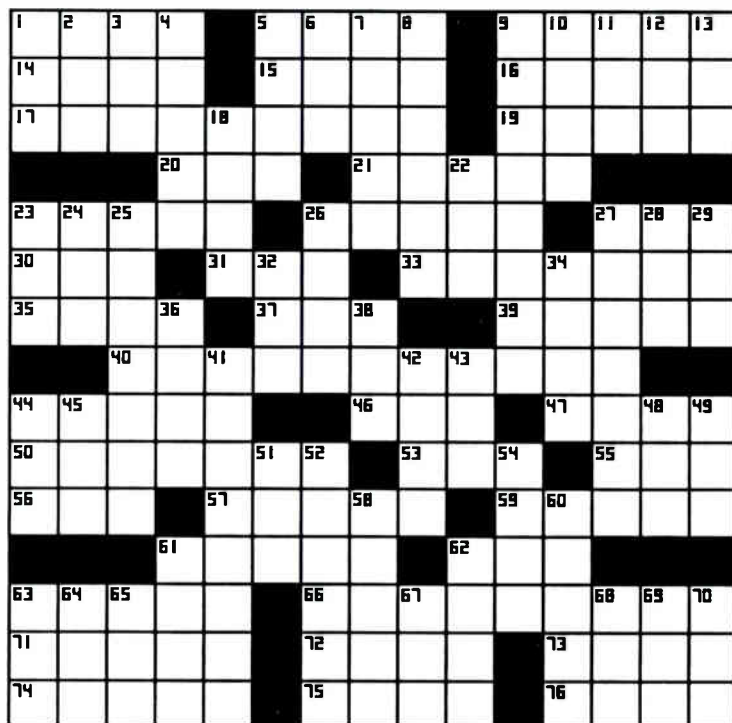
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21. Nero
23. Transfer decoration
26. Madrid Mister
27. Interjection of disgust
30. Before
31. Dine
33. Merchants
35. 007
37. Not metric
39. Auriferous king
40. Art ____
44. "Burning Down the ____"

11. Samba central
12. Negating prefix
13. Amerind
18. Lock or school
22. Peak
23. Hair cream quantity
24. Self
25. Disprove
26. 17A sidewalk sight
27. Not local or state
28. Certain acct.
29. A curve
32. ____ rule
34. Retainer
36. Medicinal amount
38. Old English letter
41. 4D art type
42. ____ up
43. Understand
44. Top ten record

45. Best 50A for a 44D
48. The champ
49. Dregs
51. Go wrong
52. Like a parking structure
54. Certain star
58. Rat hair
60. A beer
61. Down or deaf preceder
62. Squeezed
63. Spanish greeting
64. Conjunction
65. Color prefix
67. J.E.B. Stuart allegiance
68. Disturb
69. Anais
70. "...he was such a stupid ____"

46. Rush
47. Having to do with a period
50. Number
53. "Now and ____"
55. Pub quaff
56. Golf device
57. Like a wet hen
59. Iran/contra figure
61. The "Velvet Fog"
62. Hitler's gal
63. "Glass ____"
66. Secret to deals in 17A
71. "____ Doone"
72. Being
73. PA town
74. Shakespear sprite
75. Not the quick
76. Torn

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2. 70s art-rock group
3. Oceanic abbr.
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7. Run off
8. Squirrel, e.g.
9. 60s projection fad
10. Scent

Solution to August Mix Words



NEXT IN MIX

OCTOBER

- Audio For Video & Film
- Canadian Studio Report
- North Central Cities: A Special Supplement
- Corporate Music Videos

NOVEMBER

- AES Issue with Expanded Distribution
- New Products Directory
- Ethics in the Recording Industry
- HyperMedia Update

AD CLOSING:

SEPTEMBER 8

MATERIALS DUE:

SEPTEMBER 15

DECEMBER

- Tape & Disc Technology
- Mastering/Pressing/Duplication Directory
- TEC Awards Winners and Wrap-Up

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OCTOBER 15

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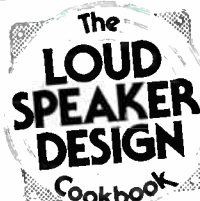
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cluster of JBL Concert Series cabinets at **Fiddler's Green** in Denver. The cluster is designed to augment visiting sound companies' P.A. and consists of 15 4873, five 4866 long-throw, three 4863 down-throw, and two 4847 down-throw JBL boxes. Each of the seven time-delay towers has two 4873s... President and CEO **Stan Miller** also stated that, "Stanal Sound's manufacturing and finished warehouse facilities in Kearney, Nebraska, are swamped with orders for the JBL Concert Series cabinets that we produce."... By the way, Stan Miller is also the audio consultant for this year's **Republican National Convention**, and he continues to work as a consultant for MCA Concerts and the Universal Amphitheater. ■

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

If you want to make the news call (415) 726-2428, or send press releases & photo to: Mix Publications—Sound Reinforcement News, 6400 Hollis St. #12, Emeryville, CA 94608.

AFTER · MIX

—FROM PAGE 190

the marketing push for the sale of the equipment, and in so doing, we began to supply masters to some clients in Europe.

I question the idea that there is a large excess of replication capacity. I know of several plants that are working 24 hours a day, five to seven days a week. So there are some plants that are very busy. I also know a large number of facilities that have no mastering systems at all. That number has increased even in the last year. That initially is our target group. With the increased competitiveness, most facilities have a desire to have all the processes under their control within their plant. So at some point they will certainly be looking at installing mastering equipment. ■

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

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