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THE RECORDING INDUSTRY MAGAZINE

# Mix

Interview: Huey Lewis

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Northwest  
Recording Studios**

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**Cover:**  
 Audio Vision Studios  
 Lindon, Utah  
**Photo by:** Studio 9/T Jay

Located in the heart of Utah ski country, eight-year-old Audio Vision sees one of its goals as getting unsigned bands record deals. The studio just completed a major renovation with the assistance of designers Seven Nielson and Gary Riggs and now includes an International mixing console and live-in accommodations.

**Corner photo by:** David Gans

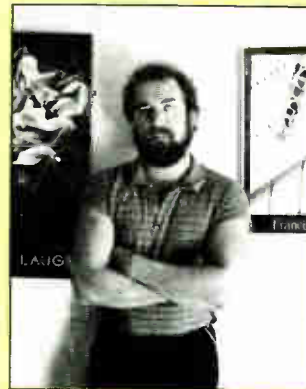


This month, George Petersen polled a number of engineers and producers as to their tastes in compact speaker systems. Our *Reference Monitor Forum* begins on Page 13.



This issue's studio spotlight falls on the Northwest region, where the recession is fading fast and studios from California to Canada are brimming with new optimism. Our *Northwest studio roundup* begins on Page 21 and our in-depth listings on Page 38.

Is *Michael Sembello* a maniac, or just another fine studio musician coming into his own? Mr. Bonzai visits with this year's "overnight" success on the hit parade, to pass along tales from the long road to stardom. Page 107.



What does a large pig called a duroc have to do with recording? Well, *The Durocs* is the whimsical name under which producers/songwriters Ron Nagle and Scott Matnews travel. These lovable S.F. eccentrics have two fine albums out now: John Hiatt's *Riding with the King* and Paul Kantner's *Planet Earth Rock and Roll Orchestra*. Jack McDonough tells their story beginning on Page 88.



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# INDUSTRY STANDARD CHAPTER II

## *The New Otari 1/4" Two Channel 5050B-II*

*The best selling professional two track audio recorder has finally been improved. We've added the refinements you asked for: The inputs and outputs of the new B-II are transformerless, balanced. The elapsed time indicator is a real-time hours/minutes/seconds L.E.D. display—tape accurate at all speeds. The built-in oscillator provides both 1kHz and 10kHz calibration tones. And we added a low frequency adjustment to the reproduce equalizers.*

*Behind the clean, new look of the B-II are the same features, performance and reliability you expect from our famous 5050B. We didn't change the rugged quarter-inch thick deckplate or the cast aluminum frame. We kept the switch selectable NAB/IEC equalization, +4dBm/-10dBv output levels, half-track and quarter-track playback heads and three standard reference fluxivity levels. And, of course, the B-II still features three tape speeds, XL type connectors, front panel record equalization and bias adjustments, variable speed, "dump edit" function, and an integral splicing block.*

*The 5050B-II has been engineered like no other tape machine in the world. When you check out the specifications you'll know why we say it's the best \$5,000.00 tape recorder available for under \$2,500.00. When you work with it, you'll know that we've just raised the industry standard.*

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Mix Magazine is published at 2608 9th St., Berkeley, CA 94710 and is ©1983, by Mix Publications, Inc. This is Volume Eight, Number One, January, 1984. Mix (ISSN 0164-9957) is published monthly. Subscriptions are available for \$24.00 per year. Single or back issue price is \$3.00. Subscriptions outside USA are \$36.00. Please address all correspondence and changes of address to Mix Magazine, 2608 Ninth St., Berkeley, CA 94710 (415) 843-7901. Controlled circulation postage paid at Berkeley, CA and additional mailing offices. Mix Magazine is distributed in recording studios, pro-audio stores, music stores and other related businesses. If you have a recording or music related business and would like to distribute Mix, please give us a call. Display advertising rates, specs and closing dates are available upon request. This publication may not be reproduced or quoted in whole or in part by mimeograph or any other printed means, without written permission of the publishers.



Dear **Mix**,

In your September 1983 issue on page 137 you mention something about the Kurzweil-Synthesizer. I'm very interested in this new synthesizer. Can you give me some information or an address where I can get more information?

Armand Dütz  
Tonstudio Grüner Weg  
Aachen, West Germany

*[Kurzweil can be reached by writing to 57 Wells Ave., Newton Center, MA 07159.]*

Dear **Mix**:

It is easy for us readers of **Mix** to just accept it as another trade magazine, read through the highlights and lay it aside. As one who was chief engineer at Sunwest, Ron/Roy, and Grammyfone inc., I can say **Mix** was one of the most read by many of the producers and musicians that I have seen.

Now that I travel throughout the U.S., I must relate an amusing tale of my much traveled **Mix**. Some months ago I caught a redeye out of LAX, sat down and started reading **Mix**. I fell asleep, and when I awoke **Mix** was gone. Last month on a flight to K.C. needing something to read, I was looking over the supply of magazines in the rack, when to my surprise there was my copy of **Mix**.

I don't know if my subscription is due, but here is my check for 1984. You are doing a great service for the industry by publishing **Mix**.

Respectfully,  
Rue Barclay  
Van Nuys, CA

Dear **Mix**:

In your latest So. Calif. (September) listing issue our studio was listed under our old address. Since that issue came out many businesses have been sending their correspondence to the old address. Could a notation be

put in your next issue to correct our address?

Old address:  
CANTRAX RECORDERS  
1720 Park Ave.  
Long Beach, CA 90815

New address:  
CANTRAX RECORDERS  
2119 Fidler Ave.  
Long Beach, CA 90815

Sir:

We all know that real men don't eat quiche. I submit that the recording equivalent of quiche is the ever popular multi-track overdub approach to making music.

It didn't happen overnight. We are all guilty of contributing to the collective evolution of what we now call "recording". Have we not lost sight of reality in music? When did the recording business get boring? When we started overdubbing *everything*.

I can't expect you to agree with me if you own, or make your living in, a modern multi-track facility. Your job is to give your clients what they want. Play it safe. Overdub 'til the cows come home, usually one track at a time. You *will* get it right eventually, and at \$100+ per hour, who's complaining? Not the studio owner. Not the union musicians.

My feeling is that at least 25% of popular recording should be done live in the studio. Obviously, classical music is rarely overdubbed. Most good jazz happens in real time. Ditto for reggae, folk and new wave. Why not record it in real time? All it takes is three things . . . talent, talent and talent.

Perhaps you've read books about the early days of recording, or talked to people who were there. If not, I'll tell you a little story. You see, in the good old days, the musicians actually showed up at the same time, in the same place, and played together. I know it

—page 149, **FEEDBACK**

# CURRENT

## SPARS Hosts Digital Seminar

The member studios of the Society of Professional Audio Recording Studios (SPARS), in cooperation with the University of Miami, have announced plans to present an intensive three-day seminar on the status of digital audio.

Scheduled for March 8-10, the event will kick off with a "mini-course" on the basics of digital audio by noted educator and author Ken Pohlmann. Part two of the seminar will feature a "courtroom" appraisal of digital, pitting its promoters against the skeptics. Michael Tapes, president of Sound Workshop, will (tentatively) moderate the proceedings with testimony and rebuttal provided by Mastering Lab president Doug Sax, independent recording engineer Tom Jung, JBL executive and author John Eargle and equipment reviewer Len Feldman. The "trial" will also allow time for interested registrants to serve as expert witnesses. Following this segment Dr. Tom Stockham will lecture on the role

distinctions and expectations of analog; and a panel consisting of Audiotechniques' Hamilton Brosious, Digital Magnetics' Bruce Botnick and Sigma Sounds' Joe Tarsia will discuss the economic implications of digital hardware in the studio of the present and future.

Other topics to be pursued during the weekend include an evaluation of digital standardization progress and caveats by Ken Pohlmann, Matsushita's Almon Clegg and 3M's Bob Younquist (tentative); and an assessment of the CD and its challenge to render the LP obsolete, presented by Len Feldman and Studio Sound Editor Richard Elan.

The cost for attending these sessions will be \$275 for SPARS members who register before Feb. 29, \$295 for general admission registering before Jan. 31, and \$350 at the door. More details are available from SPARS, 8456 West Third St., Los Angeles, CA 90048 or call 213/653-0240.

## Maxell Opens Distribution Center

Maxell America, Inc. has announced the opening of its massive computerized distribution center in Conyers, Georgia, to handle primary responsibilities for distributing audio and video cassettes and micro-computer floppy disks in the U.S. The 36,000 square foot distribution center works in conjunction with MAI's 58,000 square foot assembling and packaging plant, which develops the magnetic source material supplied by the Japanese home operation, Hitachi Maxell, Ltd. Highlighting the new facility is a \$2 million pallet storage and retrieval system that employs a robot/forklift that can be programmed to select and move any of 4000 stored pallets at a speed of 360 feet per minute.

and MBI products in the states of TN, NC, MI, AL, GA and SC. Newly appointed for the states of NJ and NY is **48th Street Musical Enterprises** of 93 E. 38th St., Patterson, N.J. 07514 (201) 684-2285. . . . **Roger Miller** has been appointed Western regional sales manager of **Ampex Corporation's Audio-Video Systems Division**, it was announced by **Tom Nielson**, national sales manager. . . . A nationwide specialty entertainment division has been established by **Korn/Ferry International**, the world's largest executive search firm. **Gary Kaplan**, Managing Vice President and Partner of Korn/Ferry's Century City, CA office, was named to head the new division. . . . **Synergetic Audio Concepts** has announced the appointment of **John G. Humble & Associates, Peregrine Southwest, Marcus Johnson Associates, Seccom Systems, Bencsik Associates, Associates Sales Representatives, Inc., Metrotech, and Steffey Marketing, Inc.**, to represent their sound engineering seminars and workshops. . . . **Image Devices International** announces the appointment of **Jon Garling**, formerly of **Victor Duncan, Inc.**, as Rental Marketing Manager of the Atlanta office. . . . Chicago-based songwriter/producer **Chuck Thomas** has formed two music publishing concerns—**Heart of the Matter Music** (ASCAP) and **Song du Jour Music** (BMI), as part of Meadowgreen Music Company, affiliated with Tree International of Nashville.

## NOTES

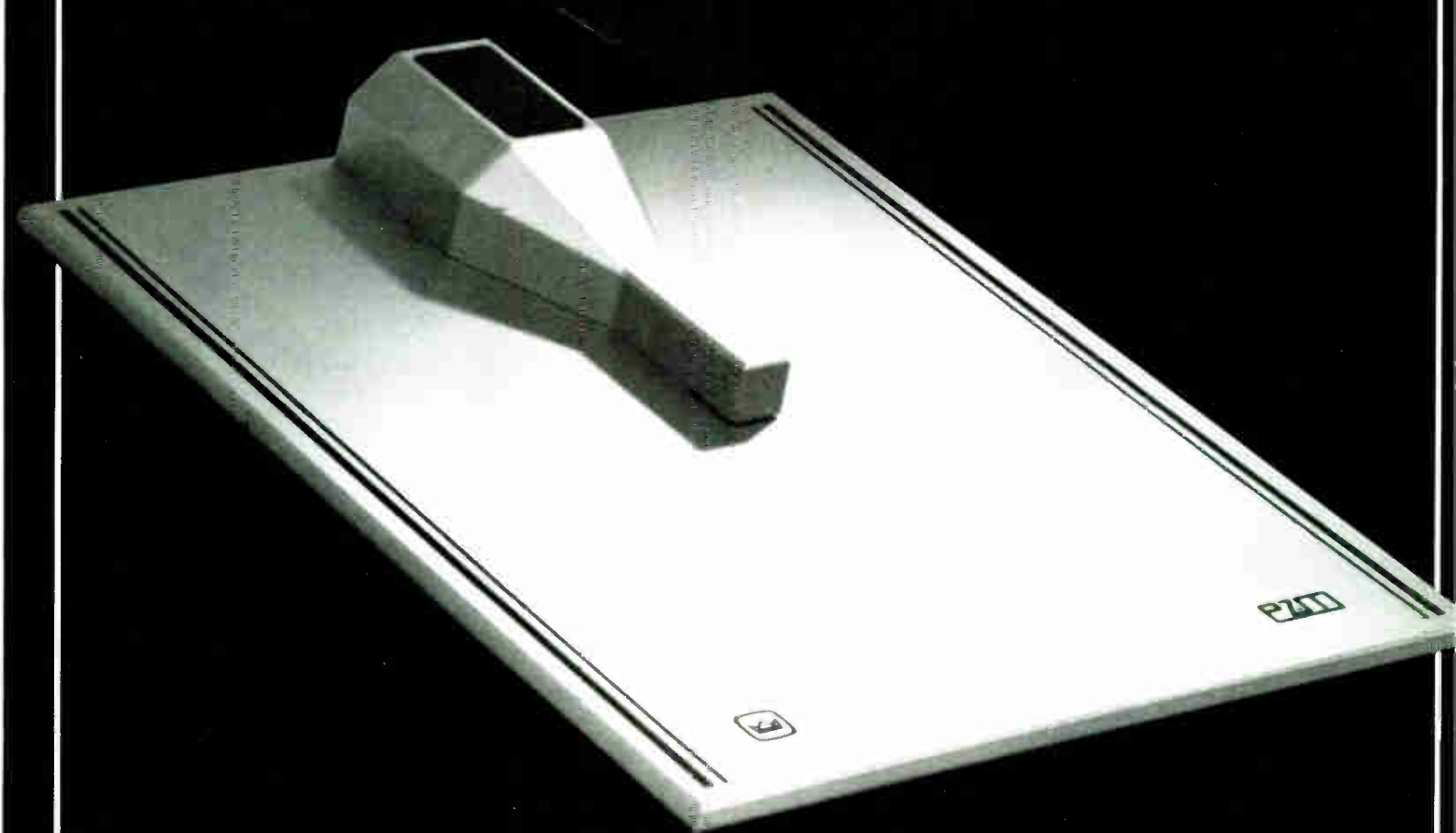
**Quad Eight** has purchased from Litton Industries its **Westrex Sound Recording** operation in the United States and all Westrex operations in the United Kingdom. The merged businesses will operate as **Quad Eight/Westrex**, and will manufacture both recording equipment and consoles in the U.S.A. and the U.K. . . . AES Fellow **Mr. Almon Clegg** has been appointed General Manager of the Audio Division and Communications Systems Division of the **Matsushita Technology Center**. . . . **Paul A. McGuire** has moved from National Sales Manager to Vice President—Marketing for **Electro-Voice, Inc.** . . . **Gene Perry**, formerly general manager at **Harvey Pro Audio Video**, has been appointed General Manager of **Audiotechniques**, New York. . . . **Harro Heinz**, President of **Renkus-Heinz, Inc.**, has announced the appointment of **Gregg Wilson** to the position of Director of Sales and Marketing. . . . **Tom Kobayashi** has been elevated to President-CEO of **Glen Glenn Sound**, Hollywood's largest motion picture and video sound company. . . . **Crown International**

recently announced the promotions of **Dr. Clay Barclay** to Product Development Manager and **Gerry Barclay** to manager of the sales promotion activities, including advertising and dealer literature. . . . **John J. Camarda, Alan Sheffield, and Robert J. Walters, Jr.**, have been appointed regional sales managers, and **Clay D. Selthum** has been named area sales representative for **Bosch-Fernseh**. . . . **MXR Innovations** announces that two repair centers have been signed as authorized MXR warranty service centers: **Advanced Musical Electronics**, 2122-A South Sepulveda Blvd., West Los Angeles, California; and **Music Dealer Service**, 4700 West Fullerton, Chicago, Illinois. . . . **Betty Bennett**, General Manager of **Soundcraft Electronics, Inc.**, has announced the appointments to their Santa Monica office of **Nick Bogden** as accountant/controller and **Linda Frank** as Sales Administrator. . . . **Allen and Heath Brenell USA, Ltd.** has appointed **Secom System** of 5241-F New Peach Tree Road, Chamblee, GA 30341, (404) 455-0672, to represent all Allen and Heath

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*Our introduction to the Pressure Zone Microphone® broke our previous record for skepticism. But the hardware converted us. Like Orville Wright's gas powered kite, it outperformed its appearance. The rest, as they say, is history. In the 3 years since we began production, sales*

*have mushroomed and the best recording studios use PZM®. So do a whole lot of other people on a whole lot of stages, church podiums, and conference room tables. Success has changed us. One of these days we'll probably start telling you we knew it would work all along.*



## CROWN

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*Phil Collins and engineer Rusty Smith at Dallas Sound Lab.*

## SOUTHWEST

At *Rivendell Recorders* in Pasadena, TX, the Houston-based *Kirk Whalum Band* is recording their latest album with *Nat Aderly, Jr.* producing and *Brian Tankersley* engineering. Tankersley is also engineering and producing *Wayne Watson's* upcoming album for Milk 'n Honey Records. . . . Activity at Fort Worth's *Sierra Recording* includes LP projects for *John Hall* and *Bob* and *Jeanne Johnson* of the *PTL Club*. . . . *Phil Collins* and *Genesis* booked time at Dallas' *Sound Lab* (located in the Dallas Communication Complex) to mix their latest video. . . . At Tucson's *Westwood Recording Studios*, local favorites *Giant Sandworms* recently completed an album's worth of tunes, with *Fred Porter* engineering. Westwood was also used recently for a 24-track mixdown and sweetening of a *Shawn Phillips* concert shot for PBS. . . .

## SOUTHERN CALIFORNIA

Engineer *Angel Balestier*, assisted by *Andy D'Addario*, are mixing some *Cannonball Aderly* tracks for Pablo Records at *Group IV Recording* in Hollywood. . . . At the *Village Recorder* in West L.A., popular British synth band *The Fixx* has been working on an MTV special with producer *Rupert Hine*, engineer *Peter Kelsey* and assistant *Jim Faraci*. And working on a special for HBO in studio B there is *Bette Midler*, produced and engineered by *Don Smith*, assisted by *Cliff Jones*. . . . A heavyweight collaboration recently at *Mad Hatter* studios in L.A.: *Chick Corea* and flutist *Hubert Laws* recorded *Harold Blanchard's* "New Earth Sonata" for Laws' upcoming LP. . . . Lots of activity lately at *Sunset Sound* in Hollywood, including *Prince* tracking and overdubbing for his long-awaited follow-up to 1999 (he produced with some assistance from *Peggy McCreary*); *The Tubes* working with producer *David Foster*, engineer *Humberto Gatica* and assistant *Terry Christian*; and *The Jacksons* working with *David Paich* and *Steve Porcaro* producing, *Tom Knox* engineering and *Terry Christian* again assisting. . . . EMI/America

Recording artist *David Lasley* was in at Larabee Sound in Los Angeles mixing cuts for his next LP with producer *Don Was*, engineer *Steve Hodge* and assistant *Judy Clapp*. . . . At Santa Barbara Sound Recording, *Paul Anka* had *Kenny Loggins* in to do overdubs for Paul's next CBS record, produced by *Denny Diante* and *David Foster*, engineered by *Larry Hirsch* with *Terry Nelson* assisting. . . . The *Chambers Brothers* were among the artists working recently at *Rusk Sound Studios* in Hollywood, with *Ganapati* co-producing with the band and engineering. . . . At *Soundcastle Recording* in L.A. the staff has been busy with a slew of interesting projects: *Michael Sembello* mixed his LP, *Bossa Nova Hotel* with co-producer *Phil Ramone*, engineer *Tommy Vicari* and assistants *Mitch Gibson*, *David Marquette* and *Bino Espinoza*; *Quincy Jones* producing a movie track sung by *Patti Austin* for the upcoming Travolta/Newton-John flick; and *Weather Report* working on their next effort with synth wizard *Zawinul* producing, as usual, and *Bernie Fromm* engineering, assisted by *Mitch Gibson*. . . . *The Features*, a Sacramento-based band, have been tracking in *Salty Dog Studios* in Van Nuys for an unspecified record label. *Scott Singer* is producing and engineering. . . . *Dennis McKay*, best known for his production work with *Al DiMeola* and other fusion stars, has begun recording the second EP for *The Difference* at *Yamaha's Artist Research and Development* studio facility in Venice. The Difference is an English band currently living in L.A. . . . Songwriter/producer *Lamont Dozier* is in at *Sound Image Studio* in North Hollywood working on album projects by *Caviar* and *Bianca*. *John Henning* is at the board. Also at Sound Image is *Cassell Webb*, working with producer *Craig Leon*, assisted by *Bruce Wildstein*. . . . At *Skip Saylor Recording* in Los Angeles, *Dukes of Hazzard* star *Tom Wopat* is cutting tracks with producer *Herb Pederson*, engineer *Jon Gass*, and assistant *Tom McCauley*; and Saylor himself is at the board working with the blossoming Canadian band *XR-7*. . . . *Westlake Studios* in LA have been busy lately finishing up *Missing Persons'* new album with producer-engineer *Bruce Swedien*.

and tracking with the wild and woolly *Mael Brothers*, better known as *Sparks*, who are scoring a forthcoming Disney film, *Growing Pains*. *Ron* and *Russel* are producing themselves, with *Steve Bates* engineering and *Greg Laney* assisting. . . . More projects at *Group IV* in Hollywood: *Dave Grusin* scoring the new *Sean Penn-Elizabeth McGovern* flick *Racing the Moon* with engineers *Dennis Sands* and *Andy D'Addario*, director *Richard Benjamin*, and producers *John Kohn* and *Alain Bernhein* behind the board; and guitar virtuoso *Joe Pass* is laying tracks for a new Pablo album with producer *Norman Granz*. Sharing the spotlight with Pass on this outing is *J.J. Johnson*. . . .

## NORTHEAST

At *Studio 4* in Philadelphia, *The Hooters* are cutting tracks for their forthcoming LP, with *Phil Nicolo* engineering; and *Bobby Eli* is mixing down *Booker Newberry* for Montage Records, Nicolo once again engineering. . . . Unit 4 of *GBH Productions'* (Boston) mobile audio facility recently provided the simulcast for WBZ-TV's 35th Anniversary Concert telecast which featured the *Boston Pops Orchestra*, *Mary Travers* and a Motown review. . . . The *Pilobolus Dance Theatre*, best known for their exquisite routines that artfully blend dance and nearly yogic positions, have been recording music for their upcoming tour at *RBY Studio* in Southbury, CT. . . . Composer/synthesist *Phil Cibley* recently completed writing and recording the theme for the nationally syndicated program *The Health Field* at his own New York City studio. . . . At *Green Street Recording* in NYC, former *Sex Pistols* manager *Malcolm McLaren*, whose "Buffalo Gals" was a big hit, is overdubbing and mixing a new EP for Charisma Records, with *Rod Hui* engineering and co-producing, *Joe Arnold* assisting. . . . In Phoenix, MD's *Sheffield Recordings, Ltd.*, *John Palumbo* and *Victor Giordano* are winding up work on the new *Crash Davenport* EP. . . . *Chestnut Sound* of Philadelphia is recording EP projects for *Rhythm of Lines*, engineered by *Chris Gatly* and *Tone Controls*, engineered by *C.J. Vincent*. . . . *Dan Fogelberg* is working on the follow-up to his immensely popular last album at *Long View Farm* in North Brookfield, MA. Engineer *Marty Lewis* is at the board, with *Jesse Henderson* assisting. Also at the Farm is the *J. Geils Band* (without recently fired singer *Peter Wolf*, we presume). Keyboardist *Seth Justman* is producing, with *Jon Mathias* engineering. . . . The *19 Recording Studio* in South Glastonbury, CT has recently completed the final mix of *Gallon's* "rock-a-funk-a-billy" disk for Sugar Hill Records, with *Jonathan Freed* engineering. . . . *Tom Teeley* is recording his first A&M album in New York City with *Le Mobile* and producer/engineer *Neil Kernon*. . . . The Boston-based band *Friday*, who recorded material at *Fishtraks* in Portsmouth, NH placed a very respectable third on a recent MTV "Basement Tapes" program (after a first



# When you're used to the best there is...



"You would choose a Soundcraft, too". That's what producer/songwriter Pete Bellotte told us.

And he certainly is used to the best. While he was co-writing and producing most of Donna Summer's hits he chose Soundcraft for his own studio.

"When we were recording Donna's 'Macarthur Park' and 'Bad Girls' we were amazed at the flexibility of the Soundcraft and in particular, the EQ. You get all the control you need out of a Soundcraft EQ without any harshness or distortion. The choice was simple.

"My major guidelines in selecting the equipment were space and quality. The Soundcraft 2400 and SCM tape machine met those criteria. With the split configuration of the 2400, it performs like a much bigger console. When I mix down I can use the monitor section of the console to return more tracks. I've got the capability of mixing down

World Radio History

up to 52 tracks simultaneously and I don't have to stand up to get to the controls – they're all within easy reach.

"Once you're used to the best there is, you'll never want to compromise. And that's why I chose Soundcraft".

## Soundcraft The Producer's choice

Soundcraft Electronics Limited, 5-8 Great Sutton Street,  
London, EC1V 0BX, England. Tel: 01-251 3631. Telex: 21198.

Soundcraft Electronics USA, 1517 20th. Street,  
Santa Monica, California 90404. Tel: (213) 453 4591. Telex: 664923.

Soundcraft Canada Inc. 1444 Hymus Blvd. Dorval,  
Quebec Canada H9P 1J6. Tel: (514) 685 1610 Telex: 05 822582.

place finish in August). That band is now back at Fishtraks recording anew. . . . At *Celestial Sounds* in NYC, Artista artist *Kenny G.* is finishing the 48-track mixes of his newest release, with *Wayne Brathwaite* and *Kashif* producing, *Steve Goldman* engineering, *Ron Banks* and *Dean Cochran* assisting. Also at Celestial is CBS/Epic star *Carl Anderson*, in with producers *Steve Williams* and *Skip Anderson*, engineer *Bill Dooley*, and assistants *Larry DeCarmine* and *Geoff Keehn*. . . . At *Power Play Studios* in Long Island City, NY, *David Reeves* finished production on "The Big Beat," by *Spoonie Gee*, engineered by *Rick Gratz*; *David Reeves* is currently producing "Move for Me" by *Output* and "Fresh" by *Davy DMX*; and *Aaron Fuchs* is producing "I Can Do It, You Can Do It" by the *Undeafated Three*. . . .

## NORTH CENTRAL

*The Disc. Ltd.* in East Detroit has been busy of late with *Gaylord & Holiday* producing a new album, *George Clinton* mixing his latest for Capitol, *Jim Barnett* self-producing his next record, and *Peter St. Mark* overdubbing and mixing. . . . At *Studio A* in Dearborn, MI, *Eric Morgeson* is doing final mixes on *99 Balloons*, by *Claudia*, for Canada's Quality Records. . . . The legendary soul group *The Dells* have been recording for Larc Records at Chicago's *Paragon Recording Studios*. *Chuck Jackson* and *Marvin Yancy* are producing, *Marty Feldman* engineering. . . . At *Spoolie Tunes* in Dearborn, MI, producer *Percy Hargrove* is in the process of

completing his latest project, featuring *Artie Anthony* on guitar and *Michael Telley* on keyboards. Engineering is *Eric Morgenson*. . . .

## SOUTHEAST

Plenty of action around Muscle Shoals, AL: At *Sound Cell* in Huntsville, *Tony Mason* is cutting an album with *Doug Jansen* producing and engineering; over at Fame Recording Studios, RCA recording artist *Gus Hardin* has finished his album, produced by *Rick Hall*, with *Johnny Sandlin* engineering, *Alan Schulman* and *Don Parsons* assisting; *Clarence Carter* is in at *East Avalon Recorders* producing himself, with *Steve Moore* and *Mark Kimberlin* engineering; *Muscle Shoals Sound Studios* finds MCA's *Thrasher Bros.* working with producer *Jim Foglesong* and engineer *Pete Green*, and veteran ace *Barry Beckett* handling sessions by *Cameron*, with *Green* at the board; and at *Wishbone Inc.*, *Terry Woodford* has been producing former *Hot* lead singer *Gwen Owens*, with *Alan Schulman* and *Lee Daley* assisting. . . . *Chet Atkins* returned to Nashville's *Sound Emporium* this fall to produce *Roger Whittaker's* forthcoming disk for Tembo/RCA; *Mike Poston* engineered. . . . *Art in America*, the synth-pop group whose last LP made a bit of a stir, have been recording in Miami's *Criteria Studios* with producers *Ron* and *Howard Alpert* of Fat Albert Productions. *Patrice Carroll Levinsohn* is asst. engineer on the project. *The Bellamy Brothers'* next album, produced by *Howard* and *David*

*Bellamy* and *Steve Klein*, engineered by *Dennis Hetzendorfer*, is just about finished at Criteria, as well. . . . He's long since hung up his gloves, but former heavyweight champion *Jimmy Ellis* is fighting the Devil these days, and he's recording tracks with the *Riverview Spiritual Singers* at *Allen-Martin Productions* in Louisville, KY. The sessions were mixed by former *Osmonds* studio engineer *Martin Anderson*. . . . Things have been hopping at the *Soundshop* in Nashville. Among the hot sessions there: *Jerry Wexler* and *Barry Beckett* producing overdubs for the English band *Wham UK*, with *Mike Bradley* engineering; and country producing legend *Billy Sherrill* working with engineer *Ernie Winfrey* on a *Ray Charles* album that features R.C. on duets with such giants as *George Jones*, *Rosanne Cash*, *Merle Haggard* and *Chet Atkins*. . . . Soaking up sun and working at *Compass Point Studios* in Nassau, The Bahamas, are the *Thompson Twins*, recording with producer *Alex Sadkin*; reggae artist *Jimmy Riley*; and British eclectic *John Martyn*. All record for Island Records. . . .

## STUDIO NEWS

In late September, *Fred Jones Recording Services* in Hollywood took delivery of the first BTX Softouch system on the West Coast. In addition, FJRS now has a 24-track studio with video capabilities. . . . *Clinton Recording* in New York City, just opened in December, bought two custom-built Neve 8076 consoles. Both consoles have 40 inputs and 24 busses, and one is equipped with Necam II automation. . . . *Mastermind Recording Studios* in New York City has installed a new state-of-the-art MCI JH-528 "D" Console, complete with plasma light meter display and automation. . . . *Rivendell Recorders* of Pasadena, TX received a new Synclavier Music System for its synthesist/producer Paul Mills. . . . *Midwest Recorders* in Milwaukee is reopening its doors after a complete reworking of the existing facility and a restructuring of the managerial and engineering staff. The studio was formerly Traum Recording. For more info, contact Lisa Richardson at (414) 483-5055. *The Soundsmith* in Indianapolis has made a couple of personnel changes. *Al Thompson* is now on the sales staff of Soundsmith Audio and *Jeff Bowen* has joined Soundsmith Recorders as a production coordinator and marketing director. . . . Miami's *Criteria Studios* has acquired their second Mitsubishi X-80 PCM 2-channel digital recorder, which is being used extensively in record and mix sessions. *Roar Productions* of Columbia, MD has installed a Neotek Series II console. That installation resulted in a restructuring of the facility, with a relocation of the outboard equipment. Also added there were a DeltaLab digital delay, Klark-Teknik 1/3 octave EQ, and a fourth 2-track recorder. . . . *Power Play Studios* in Long Island City, NY is completing a new studio that includes a new MCI 636 automated board, MCI JH24, J110 tape machines, UREI 813B monitors and a 6' Yamaha grand piano. . . . Pasadena, CA's *Bell Sound Studios*, who work primarily in the jingle and commercial fields, has acquired a pair of Studer A810 tape machines. The Studers are two-track stereo recorders with center time code track. ■

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CLIP

# reference monitor

## FORUM

by George Petersen



ew topics in the recording industry are quite as subjective as engineers' individual preferences in speaker monitors. No two engineers perceive sounds in quite the same manner—what sounds "tinny" to one may sound "crisp" to another. Along the same lines, no two different models of monitors sound alike—two speakers with identical frequency responses can vary widely in the accuracy of their sonic reproduction. The problem is further compounded by variances in control room design, acoustics, equalization, volume levels and monitor placement.

Reference monitors, by their very nature, can provide a step towards solving this dilemma. For the purposes of this forum, we define "reference monitors" as secondary speaker systems which are used in conjunction with the main monitors found in control rooms. Thus the use of reference monitors allow engineers to check recordings on several playback systems, ranging from an automobile AM radio-type sound to "average" home stereo (bookshelf style) speakers.

We asked a number of engineers about their preferences in reference monitors. Their responses

were varied, informative, and sometimes surprising. Some engineers use reference monitors nearly all the time, while others rarely use them at all. One trend we noted is a growing number of engineers (particularly independent engineers who work in many different studios) who have their own set of small monitors which they bring on session dates.

### Thom Moore, Synchro Sound Studio, Boston

"The thing that a small monitor should do is to allow you to hear everything in a real-life situation—a supposedly real-life situation. The big monitors are always going to make things sound glorious. When you get down to the smaller speakers, you want to hear something that's a little more true to life, like what you'd hear everyday.

"The reference monitors we're using now are the Yamaha NS-10Ms, a small two-way bookshelf type speaker. They seem to have pretty good clarity and a good enough power handling capacity. They come across real well. The high end is really crisp. You can trust the low end—it's not going to boom out at you. The Yamahas pretty much give you what you want."

**Mix:** What percentage of your mixing is done on reference monitors?

"A fair bit, about 75-80%, although there are clients that come in and want everything up big, and will sort of dictate how loud you listen. If you listen to the smaller reference speakers, you'll find fatigue is less. You can always refer to the top ones, but it's pretty good practice to stay down on the small ones—you can work longer."

### Lee Herschberg, Director of Recording, Warner Bros. Studio

"I've got two that I like. One is a very small Visonik David 50, which aren't being made anymore. They're a two-way speaker, only about seven inches high. They are pretty realistic to me and if everything I think is in a mix, it's going to be audible on the Visoniks.

"For larger reference monitors, with real accuracy, I like the small Westlake bookshelves. For me, they're an excellent reference. I could live with those in any studio where I didn't know the monitors. If I get in a studio where I can't really adapt, or there's bad imaging, the Westlakes in the nearfield work out well for me."

**Mix:** How do they translate to the main speaker systems you're used to?

"Compared to the monitors in our studio, which are old Westlake boxes with the wooden horns, Cetec low frequency drivers and Pioneer TADs on top, they really relate well. For what I'm used to listening to, the small Westlakes give a good sense of what's on the tape, but it all relates to room acoustics, room equalization and other things."

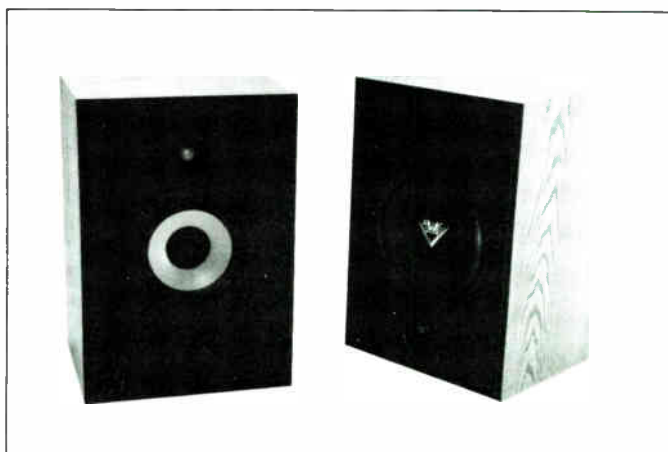
### Ed Wolfrum, Audio Graphics, Royal Oak, Michigan

"I do a lot of classical and jazz work here, so I have to have an accurate monitor. I can't be hoked around by them. I've had UREI 813s in here,

Westlake BBSM-6

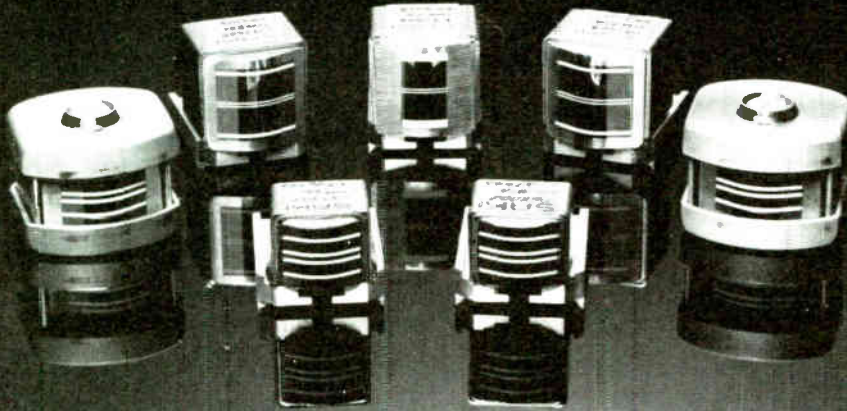


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Lansings, and everybody else, and I keep going back to the Klipsch. In 23 years, I haven't found anything better.

"In the small studio I use Heresys and in the big studio I use K-horns. If you listen to the last Roger Whittaker album you'll hear 'em. I get excellent results from them and they translate very well to what's on the air. I wouldn't consider using anything else.

I have a set of Klipsch kg's I use for location work. They also sound good, but have a little more sizzle at the top. It's only 10 dB down at 24 Hz. It's probably one of the flattest little loudspeakers on the market today.

#### **Jack Leahy, Russian Hill Recording, San Francisco**

Mix: What kinds of reference monitors have you been using?

"Well, we have these little Technic things, and we have Auratones, but my personal taste is not to use any of them. I think the whole business of listening to crummy speakers is a crutch that's unnecessary. If it sounds good on the big ones, it'll sound good on the little ones. When you're hearing full range speakers, you'll know by experience what is going to read on the radio. I generally don't listen to little speakers, but I bet you'll get a different story from each of the eight engineers here.

"I put a studio into the building recently, primarily for film-to-video transfers, with a small board so I could mix sprocketed sound tracks over to video with picture. I looked around at little speakers, and bought the Technics and some Radio Shack Minimus, the ones in the metal cabinets, and they sounded fine also. I didn't want to put nice speakers in there—it's not an acoustically cool room—and with big speakers in, you'd have a lot of room color and acoustical problems anyway. So I used these little ones, which sound better than television and don't break up at high levels."

#### **Gary Laney, Sound Emporium, Nashville**

"I use the Yamaha NS-10Ms. We have Auratones here too, which some people like, but I prefer the Yamahas. I usually hook up one Auratone to have a good mono-type speaker. Everything gets played through a mono speaker at some point in time, so if it doesn't sound good in mono, it's not gonna sound good anywhere else.

"I've had real good luck with the Yamahas. They sound good, and are basically more like the home speaker most people have. It's a good reference point today."

# reference monitors

## Will Eggleston, Crescendo Studios, Atlanta

"Personally, I've been using a pair of EAW MS-50s since they came out on the market, about five years ago. If I had my druthers, I'd be using MDM-4s."

### Mix: How do the two speakers compare?

"There really isn't a whole lot of comparison. They're really different sounding. The MS-50s have that big 'hi-fi' sound. They have a hole notched out of them between 400 and 500 cycles that's as big as the Grand Canyon, but the clarity is good. The thing I like about the MDMs is that they are very full sounding. They're more representative. About the only reason I use the MS-50s is because I've gotten used to them."

"Instead of Auratones, we're using these little TOAs. They go up a little higher and go down a little lower. Our clients like that. So between the

three of them [EAW, MDM, TOA] we feel we're real close."

## Bob Clearmountain, Independent Engineer

"I use the Yamaha NS-10Ms. They've been pretty good for me. I have a set I bring when the studio doesn't have any, but most of the studios where I've been working lately have sort of adopted them as their standard speakers, in addition to their Auratones. I use the Yamahas pretty much exclusively. I practically never use studio monitors, although sometimes when I'm finished mixing, I'll put it up there just for the hell of it to hear how it sounds."

### Mix: What is the problem with main speakers?

"Well, first of all, I've never been to anybody's home where they had Westlakes, or UREIs, or Big Reds, or anything like that, so I could never understand the concept of using them to mix a record that's made to be bought by regular people with regular little stereos. Secondly, my ears tend to start ringing if I listen loud, and it seems for some reason, when recording on

the big speakers, you want to turn it up to hear it loud up there. After a few minutes of that, I'm pretty much burned out for the day. Usually I'll mix for twelve hours at a stretch, and when using the Yamahas or any small speaker, I can last quite a bit longer."

"I try to listen as quietly as possible. At home I listen quietly, because I have a New York apartment and if I crank my stereo all the time, the neighbors go nuts. I find it's a lot easier to place the vocal that way too. On most large speakers, and also on smaller speakers, if you play too loud, you'll tend to push the vocals too loud."

### Mix: How do the Yamahas translate to disk?

"They're a little on the bright side, so I usually stick a little piece of tissue or a Kimwipe in front of the tweeter. I like to leave the grillcloths off also, because they don't really reproduce the low frequencies like 50 cycles and if you watch the speaker come moving in and out, you can tell if the speaker's going nuts. The speaker cone corresponds roughly to what the stylus would be doing when it cuts. That works out pretty well."

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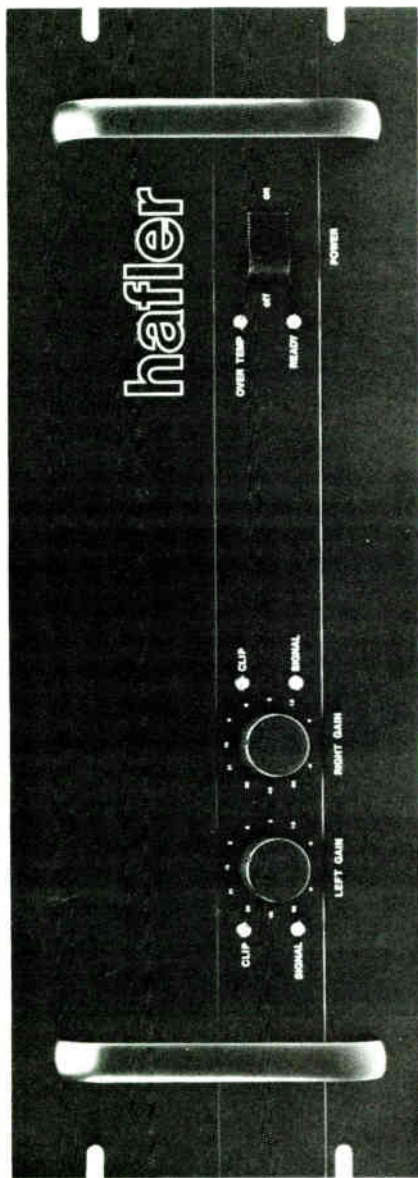
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## reference monitors

### Eddy Offord, Eddy Offord Studios, Atlanta

"The ones I like most of all are the MDM-TA3s. It's not a very flattering speaker, but I find them very, very accurate. I'm real happy with them. For mains I'm using JBLs—it's a weird set-up. I'm using the standard 4330s, but because my speakers are free standing, I don't get quite as much bass out of them as I'd like, so I'm using two cabinets a side, but on one cabinet just the low end is hooked up so I have four 15s on each side.

"I do about 50 or 60 percent of a mix on the MDMs. I'm always switching back and forth trying to make it sound great on both speakers. Then I'll do my final balance on the small ones."

### Bob Ludwig, Disk Mastering Engineer, Masterdisk, New York City

"I've got a set of speakers I've been using for years here. They're basically stock Altec model A-19s, with Sequerra super tweeters on it and a Hartley 24" woofer. It's triamped with Times One amplifiers and Mark Levinson crossovers. You can actually hear 19 cycles without much problem. That's my main system.

"For smaller speakers I kind of rotate around. From time to time I've used David 9000s, Yamaha NS-10s, and about a week ago I got the Fourier Model Eight. It's a two-way speaker with an eight-inch woofer and dome tweeter. They have an amazing amount of bass for their size.

"It's important for engineers to really intimately know the speakers they are using. For example, I have some difficulty with the David 9000s, because to me they sound extremely bright. And yet Roger Nichols just did the John Denver *It's About Time* album down at Criteria using just those speakers, and there was nothing that needed to be done in mastering—it was perfect top to bottom. He really knows those speakers. Now if I was to balance a record on those speakers, I would probably come out with a tape which was very dull sounding—the top end would fool me.

"Generally tapes that come in on Yamaha NS-10's are quite well balanced. They may need EQ-ing—sometimes the tapes are boomy about 200 cycles—but the relationships in the mix usually seem pretty good."

**Mix:** What other kinds of reference speakers are you familiar with?

"I'm a part owner of Boogie Hotel, a studio in Port Jefferson (NY) and we have a new set of small Mitsubishi speakers that sound pretty good, although I haven't had a chance to use them much. We have a set of Auratone-type speakers here that were made by Secret Sound Studios, and a pair of JBL Century L-100's which Mick Jagger liked to listen to when he was here. I've mixed a record on Tannoy Reds, and I like those very much. I've had to do very little here when mastering mixes done on those."

### Jim Waller, Road Apple Pro- ductions, San Antonio

"I have an eight track studio with JBL 4411's. I think they're terrific. I've been in a lot of studios over the years and the 4411's don't have the bass response that some of the larger

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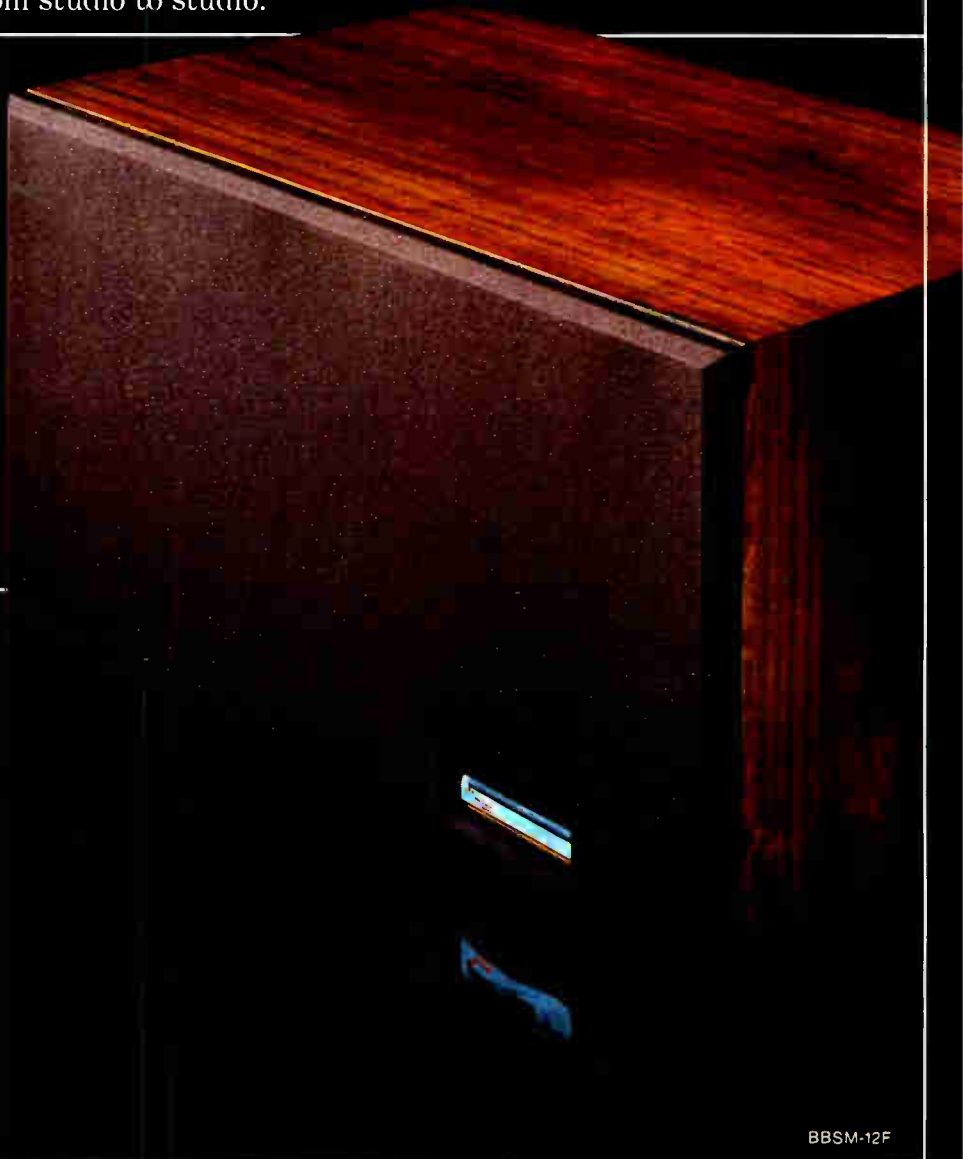
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# reference monitors

monitors have, but I really don't need it. My control room is about 12' x 16' and they fill it up just fine.

"When I got these, I went to Abadon Sun's consumer store here in town, where they have all the models on display so you can really listen to them. I listened to a variety of models from some very small ones up to the big Biradials. I had planned on getting the 4312s until I heard these 4411s, which were \$100 more and had unbelievable bass response for their size."

## Jay Antista, Lion Share Recording, Los Angeles

"I used to use the Yamaha NS-10s, but now I'm using the Auratone T 6s. They're a small two-way monitor, about the size of the NS-10s. They're real close to airplay, kind of a step above a car speaker, like an average home system. The T 6s are a little bit smoother than the NS-10s.

"The people from Auratone brought us some to check out and we listened to them and bought the T 6s and some T 66s, which are also two-way, but have a double woofer on the bottom. We've had so many people come in who like them, that we have them in all our rooms now."

## Electro-Voice Sentry 100A



**Mix:** What percentage of your recording is done on reference monitors?

"In basic tracks it's about 70% mains and 30% on small speakers. When mixing, it's just the opposite. If I can hear what I like when it's soft, then it's right."

## Ron Capone, Westwind Recording, Westlake Village, CA

"You're not going to believe this but I like EPI's—their 8" two-way model [T/E 100]. I've got two in the control room and two at home. I have UREI Time Aligns in the control room and I don't get that tremendous change in sound when I go down to the EPI's.

"Vito San Phillippe, the Tower of Power bass player, was in here working on his solo album and brought in some NS-10's, but I got a sense of them being boxy. When Bruce Swedien worked out here, he brought his JBL's with him. I guess it's just a matter of what you're used to."

## Drew Townson, Castle Recording, Carrollton, Texas

"We have JBL 4435 Biradials, and Auratones, and we're getting some Radio Shack speakers, the little ones in the aluminum boxes. All of the independent engineers around town carry those around with them. It's like 'have Realistics, will travel'. For TV and film scoring and radio jingle work the



*Auratone T 6*

Auratones are better, but for comparing to FM stereo, car cassettes, and home mini-systems we're going with the Realistics.

"We're also thinking of putting in a pair of mid-size speakers so we would have three references, because it seems we're jumping from a big, clinical scientific sound that nobody can reproduce—the room here sounds dynamite—to the Auratones. I'd like to get something like a mid-size JBL or some Toby speakers. Toby is a guy here in Fort Worth, with dealers in Dallas, Houston, and London, England. He only makes a limited number of speakers. They're really excellent speakers—almost too good."

## Tom Brown, Scruggs Sound Studio, Nashville

"I've been using the Electro-Voice Sentry 100's. Personally, I love them. They're a good medium between the super high-tech audiophile stuff and bookshelf speakers. They relate well to the real world. If you get a mix that sounds good on Sentry 100's, it'll normally sound good on any playback system.

"In Nashville, there are probably twenty different types of speakers engineers carry around with them—Panasonic, Technics, MDM's, JBL 4301s and 4401s—but everybody who uses our EV's likes them. They might not like them the first time they hear them, because they sound hi-fi-ish at first, but after awhile you find out they're not hyped. They give a good representation of what's on the tape.

"Secondary monitors don't have a habit of hanging around a studio forever. They get beat up and pushed real hard. We're pushing 300 watts per side into the Sentry 100's and we've approached SPL's of 125 dB here, and they still work and sound clean." ■

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# GROWING WITH THE TIMES

by Blair Jackson

To steal from Charles Dickens, "It was the best of times, it was the worst of times" for studios in the Northwest in 1983. For some, the recession became just a faded memory, recalled only in nightmares during fitful nights; for others it was an unwanted, uninvited guest who arrived late to spoil the party. While most studios reported an increase in business over 1982, the past twelve months hardly constituted a "boom year." The light at the end of the tunnel is getting brighter, but we're still in the tunnel.

It's difficult to generalize too much about the region because every state has its own economy, its own recording scene that is affected by a hundred different variables peculiar to it alone. True, the record industry slump is essentially over and the major labels are signing new bands again, but realistically, that bit of good news really only affects a handful of large studios in the Northwest, mainly 24-tracks in the Bay Area, and a few in Seattle and Vancouver. The frantic rush to sign tomorrow's Duran Duran or Spandau Ballet simply hasn't filtered down to Denver or

Salt Lake City. All that means, though, is that A&R men are, as usual, confining their fashion hunt to the coasts primarily. That's nothing new. Studio owners in Salt Lake City can sleep tonight, even though up-and-coming rockers with immaculately styled hair, tuxedos and synthesizers aren't breaking down the doors of their studios to track their banal ditties of suburban angst and life in this cold, cruel world.

In fact, Utah has a very healthy recording scene right now. Here's a state with just a million and a half people, yet it supports nearly a dozen 24-track studios, most of which report they are doing well. "Probably a third of the business in the state is related to the Mormon culture," says Sam Foster of Audio Vision in Lindon, UT. "It's not just spiritual music, either. There are rock bands that have a Mormon outlook, and businesses that have recording needs that have ties with the Church." Foster's studio has been busy indeed of late. Audio Vision has been completely remodelled, down to changing the acoustics in the control room. Foster reports that "Electro-Voice helped me put in a new custom



PHOTO: JUDY HOWARD

Bonnie Hayes at "The Plant" in Sausalito, CA

monitor system, and it's one of the first anywhere to add a sub-woofer to the Century 500 system." Other recent additions to the studio include an ATR 102 with a half-inch head stack, and "we're really excited about this series of Valley People Dyna-Mites which we're using quite a lot with outboard equalizers, particularly Symetrix." The studio's main work these days has been recording 500 jingles for a jingle subscription service, Broadcast International, but they have also been active in working with local bands such as Jubal, Union Station and Thunderbuck Ram.

Over at Salt Lake's Bonneville Studios, Dave Michaelson reports that business is "about fifty percent above last year." The studio is extremely pleased with the Neotek Series 3 console they bought about a year ago. "Sonically it's great," Michaelson says. "It was relatively inexpensive but its performance is superlative." Among recent purchases at Bonneville are a Q-lock synchronizing system, and an MCI one-inch video-audio layback machine. Recent projects at Bonneville include mixing for Glen Yarborough's forthcoming LP, and recording an album for popular jingle writer Mike McLean.

Another area that seems to be enjoying considerable growth is Vancouver, British Columbia. The club scene is reportedly the most vigorous

Tres Virgos in San Rafael, CA



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it's been in several years, and an increasing number of U.S. and Canadian bands are taking advantage of the city's charms and good studios. For instance, at Little Mountain Sound Studios, manager Bob Brooks enthuses, "'83 was a fabulous year for us, at least 30% better than '82.'" With a staff of 36, nearly 13,000 sq. ft. of space and scads of creature comforts, Little Mountain was able to lure a host of big names in '83, including Loverboy, Bryan Adams and Chilliwick, in addition to jingle and other work. Recently, the facility enlarged Studio A's capacity, and added a new Solid State Logic console.

All was not completely bright in the Rockies, however. John Aldridge of Mountain Ears in Boulder comments that "we seem to get everything about six months after the coasts, and that includes the recession. Quite frankly, we've had a real tough year." The studio is attempting to reorganize under new management, and Aldridge is basically optimistic about the future. "The whole region seems to be down a little, economically, but it'll bounce back. It always does." Aldridge can also perhaps take some hope in the rebounding of studios on both coasts, meaning his region probably isn't far behind.

At Caribou Ranch in Nederland, CO, business has been steady but unspectacular, according to studio manager Jerry Mahler. "We've been lucky in that we've managed to get several long bookings, which is what you need in times like these. Al DiMeola had the studio for four months, plus we've done some mixing work for Glenn Frey, and Dan Fogelberg has worked a lot here." In addition, Chicago favorites Idle Tears have kept the staff of Caribou busy. New purchases there include a Studer A800.

Don Tyler of Commercial Recording in Honolulu agrees that it sometimes takes a long time for trends on the coasts of the mainland to hit more remote areas. He called '83 "the worst year since 1981," but that's not such bad news when one considers that last year was his biggest year ever. He, too, is very upbeat, particularly in light of the fact that Commercial is going to be putting in video interlock to go along with their magnetic film interlock within the next six months. The studio has done a lot of radio and TV work over the past year, "and things look like they'll be good in the first quarter of next year."

At Sea-West Studios in Hauula, Hawaii, studio manager Donna-Alexa Keefer reports that their business has been fairly good, "but it might not look so great if we weren't getting a lot of

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non-local clients." Indeed, Sea-West has attracted several top out-of-state bands in the past year, among them Siouxi & the Banshees and Australian Crawl, both of whom recorded huge hits there.

Herbert Ono of Sounds of Hawaii in Honolulu says that his business is picking up after what he terms a "terrible" 1983. "We've had some good local projects recently, though," he adds, "and we're hoping it's a trend."

In Washington, one new facility that's stirring interest is Startrax, in the small town of Concrete, about 65 miles from Seattle. (Concrete, it should be noted, is a rustic community with virtually no concrete in it.) The studio is operated by owner Larry Read and his studio manager wife Jeannette, who used to operate a 16-track studio near Las Vegas. "We've always loved the Northwest," Jeannette says, "and we've vacationed in Concrete, so we eventually decided to try to have our studio

here." The brand-new 24-track has been open since November, but is having its grand opening in January. So far, the studio has attracted a variety of local acts, such as Applied Science and Jesse Gordon Shepherd, and Jeanette hopes to "attract people who'd like the serenity of working out in the woods, away from the big city." Startrax also plans to open a recording school on the premises.

Meanwhile, DNA Productions in Seattle, which opened about a year ago, reports their initial 12 months of operation were good. "The scene in Seattle is healthy right now and we've benefitted from that," says owner/studio manager David Thompson. Among the local acts who have tracked at DNA lately are Legacy, Stripes, and even the area's best known aggregation, Heart. Recently added gear at DNA includes an Effectron 4 digital delay and a Roland programmable digital delay.

—page 27

## FANTASY STUDIOS: "A People Business"

Fantasy Studios, with its state of the art audio studios and facilities for 16/35mm film/video sweetening, mixing, and post-production, as well as record mastering, has become a home away from home for artists such as Stanley Clarke, George Duke, The Greg Kihn Band and Journey, among many others. Located in a modern multistory edifice which towers over its neighbors in an industrial section of Berkeley, California, Fantasy has likewise established itself as one of the San Francisco Bay Area's leading centers of record, film and video production.

Veteran engineer Roy Segal, who for years was Fantasy's studio manager and has since been promoted to Vice President, talked about some of the changes in the industry which have affected Fantasy Studios and the local and national recording scenes as well.

"We've been increasing our capacity to deal with television and films in our recording studios, while at the same time maintaining our capability to do major recording projects. Here at Fantasy, we operate four studios—two of them are state of the art, and the third one is in a construction state right now, which will give us three rooms acoustically designed for the

'80s and equipped with Neve 8108 consoles. We have a fourth room which is 16-track and equipped with a Q-Lock, video monitors and projection to do every form of synchronized sound, ADR, Foley, film/video sweetening and scoring. But that has not been a huge part of our business. Essentially we're a music recording studio and the biggest part of our business is doing album and single projects for independents and labels.

"The cost effectiveness of a studio is always important to both record labels and independents. The competitive nature of the business has been caused by the proliferation of smaller studios. The improvement in equipment and technology is amazing. It's let a lot of studios come on line and dilute the existing market, and while the smaller studios can't compete on a high end, they compete for the smaller projects. So from a marketing standpoint, the industry today is much more professional and competitive. The pricing is more exacting and there are studios which fail for not having sufficient margins, and sometimes when they find out, it's too late.

"About two years ago, we entered the digital age, purchasing the X-80 and X-80A [Mitsubishi digital two track recorders] and equipment which allowed us to do disk mastering from the digital machines. In the first six months it was relegated to Fantasy Records

—page 29



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**Besides psycho-acoustics, that is.**

## Triad Studios

Triad Studios of Redmond, Washington (Seattle area) will celebrate their second anniversary on January 8, 1984. James Loomis, owner of the 24-track facility, feels the investment into the studio has paid off: "Seattle is a good recording market. After deciding to build here, we went in with both barrels—a good facility, good equipment, and a top staff. Our predictions of an up-and-coming market came true. We've been busy since day one, and we're seeing more and more label work."

Some of the recent sessions at Triad Studios have included Mark



Lindsay completing his album project; producer Danny Deardorff finishing the Tickle Tune Typhoon LP; Queensryche tracking for an upcoming album; Chuck Conlon recording two songs for Warner Bros., with Dave Perry and Conlon producing; a five song EP for Allies with Marlin Greene and David Kincaid producing; the Cozzetti/Gemmil Quartet mixing their second LP; and David Maddux producing an album for Wickline of Cascade Mountain Music.

Since their opening, Triad has continued to expand and upgrade their equipment offerings, thus far adding an additional \$60,000 worth of gear in the past two years. A new Neotek Series III-C 36x24 console has also been ordered at press time and a 1/2" two track machine will be acquired in the near future.


Owner Loomis reports that construction of a second studio will begin this month. The new room will be outfitted with an MCI two-inch, 16-track recorder and a Neotek Series III console. The 16-track room is designed to be acoustically similar to their 24-track live end, dead end room, and will handle overflow bookings, post-production needs, and in-house jingle work. The additional studio will increase Triad's total studio size to 5000 square feet.

—George Petersen

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—from page 24, Northwest

North of the San Francisco Bay Area, in Sonoma County, most studios have been thriving in these unpredictable times, and no wonder: Sonoma is one of the fastest growing counties in the West. Prairie Sun Studio in Cotati has seen considerable expansion of late, with the acquisition of quite a bit of new gear, including an ATR 102, Lexicon 224, 92 and PCM 41 digital delays, a Series 80 Trident console and a slew of new mikes. Owner Mark "Mooka" Rennick supervised the building of the studio's new 1500 sq. ft. live echo chamber, built out of a chicken hatchery on the 12-acre ranch that is home to Prairie Sun. "It's the rudest drum room you've ever heard," Mooka enthuses. It's obviously been put to good use, too, since much of Prairie Sun's work the past year has been with acts on Mike Varney's heavy metal label, Shrapnel Records. Varney apparently sends bands up to Prairie Sun because of the low rates and the cheap accommodations offered on the ranch. "Business was good for us last year," Mooka says, "and my sense of it is that the whole area is picking up quite a bit."

Theresa Stoops, studio manager of Beggar's Banquet in nearby Santa Rosa, (which is as close to a boomtown as Northern California's had), agrees with Mooka's assessment, and adds that 1983 has been "a fabulous year" for the facility, which both moved from Sebastapol and upgraded from 16- to 24-tracks. To accommodate that change, the studio bought an MCI JH16 recorder and a new Artek "Angela" mixing console, as well as thousands of dollars of outboard equipment and musical instruments. Most of the recent business at the studio has come from the local scene, including projects by Gravity, Doc Collins, R.B. Baker and the new age artist Aeolia. "What we'd like to do," Theresa says, "is start pulling business up from the Bay Area. I think that's just around the corner for us. This area is picking up fast."

And what of the Bay Area? Have recession-plagued studios bounced back to late '70s levels? In some cases yes, in others no.


At the Automatt, perhaps the most visible studio in the region, business has been steady, about the same as last year, according to studio manager Michelle Zarin. Certainly there has been no shortage of big-name clients at the facility recently: producer Sandy Pearlman has worked there with Blue Oyster Cult (whom he manages), Dream Syndicate and disco mixer extraordinaire Francois Kavorkian. David Kahne is currently there producing the next LP by the Bay Area's best new

wave band, Romeo Void. The Jefferson Starship are in residence, working with producer Ron Nevison. And Narada Michael Walden has handled numerous projects out of the Folsom St. studio. Recent purchases, according to assistant engineer Vince Casper, have included a 1/2" Studer mastering machine, about which Casper comments "everyone who hears it has to have it"; and Lexicon 224x digital delay. When asked why so many studios have opted to go Lexicon recently, Casper com-

mented that "It doesn't have the coloration that a lot of units have. It's so clean, it doesn't have any of the 'edginess' you get with other delays. I think the Bay Area is actually a little ahead of Los Angeles when it comes to Lexicon's gear because the West Coast rep used to work out of S.F., so we'd try a lot of things first." Zarin says the main challenge for the Automatt in the coming year will be to come to grips with the video revolution. "We're in the thinking stages right now," she says. Adds

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Casper, "We're excited about that direction. We all want some new toys."

Across S.F.'s Mission district at Pat Gleeson's Different Fur Recording, business is down a little from last year, but whereas many suffered in '82, that was the facility's biggest year ever, by far. The studio has a new Studer A80 24-track and an A80 two-track. Other equipment Gleeson has put in includes a computer system for the office, hardware by Franklin, software by Peachtree. "The computer is really helping make the business end much easier," he reports. "We're working on a program here that we hope other studios will be able to take advantage of eventually." Aside from a number of local recording projects, Different Fur has been busy lately with album sessions by George Winston for A&M and the band Pleasure for RCA.

While Tres Virgos Studios in San Rafael was host to a number of major label projects over the past year (including Stewart Copeland's soundtrack for *Rumblefish* and two separate albums for Van Morrison), studio co-owner Jerry Jacob notes "a large trend towards independent production. Because of this, we've started an 'open



PHOTO: DAVID GANS

*Pictured above: Mark Volman, Grace Slick, Howard Kaylan and Paul Kantner add background vocals to Kantner's solo lp Planet Earth Rock n Roll Orchestra at the AUTOMATT in San Francisco. Volman and Kaylan are Flo & Eddie in real life.*

door policy' and one-third of our studio time is dedicated to independently-financed projects at a substantially reduced rate to encourage local productions." Some recent independent

sessions at Tres Virgos include projects by Merle Saunders, Physical Ed (produced by Ronnie Montrose), Question Men, Mingo Lewis, and Secrets (produced by Johnny Colla). —page 32



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—from page 24, *Fantasy*

product and slowly gained acceptance among most of our clients. Today over 50% of our mixing jobs end up on the Mitsubishi. We are committed to multitrack digital and if all goes well, we will be on-line with a Mitsubishi 32-track system in March 1984."

For over a year now, Fantasy Studios has been offering low-cost independent album production packages to local bands and artists. "Nina Bombardier, the active manager of Fantasy Studios, puts together these packages," Segal explains, "which include everything to release a professionally produced record. We've been pricing it very low to encourage musicians and artists to do it. I've noticed other studios have also begun to offer this service, because it's a help to people entering the business. It's a form of artist development.

"Along the same line, we work closely with young artists, new artists, working out situations where we can help guide them if we feel they have potential. I think in 1984 you're going to see four new artists spring out who had their beginnings within Fantasy Studios, working with our people: The Hyts, who are signed to Beserkley Records; Billy Satellite, who are in the process of being signed to Capitol; Tigge Clay, an act signed to Motown; and Eddie and the Tide, who are on the verge of signing.

"Helping new artists such as these is another aspect of what the studio has been doing. This is important, especially in a market like this, and all the studios are into this to some extent. Maybe we've been a little more successful than a lot of them—this may be due to the people we have. The music business has always been a people business. Having the right tools is essential, but first you've got to have the craftsmen to use the tools properly.

"The essential thing which hasn't changed in running a studio is a desire to meet your client's needs: being aware of technological changes, making use of that technology, and to supply good engineering and design so you can bring a better product to your customer."

—George Petersen

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Because of this, we've started an open door policy' and one-third of our studio time is dedicated to independently-financed projects at a substantially reduced rate to encourage local productions." Some recent independent sessions at Tres Virgos include projects by Merle Saunders, Physical Ed (produced by Ronnie Montrose), Question Men, Mingo Lewis, and Secrets (produced by Johnny Colla).

At Eureka Teleproduction Center in San Carlos, work continues to grow on both the audio and video fronts. "Business is building very steadily. We're headed in the right direction," comments studio manager Tom Curry. Among the video projects the facility has worked on recently are a five-hour series called *Search for Excellence*, and some work for comedian Bob Hope. On the audio side, ETS recently recorded the music for a new Atari video game that employed a small chamber orchestra.

It was another interesting year at San Rafael's Shyne Sounds. Owner/engineer Leroy Shyne provided the sound reinforcement gear, recorded and did a one-camera video-tape shoot of the entire San Francisco Blues Festival this past September, and as usual, did a considerable amount of sound reinforcement work for local concerts and political functions. Shyne has a relatively new 16x24 stage that is fully portable and he has also developed a solar-powered system that he has used several times, starting with a concert at the Diablo Canyon blockade.

There are big plans afoot at the Music Annex in Menlo Park, south of San Francisco. Their studio C has now upgraded from a rehearsal studio all the way to a 24-track (with a few stops in between), and there is a lot of reconstruction going on as work begins on the studio's new 2500' video soundstage, which will have a 90' cyc, a 400 amp lighting grid, and a full 3/4" system. Engineer Keith Hatschek reports that 1983 was the studio's best year ever, a significant turnaround from the major recession years. Projects there of late have included an EP by Ronnie Montrose and Mitchell Froom; an LP by local favorites The Kids; a number of radio specials, such as a recent Stray Cats interview for RKO Radio; plenty of work for Palo Alto Jazz, one of the budding jazz independent labels; and the next album by Windham Hill guitar whiz Alex DeGrassi.

Dragon Studios in Menlo Park tells us that they are ending their first year as a 16-track facility "with a bang." Owner/engineer Charles Albert reports that the studio's comfortable home en-



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A relatively new 24-track facility is Ocean Studio in beautiful Stinson Beach, north of San Francisco. Owned and operated by musician Tim Tomke, the studio is just beginning to take outside clients. Studio manager Larry Pendleton says the studio has added an MCI half-inch two-track and a ¾-inch Ikegami camera and SMPTE time-code generator recently.

T&B Audiolabs, a year-old studio in S.F., tells us their first year of operation was a good one. Recent sessions there have included work by Noh Buddies, Levi's, and a pair of film scores—for Wayne Wang's *Dim Sum*, and a movie called *Radio World*. Mendocino-based Avalanche and The Defectors are among those slated to come to T&B soon. The studio has been buying lots of new equipment recently, such as a Lexicon 200 digital reverb, two Valley People Dyna-Mites, a Delta-lab Effectron 1024, a pair of MDM TA-2 monitors, and two AKG 414 mikes. In addition, studio engineer Mark Ellinger is designing a master synchronizer and custom noise gates for T&B.

Russian Hill Recording in San Francisco had much of its 1983 dominated by film soundtrack work. Director Phil Kaufman raved about the studio's ADR (automated dialogue replacement) facilities after taking scenes from *The Right Stuff* to Russian Hill for work. The entire musical soundtrack of the hit film *Never Cry Wolf* was recorded there, and the complex also was involved in the music recording for the recent *Garfield* TV special. Commercial clients, such as Bernie Krause's Parasound company, also used the studio. Just this past August, Russian Hill opened its film-to-tape transfer room, featuring the first KEM K800 machine in the United States. The studio has 16 mm and 35mm transfer capability now.

At The Plant (formerly the Record Plant) in Sausalito, a whole parade of musicians has kept the studio busy. "This summer was our best in many, many years," says studio manager Paul Broucek, "and we're very optimistic about the future because we got a lot of first-time clients last year, as well as our regulars." Among those who've worked there over the past couple of months are Grace Slick, metal monster Ted Nugent, Wolf & Wolf, Rick Springfield, Romeo Void and Border Patrol, a new band featuring ex-Doobie Tom Johnston, Charlie Williams, the one-time Mistress member, and Van Morrison's long-time bassist, David Hayes. The only major physical change at The Plant was the conversion last spring of

"The Pit" lounge into a small studio (Studio C), which has accommodated a number of smaller, mainly independent projects.

One of the most exciting developments in Idaho's recording scene is the recent completion of Sun Valley Audio's new facility in the heart of ski and sun country. "It's a recording studio built with almost entirely new technology," says Lance Parker, who helped design and put the studio together. "We're viewing it as a place to do good work at the same time as demonstrating new technological advances in recording." Parker says that one of the most revolutionary features of the studio is its patented wedge-shaped control room, with its high frequency drivers in the apex of the room. This interesting placement virtually eliminates the problem of early reflection, as well as severely cutting down in ear fatigue problems. The perfectly symmetrical room also features a four foot sound trap behind the console, further adding to the cleanness of the sound. "Bernie Grundman, the mastering engineer, has raved about it," according to Parker. "You can do an accurate mix in less time than a conventional studio because you can hear all the elements of the music and it's not going to sound completely different once your step out of the studio." The studio uses an I.C.C. (International Console Corp.) board which, according to Parker, has many of the same capabilities as an SSL or Neve, but at a lower price. This isn't the only room Parker has prepared; The Record Lab in Provo, UT also shows his handiwork. With its idyllic setting and state-of-the-art technology, Sun Valley Audio will likely have little problem attracting clients. "It's a different kind of recording experience," Parker says. "I don't know anyone who hasn't been impressed with what we've got here."

Finally, here is a list of the studios in the Northwest region that have upgraded since our last spotlight issue: Starship in Seattle, 3-B Productions in San Jose, and Transparent in S.F. have all gone from four to eight tracks. Jumping from 8- to 16-tracks were Astral Sound in San Jose, Bear Creek in Los Gatos, CA, Rick Chaisse Productions in Scotts Valley, CA, El Dorado in Oakland, Showcase in San Jose, and Startsong in Colorado Springs. And taking the big step up to 24 tracks were Denten in Alameda, CA, Phil Edwards Recording and Independent Sound in San Francisco, Mushroom Studios in Vancouver, Rosewood in Provo, UT, and Recording Techniques and Spectrum in Portland. ■

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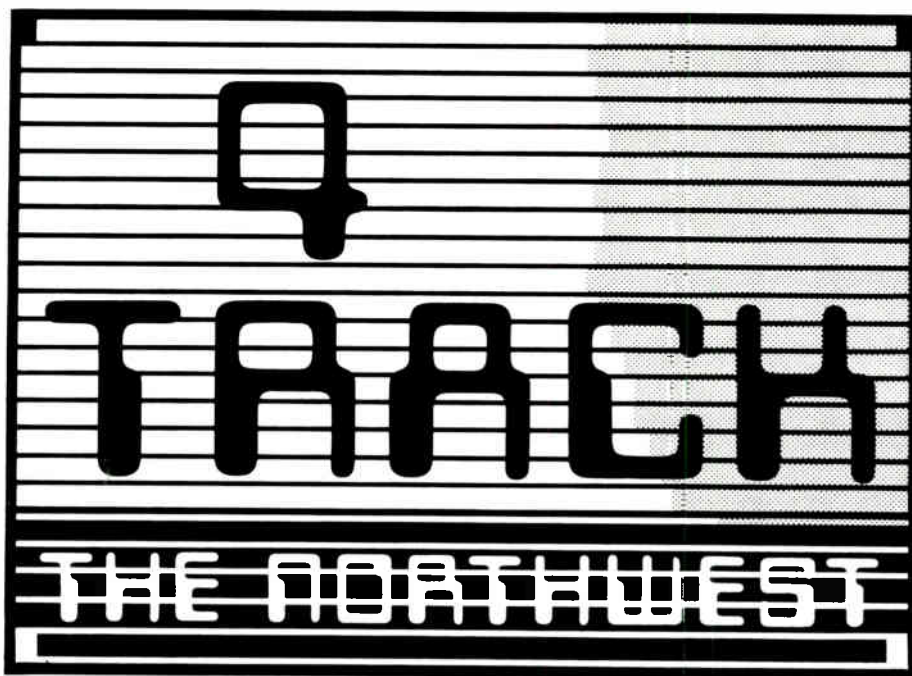
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Studio Manager: Gary R. Messick.

• **G.F.O. RECORDING**  
*also REMOTE RECORDING*  
P.O. Box 21, Albion, CA 95410  
(707) 937-0876  
Owner: George Frederick Quirin.  
Studio Manager: George Frederick Quirin.

• **GENTLE GIANT RECORDING CO.**  
*also REMOTE RECORDING*  
823 S.W. Ellingson, Albany, OR 97321  
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Owner: Bo Bryant.

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Owner: Jack Ellis.  
Studio Manager: Little Mike.

• **KNBQ**  
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Owner: Tribune Publishing Co.  
Studio Manager: R.P. McMurphy.

• **LEW'S RECORDING PLACE**  
*also REMOTE RECORDING*  
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(206) 285-7550  
Owner: Lew J. Lathrop.  
Studio Manager: Cary R. Wakeley.

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*also REMOTE RECORDING*  
P.O. Box 1772 Rohnert Park, CA 94928  
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Studio Manager: Joe Louvar.

• **PHANTASMASOUND**  
*also REMOTE RECORDING*  
7935 Fremont Ave., Ben Lomond, CA 95005  
(408) 336-2494  
Owner: Errol G. Specter.  
Studio Manager: Errol G. Specter.

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(415) 321-5776  
Owner: John R. DiLoreto, M. Eng.  
Studio Manager: John R. DiLoreto, M. Eng.

• **SONRISE PRODUCTIONS**  
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Studio Manager: William Burnside, Ken Botelho, William Van Bloom.

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Studio Manager: Kevinn Tam.

• **SPEED OF LIGHT VIDEO PRODUCTIONS**  
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Studio Manager: Elm Bordner.

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Studio Manager: Jim Dangler.

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Studio Manager: F.X. Windorski.

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Studio Manager: Raul Suarez.

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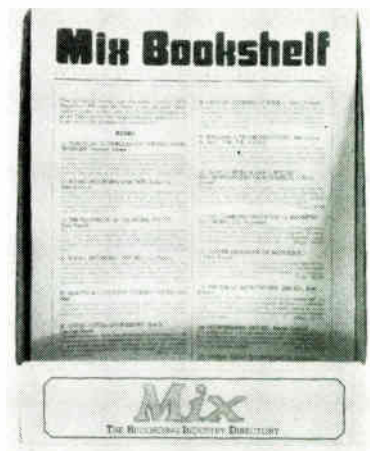


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(415) 479-2124

Owner: Robert Brown

Studio Manager: Robert Brown

Engineers: Bery Vincent, Peter Penhollow, John Laverne

Dimensions of Studios: (63) 20' x 24', (54) 20' x 24', (75) 20' x 50', (101) 20' x 30' x 50'

Dimensions of Control Rooms: 12' x 5'

Tape Recorders: Otari MX 5050-8X 8 track; TEAC 3440 4 track; Sony 4330 4 track

Mixing Consoles: Tangent 1602 16 in x 2 out, Tangent (custom zed) 1602, 16 in x 2 out, Yamaha 6 in x 2 out

Monitor Amplifiers: McIntosh, JBL Icecube, Dyna 70

Monitor Speakers: JBL Auratone, Altec, E.V.

Echo, Reverb, and Delay Systems: Space station, SST 282, Ibanez AD 230, MXR, Fender tube, Echoplex, Moog Phaser, Space echo 150

Other Outboard Equipment: SAE 2700 graphic EQ, UREI limiter, Bi-Amp graphic EQ, IVP pre-amp, dbx noise reduction

Microphones: Sennheiser 409 421, 441, AKG, Sony, E.V., Shure

Instruments Available: Piano, synthesizer, drums, and other on request

Rates: \$20/hr and up Block time available

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Studio Manager: Tony Zaccaria

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P.O. Box 1339, San Juan Bautista, CA 95045

(408) 623-4902

Owner: Alegria Productions

Studio Manager: David Silva

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4450 Fremont Ave. N., Seattle, WA 98103

(206) 633-1776

Owner: Andy Aldrich and Reese Mann

Studio Manager: Andy Aldrich and Reese Mann

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(415) 482-0839

Owner: Anthony Pasciucco

Studio Manager: Tony Pashuco

### •• APPLEWOOD RECORDING STUDIOS

4542 49th S.W., Seattle, WA 98116

(206) 932-6348

Owner: Harlan Michael

Studio Manager: Harlan Michael

### •• ARCAL PRODUCTIONS

2732 Bay Road, Redwood City, CA 94063

(415) 369-7348

Owner: ARCAL, Inc

Studio Manager: Sal Viola

### •• ARMY STREET STUDIOS/B.S.U. PRODUCTIONS

also REMOTE RECORDING

P.O. Box 31425, San Francisco, CA 94131

(415) 821-6962

Owner: IAK Enterprises

Studio Manager: Jim Keyler



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Lafayette, CA

### •• A.T.R.

P.O. Box 993, Lafayette, CA 94903

(415) 283-4094

Owners: John Duncan, Peter Rowe, John Christensen

Studio Manager: John and Duncan Rowe

Engineers: Duncan Rowe, John Rowe, Peter Rowe

Dimensions of Studios: 18' x 22', 5' x 40'

Dimensions of Control Rooms: 17' x 19'

Tape Recorders: Scully 284 8 track, Otari 5050 2-track, Sanyo cassette; Pioneer cassette

Mixing Consoles: Sound Workshop, Series 30, 16 x 16

Monitor Amplifiers: Yamaha P2201, Yamaha P2050, Symetrix HA-108

Monitor Speakers: URIE Time Align Model 811A, Yamaha NS-10M

Echo, Reverb, and Delay Systems: Echoplex I plate reverb, Delta Lab DL-1, Korg Digital Delay

Other Outboard Equipment: UREI 1176 limiters (2); Symetrix noise gates (6), Roland Phase Shifter

Microphones: Neumann U-87, EV-RE20, DS-35, RCA D-77,

Sony C 55, C 22, Shure SM-53, 57, 545, Sennheiser 441, 421

Instruments Available: Brambach baby grand piano, numerous guitars and amps

Rates: \$30 per hour Call for block rates

### •• AUDIO PRODUCTION STUDIO

7404 Sand Lake Rd., Anchorage, AK 99502

(907) 243-4115

Owner: Creative Productions, Inc

Studio Manager: Bruce Graham, Chief Engineer

### •• AUDIO RECORDING, INC.

also REMOTE RECORDING

4718 38th Ave. N.E., Seattle, WA 98105

(206) 623-2030

Owner: Kearney W Barton

Studio Manager: Kearney W Barton

### •• AUDISSEY SOUND

ONLY REMOTE RECORDING

1020 Auahi St. Bldg. #6, Honolulu, HI 96814

(808) 521-6791

Owner: Gerald Luke, Rick Parlee

Studio Manager: Rick Parlee

### •• AVID STUDIOS, INC.

also REMOTE RECORDING

P.O. Box 1021, Menlo Park, Ca 94026

(415) 593-3919

Owner: Henry Bilbao

Studio Manager: Henry Bilbao and Chris Craig

Direction: Avid is a producer's studio with an emphasis on comfort and creativity. We have all new equipment for serving three major fields:

- 1) Audio for video, including custom or library music, sound effects, dialog replacement, narration
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1516 Oak St., Suite 320, Alameda, CA 94501

(415) 865-2040

Owner: Michael Cogan

Studio Manager: Michael Cogan

Engineers: Michael Cogan

Dimensions of Studios: 30' x 40'

Dimensions of Control Rooms: 18' x 12'

Tape Recorders: M 79 8 track, Ampex AG350 2 track, Sony 854 45 4 track

Mixing Consoles: Custom built

Monitor Amplifiers: McIntosh MC 60

Monitor Speakers: JBL 4311

Echo, Reverb, and Delay Systems: MICMIX Super C

Other Outboard Equipment: dbx 160 compressor, SAE graphic, Metrotech graphic

Microphones: Neumann U 87's, AKG D224E CA52, Beyer M260, E.V. RE 15, etc

Instruments Available: Grand piano

Rates: \$30/hr plus tape in the studio 1000 LPs from your tape and artwork for \$3,200 including color covers, everything 1000 45's, \$800 total

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(415) 328-8338

Studio Manager: Keith Hatschek

### •• BENT NAIL STUDIOS

2375 Cory Avenue, San Jose, CA 95128

(408) 244-0766

Owner: Dave Morris

Studio Manager: Dave Morris

### •• BERKELEY MUSIC GROUP

1442A Walnut, Suite 176, Berkeley, CA 94709

(415) 524-5188

Owner: Robert Marcus, Michael Zeitsoff

Studio Manager: Robert Marcus

Engineers: Robert Marcus, Michael Zeitsoff, Calvin McElroy

Dimensions of Studios: 15' x 17' x 9.5', 2 iso booths 5' x 7'

Dimensions of Control Rooms: 14' x 9' x 10'

Tape Recorders: Otari 5050 MK-111-8 8 track, Otari 5050B 2 track; Sony TC-D5 cassette 2 track, TEAC Portastudio 144 4 track

Mixing Consoles: Ramsa 8816 16/16, 4, 2

Monitor Amplifiers: Marantz, Hafler

Monitor Speakers: Auratones, MDM TA-2

Echo, Reverb, and Delay Systems: MICMIX Masterroom reverb, Lexicon PCM 41 DD, Ellectron

Other Outboard Equipment: 2 Valley People "Dyna-Mite" multi-

function limiters, EXR exciter, Microphazer, dbx compressor, Biamp graphic equalizer  
**Microphones:** AKG 414, Shure SM57, Crown PZM 30GP, E.V. RE-20, AKG 310, D120, more.  
**Instruments Available:** 1890 Whitney Upright, Rhodes 73, Ibanez, Les Paul, custom acoustic guitars, P Bass  
**Rates:** \$20 25/hour including engineer  
**Extras:** We offer session musicians and arrangers to put together complete demos or records for singers and songwriters. Our songwriters resource center provides invaluable information for writers who want to get their songs to major recording artists. We have been successful with acoustic cassette albums and all styles of pop music.

•• **SKIP BESSONETTE RECORDING STUDIO**  
 135 Fern Vally Rd. #111, Medford, OR 97501  
 (503) 773-3988  
**Owner:** Skip Bessonette  
**Studio Manager:** Skip Bessonette

•• **BIRD PERCUSSION STUDIO**  
 P.O. Box 112, 1716 Ocean Ave.,  
 San Francisco, CA 94122  
 (415) 871-2410  
**Owner:** "Bird"  
**Studio Manager:** "Bird"  
**Dimensions of Studio:** 19' x 23'  
**Dimensions of Control Rooms:** 10' x 17'  
**Tape Recorders:** MCI JH110B 8 track; Sony PCM-F1 with Meyers/Ultra Sound time correction filter.  
**Mixing Consoles:** Quantum 16/8.  
**Monitor Amplifiers:** Haller.  
**Monitor Speakers:** Ed Long TA3  
**Echo, Reverb & Delay Systems:** MICMIX reverb, space station, Kurzweil 250 synthesizer, plus full range of steel drums and idiophone percussion  
**Microphones:** AKG's, Sennheiser, EV, Neumann KM84, KM86.  
**Instruments Available:** 5 octave F to F Deagan marimba, 4 octave zylaphone, complete range of steel drums, full range of percussion, Rogers drums  
**Rates:** By request

•• **BOUNTY MUSIC**  
*also REMOTE RECORDING*  
 P.O. Box B, 98 Hana Hwy., Paia, HI 96779  
 (808) 579-9498  
**Owner:** Paul Weinstein  
**Studio Manager:** Paul Weinstein

•• **BRANT PRODUCTIONS RECORDING STUDIOS**  
 2701 38th Ave. S.W., Seattle, WA 98126  
 (206) 937-7025  
**Owner:** Bob Ensley  
**Studio Manager:** Bob Ensley  
**Engineers:** Bob Ensley, Independents.  
**Dimensions of Studios:** Studio A, 12' x 14'; Studio B, 8' x 11'.  
**Dimensions of Control Rooms:** 10' x 14'.  
**Tape Recorders:** Tascam 80-8 8 track w/dbx, TEAC A-3300-SX-2T (1/2 track) w/dbx, TEAC A-3300-SX 1/4 track w/dbx, TEAC C-3-RX cassette w/dbx.  
**Mixing Consoles:** Tascam Model 5-A  
**Monitor Amplifiers:** Crown D-150-A, Kenwood KA-305, Kenwood KA-5500.  
**Monitor Speakers:** Auratone, JBL  
**Echo, Reverb, and Delay Systems:** Lexicon, Sound Workshop  
**Other Outboard Equipment:** Symetrix parametric equalizers, dbx compressor-limiters, Symetrix noise gates, Orban de-essers, Symetrix compressor-limiters, Biamp graphic equalizers.  
**Microphones:** Sennheiser, Shure, Crown PZM, Sony, Neumann, Electro-Voice  
**Instruments Available:** Baldwin piano, assorted musical instruments and amps  
**Rates:** \$25/hr base. Special project rates upon request.

•• **C.A.V.E. RECORDING**  
*also REMOTE RECORDING*  
 P.O. Box 3667 Santa Clara, CA 95055  
 (408) 244-2283  
**Owner:** C.A.V.E. Recording  
**Studio Manager:** Brett Tyson

•• **CAVE STUDIOS**  
 140 E. 14th, Oakland, CA 94606  
 (415) 763-1773  
**Owner:** Jan Willson  
**Studio Manager:** Jan Willson.

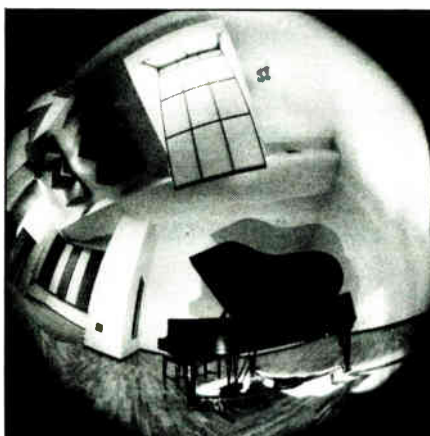
•• **CENTER FOR CONTEMPORARY MUSIC**  
 Mills College, Saminary and MacArthur Blvd.,  
 Oakland, CA 94613  
 (415) 430-2191  
**Owner:** Mills College  
**Studio Manager:** Jay Clodt.

•• **CHAPELWOOD PRODUCTIONS**  
 P.O. Box 672, Broomfield, CO 80020  
 (303) 466-3619  
**Owner:** Kenneth Rott  
**Studio Manager:** Clifford Rott.



•• **C-M-I RECORDS & TAPES**  
*also REMOTE RECORDING*  
 Box 70, Buckley, WA 98321  
 (206) 862-1877  
**Owner:** Tom Thrasher.  
**Studio Manager:** Tom Thrasher.

•• **CORY SOUND**  
 1255 Howard, San Francisco, CA 94107  
 (415) 861-4004  
**Owner:** Phil Markinson.  
**Studio Manager:** Doug Wade.



**CREATIVE FIRE RECORDING**  
 Ellensburg, VA

•• **CREATIVE FIRE RECORDING**  
 607 W. Third, Ellensburg, WA 98926  
**Owner:** Sam Albright  
**Studio Manager:** Sam Albright

•• **CREATIVE SOUND STUDIO**  
 602 Cree Dr., San Jose, CA 95123  
 (408) 224-1777  
**Owner:** Richard Dias  
**Studio Manager:** Ramah Dias.



**DANGEROUS RHYTHM RECORDING STUDIOS**  
 Oakland, CA

•• **DANGEROUS RHYTHM RECORDING STUDIOS**  
 3700 E. 12th St., Oakland, CA 94601  
 (415) 261-9150  
**Owner:** Matt Wallace, Laurie Nelson.  
**Studio Manager:** Laurie Nelson.

•• **JAMES DANIELS PRODUCTION**  
 P.O. Box 618, Palo Alto, CA 94301  
 (415) 325-8574  
**Owner:** Jim Daniels.  
**Studio Manager:** Larry Sosman.

•• **DAS AUDIO HAUS**  
*also REMOTE RECORDING*  
 1125 S. 3rd W., Missoula, MT 59801  
 (406) 728-8883  
**Owner:** Jacob Straw.  
**Studio Manager:** Jacob Straw.

•• **DITURI RECORDING**  
 307A W. 11th St., Tracy, CA 95376  
 (209) 835-4994  
**Owner:** Louie Ditun.  
**Studio Manager:** Louie Ditun

•• **DOMESTUDIOS**  
 S.R. Box 40510, Fairbanks, AK 99701  
 (907) 456-1993, 456-2604  
**Owner:** Jerry Ralson.  
**Studio Manager:** Rif Ralson.  
**Engineers:** Jerry Ralson, Rif Ralson  
**Dimensions of Studios:** 375 sq. ft. irregular polygon.  
**Dimensions of Control Rooms:** 125 sq. ft.  
**Tape Recorders:** TEAC/Tascam 80-8 8 track; TEAC A3340S 4 track, Technics RS 1500 US (1/2) 2 track, Pioneer RT 1050 2 track; (2) Kenwood cassettes, Pioneer cartridge 8 track.  
**Mixing Consoles:** Peavey MC-24, 24 channel; Tascam Model 3, 8 channel; (2) Shure sub-mixers, 4 channels.  
**Monitor Speakers:** JBL 4313, Auratones.  
**Echo, Reverb, and Delay Systems:** DL-2 Acousticcomputer, AKG BX-5 reverb.  
**Other Outboard Equipment:** 8 channels dbx, 2 Furman Comp/Limiters, Orban 622B Parametric, Rane HC-6 headphone amp  
**Microphones:** Beyer, Shure, Peavey, Crown PZM, Neumann U-47 tube, Audio-technica, Countryman Boxes, others on request.  
**Instruments Available:** Piano, bass (acoustic and electric), drums, guitars, Emu Drumulator  
**Rates:** Upon request.

•• **FAIRHAVEN RECORDING STUDIO**  
 Western Washington University, Bellingham, WA 98225  
 (206) 676-3681  
**Studio Manager:** Ric Semechal.

•• **FAST TRACK STUDIO**  
*also REMOTE RECORDING*  
 1906 E. 115 Pl., Northglenn, CO 80233  
 (303) 457-0730  
**Owner:** Technical Sounds Inc.  
**Studio Manager:** Wayne Gerbrant and Dean McIndoo.

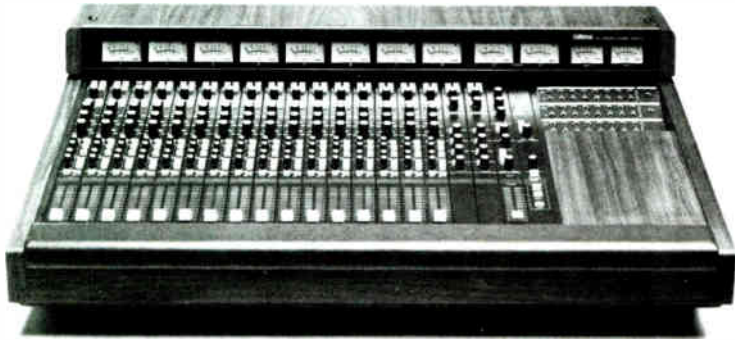
•• **FOCUSED PRODUCTIONS, INC.**  
 30 Berry St., San Francisco, CA 94107  
 (415) 777-3108  
**Owner:** Jeff Roth.  
**Extras:** 16 mm interlock film projection and/or SMPTE time-code synchronization of multi-track to video image for scoring, mixing, and audio post-production work in film and video.  
**Direction:** Ideal for live video shoots, thus 4 and 8 track studio (Oran) has been praised by musicians for its sound, comfort, and "feel." Complementing the room is a 1914 Mason Hamlin Grand piano, completely restored and perfectly maintained.  
 Well versed in recording all styles of music, Focused Productions has been especially fortunate to be the creative home base for some of America's top jazz artists, as well as world class musicians from Jamaica, Africa, and Brazil. Whatever the nature of the production, we realize we are working for you. In addition to a professionally equipped studio we offer you the atmosphere, experience, and respect necessary to perform your best

•• **FORTE**  
 12495 S.W. Summercrest Dr., Tigard, OR 97223  
 (503) 620-7849  
**Owner:** Walter Bruhn.  
**Studio Manager:** Walter Bruhn.

•• **FOTO SOUND PRODUCTIONS**  
 2600 15th St., North Bend, OR 97459  
 (503) 756-5879  
**Owner:** Dave L. Knapp.  
**Studio Manager:** Daug Knapp, Fred Sell.

•• **FRED FOX MUSIC CO./STUDIO IV**  
*also REMOTE RECORDING*  
 5 Elkwood Dr., So. San Francisco, CA 94080  
 (415) 994-5908  
**Owner:** F.H. Nesbitt, Jr.  
**Studio Manager:** V.A. Nesbitt.

And now  
a  
message  
on  
Yamaha's new  
RM1608  
recording  
mixer.



# RM1608

## SPECIFICATIONS

### TOTAL HARMONIC DISTORTION (T.H.D.)

Less than 0.1% at +4dB \*output, 20Hz to 20kHz (all Faders and controls at nominal)

### HUM & NOISE (20Hz to 20kHz) $R_s = 150$ ohms (INPUT GAIN "–60")

- 128dB Equivalent Input Noise (E.I.N.)
- 95dB residual output noise: all Faders down.
- 80dB (84dB S/N) PGM Master volume control at maximum and all CH PGM assign switches off.
- 64dB (68dB S/N) PGM Master volume control at maximum and one CH Fader at nominal level.
- 73dB (77dB S/N) STEREO Master Fader at maximum and all CH STEREO level controls at minimum level.
- 64dB (68dB S/N) STEREO Master Fader at maximum and one CH STEREO level control at nominal level.
- 80dB (70dB S/N) ECHO SEND volume at maximum and all CH ECHO volumes at minimum level.
- 75dB (65dB S/N) ECHO SEND volume at maximum and one CH ECHO volume at nominal level.

### CROSSTALK

- 70dB at 1kHz: adjacent Input.
- 70dB at 1kHz: Input to Output.

### MAXIMUM VOLTAGE GAIN (INPUT GAIN "–60")

- |        |  |
|--------|--|
| PGM    | 74dB: MIC IN to PGM OUT.<br>24dB: TAPE IN to PGM OUT.<br>34dB: ECHO RETURN to PGM OUT.<br>14dB: PGM SUB IN to PGM OUT. |
| STEREO | 74dB: MIC IN to STEREO OUT.<br>24dB: TAPE IN to STEREO OUT.<br>34dB: ECHO RETURN to STEREO OUT.                        |

- |        |  |
|--------|--|
| ECHO   | 70dB: MIC IN to ECHO SEND.                                   |
| C/R    | 74dB: MIC IN to C/R OUT.<br>24dB: 2 TRK IN to C/R OUT.       |
| STUDIO | 74dB: MIC IN to STUDIO OUT.<br>24dB: 2 TRK IN to STUDIO OUT. |

### CHANNEL EQUALIZATION

± 15 dB maximum

HIGH: from 2k to 20kHz PEAKING. MID: from 0.35k to 5kHz PEAKING. LOW: from 50 to 700 Hz PEAKING.

HIGH PASS FILTER – 12dB/octave cut off below 80Hz.

OSCILLATOR Switchable sine wave 100Hz, 1kHz, 10Hz

PHANTOM POWER 48V DC is applied to XLR type connector's 2 pin and 3 pin for powering condenser microphone.

DIMENSION (W x H x D) 37-1/2" x 11" x 30-1/4" (953 mm x 279.6 mm x 769 mm)

Hum and Noise are measured with a –6dB/octave filter at 12.47kHz; equivalent to a 20 kHz filter with infinite dB/octave attenuation.

\*0dB is referenced to 0.775V RMS.

- Sensitivity is the lowest level that will produce an output of –10dB (245mV), or the nominal output level when the unit is set to maximum gain.
- All specifications subject to change without notice.

The specs speak for themselves. But they can't tell you how natural, logical and easy the RM1608 is to work. All the controls and switches are logically arranged to help you get the job done quickly and accurately.

And in the tradition of Yamaha's sound reinforcement mixers, the RM1608 sets new standards of reliability as well as ease of operation. For complete information, write: Yamaha International Corporation, P.O. Box 6600, Buena Park, CA 90622. In Canada, Yamaha Canada Music Ltd., 135 Milner Ave., Scarborough, Ont. M1S 3R1.





•• FULHOUSE STUDIOS  
also REMOTE RECORDING  
P.O. Box 1413, Pendleton, OR 97801-0320  
(503) 276-5454

Owner: Ian Mizumiura  
Engineers: Ian Mizumiura, Mark Feya  
Tape Recorders: Tascam 2424 8 track TEAC 2444 4 track Sony  
mixer (oper. on 1/2" tape cassette dual)  
Mixing Consoles: Tascam 40 6x4x4, TEAC Model 1 6x4x4x4,  
Rose Extramix 6x, xl, Peavey 16x2x2x2  
Monitor Amplifiers: Sony HCC receiver, Crown D75A, Ken-  
wood 6440 4 channel receiver  
Monitor Speakers: APL Dyna-amic JBL Spk. 19, Bose 501 M  
Microphones: AKG D11, AKG C41 F w C1, C100, C1000, Framo  
EQ model Shure 57, Shure 54, E.V. Atec many others avail-  
able for request  
Instruments Available: Hammond M-10, 4x4 Ahi ericas  
Fender rhythm guitar, piano, electric and electric guitars (Gibson,  
Fender, Ibanez), Peavey drums, electronic drums available upon  
request . . .

•• GENERATION ORGANIZATION  
also REMOTE RECORDING  
3745 Potter, Eugene, OR 97405  
(503) 484-9087  
Owner: Lew Thorne  
Studio Manager: Lew Thorne

•• GRASS ROOTS RECORDING STUDIO  
2737 N.E. 25th St., Portland, OR 97212  
(503) 281-5108  
Owner: Michael O'Rourke  
Studio Manager: Michael O'Rourke

•• HACIENDA RECORDING STUDIO  
P.O. Box 632, Forestville, CA 95436  
(707) 887-1951  
Owner: Jane J. Oliver, Phil Hirsch  
Studio Manager: Phil Hirsch

•• (H.A.R.C.) HORIZON AUDIO RECORDING CO.  
10297 Bethel Burley Rd. S.E., Port Orchard, WA 98366  
(206) 876-4972  
Owner: Kerry L. Pilling  
Studio Manager: Kerry L. Pilling



HEXTRAX PRODUCTIONS  
Fremont, CA

•• HEXTRAX PRODUCTIONS  
P.O. Box 4067, Fremont, CA 94539  
(415) 490-7732  
Owner: Hext Brothers Enterprise  
Studio Manager: Craig Hext  
Engineers: Ron Hext, Dennis Mahjek, Craig Hext  
Dimensions of Studio: 24 x 25 x 16'

Dimensions of Control Rooms: 20 x 15 x 8  
Tape Recorders: TEAC/Tascam 80 8 track TEAC A 2340 SX  
4 track TEAC A-6, 00 MKII 2 track Aka: 4000 1 S 2 track Asa  
AD 1450 2 track cassette  
Mixing Consoles: Sound Workshop 2, ACB REC 12 8 TEAC  
model 4 8 8 4, Ramp 8802 8 x 1  
Monitor Amplifiers: Spectro Acoustics 500-SR, Crown D75  
Monitor Speakers: Kipsen La Scala, Yamaha S4, JFH HL  
4301  
Echo, Reverb & Delay Systems: Master Room XL 305, Reverb  
DC 10  
Other Outboard Equipment: dbx 161 Compressor, Spectro  
Acoustics 21, L.E.C.  
Video Equipment & Services: Color video demo services  
available  
Rates: 8 track \$1.00/hr, 4 track \$1.00/hr, hook rates available

•• HORODKO SOUNDTRAX  
also REMOTE RECORDING  
111 Vallejo St., San Francisco, CA 94111  
(415) 956-8729

Owner: Horodko, Soundtrax Inc.  
Studio Manager: Mark Myers  
Extras: A full service audio studio with exciting peripherals like  
Timeslice, Enhancement and 1/4 video interface. Specializing  
in making commercials with extraordinary creativity. Near the  
Broadway at ramp in San Francisco convenient to most advertis-  
ing agencies. Original mix music and tapes. Computerized syn-  
thesizer. Computer assisted sound effects library. Many produc-  
tion music libraries. Remote recording. Full production including  
talent if desired. A/V and digital video. Over eighteen years  
experience in making excellent commercials. Metropolitan record-  
ing studio.

•• INFAL RECORDS, CO  
also REMOTE RECORDING  
2217 Champa St., Denver, CO 80205  
(303) 295-1500  
Owner: Victor M. Hernandez  
Studio Manager: Ruth Medina

•• NEIL JANKLOW STUDIO PRODUCTIONS  
also REMOTE RECORDING  
P.O. Box 51431, Palo Alto, CA 94303  
(415) 858-0132  
Owner: Neil Janklow  
Studio Manager: Neil Janklow

•• JOYFUL SOUND  
4324 Macey Dr., Sacramento, CA 95841  
(916) 482-9113  
Owner: Rob He and Rosina Robertson  
Studio Manager: Hebbie Robertson

•• JUDE PRODUCTIONS  
P.O. Box 90, Dutch Flat, CA 95714  
(916) 389-2326  
Owner: Russell Brian Brooker  
Studio Manager: Russell Brian Brooker

•• KEYBOARD STUDIO  
also REMOTE RECORDING  
(415) 355-6617  
Owner: Grant Ewald  
Studio Manager: Grant Ewald  
Engineers: Grant Ewald  
Tape Recorders: Tascam 38 8 track, TEAC 1340S 4 track  
Mixing Consoles: Tascam 3 8 8, Peavey MR 7 7 5  
Monitor Amplifiers: 2 Crown DC 300  
Monitor Speakers: Yamaha S10, Bose 802, Voice of the  
Theatre numerous others  
Echo, Reverb & Delay Systems: Orban reverb, Yamaha  
E1010 delay, Fender vintage reverb unit  
Microphones: Sennheiser 411, AKG 224E, Sony, Shure,  
Beyer  
Instruments Available: Yamaha electric grand 2 Fender  
Rhodes Wurliatzer 140 electric piano, Minamoo, Rhodes  
Chroma C x 2 Leslies, Korg CX5 drum machine, ARP string  
ensemble, upright acoustic piano, various amplifiers  
Rates: Varies \$10-20/hr depending on project. Can help key  
and bass parts, good drum sound.

•• KEZR STUDIOS  
777 North First Street, Seventh Floor, San Jose, CA 95112  
(408) 287-5775  
Owner: Alta Broadcasting Inc.  
Studio Manager: Michael McGurk

•• KING PRODUCTIONS  
300 Broadway, San Francisco, CA 94133  
(415) 391-5464  
Owner: King Broadcasting  
Studio Manager: Gary Deminguez

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- Audio/Video Documents of Musical Events
- Studio (Sound Stage) and Remote Recording
- Can be Solar Powered



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(415) 459-2833

Circle #034 on Reader Service Card

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Roland GR Guitar

Whether it's **digital synthesis, music printing, digital sampling** or **film production**, the Synclavier II *handles it all*. Now, guitarists as well as keyboard players can experience the future of music, today. See and hear why many studios have taken the lead in using the Synclavier II Computer Music System as *standard studio equipment*.

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**New England Digital Corporation**  
Department B  
White River Junction, VT 05001  
802/295-5800

or contact one of New England Digital's  
only authorized distributors:

**New York:** Digital Sound Inc.  
212/977-4510

**Atlanta:** Songbird Studios  
404/351-5955

**London:** Turnkey  
202-4366

**Brussels:** Trans European Music  
569-1823

**Montreal:** George Klaus  
514/842-4506

**Johannesburg:** Sunshine Records  
793-2913



Optional Ebony Model Synclavier II Keyboard

•• **LITTLE BIRD/HARBINGER PRODUCTIONS ASSC.**  
*also REMOTE RECORDING*  
 4416 S.E. Hwy. 101, Lincoln City, OR 97367  
 (503) 996-2575  
 Owner: Harbinger N.W.P.A.  
 Studio Manager: L.F. Caulkins

•• **LITTLE OAK SOUND RECORDING STUDIO**  
 2028 S.W. 'G' St., Grants Pass, OR 97526  
 (503) 479-3205  
 Owner: Neil E. Moore  
 Studio Manager: Chris Wood

•• **MADMAN STUDIOS**  
 3268 Adeline St., Berkeley, CA 94703  
 (415) 654-1564  
 Owner: Bill Thompson  
 Studio Manager: Bill Thompson  
 Engineers: Bill Thompson  
 Dimensions of Studios: 12' x 20' (main room), 8' x 8' (drum), 4' x 8' (vocal booth).  
 Dimensions of Control Rooms: 12' x 16'  
 Tape Recorders: Otari 5050B 8 track, Technics 1220 2 track, Sony 1010 5X cassette, TEAC 2340 4 track.  
 Mixing Consoles: 2 TEAC series 5 16/8  
 Monitor Amplifiers: Sony, Crown  
 Monitor Speakers: JBL 4311, Auratone  
 Echo, Reverb & Delay Systems: Tapco 4400 stereo reverb, Furman RV-1, Lexicon PCM 41 DDL, MXR Flanger  
 Other Outboard Equipment: dbx doubler 161 Comp/Limit, Orban 672A parametric notch filter, Furman parametric, Symetrix noise gates, Bi-amp graphics, Dolby noise reduction (2 track)  
 Microphones: AKG, Sennheiser, Crown P2M, Electro-Voice, Shure, Audio-technica, Beyer, Sesscom dis  
 Instruments Available: Upright grand piano, Fender Rhodes, Micromooq, Yamaha 5G 1500 guitar, Ampex, Sunn and acoustic amps  
 Rates: \$18/hr., block rates \$15/hr.

•• **MANTRA SOUND STUDIO**  
 P.O. Box 3072 Lihue, Kauai, HI 96766  
 (808) 822-9466  
 Owner: Michael Sena  
 Studio Manager: Michael Sena  
 Dimensions of Studios: Control Room 9 x 11; "A" room 16 x 18; "B" room 11 x 9  
 Tape Recorders: TEAC 80-8, modified-transformerless, 8 track, TEAC 32, modified, transformerless, 2 track, Otari 5050B 2 track; Revox B77 2 track; Technics 1507 2 track; TEAC 3340 4 track.  
 Mixing Consoles: Allen and Heath Brennel 168 16/8/2  
 Monitor Amplifiers: SAE, TOA  
 Monitor Speakers: JBL 4311, Auratone, JBL-L40  
 Echo, Reverb & Delay Systems: Roland RE-130 delay, Tapco 440 reverb.  
 Other Outboard Equipment: Kepex, Gain Brain,UREI 1176 limiters, SAE parametric E.O., Systech flangers, Mutron phasers, dbx noise reduction on the 80-8.  
 Microphones: Neumann U87, U47; AKG451; Sennheiser 451; Shure SM57, 7, 58, 76; Electro-Voice RE20; Sony ECM22P; AKG D224 E, D 140E.  
 Instruments Available: Fender Rhodes 76, Moog Micromooq, Roland Vocorder Plus, Oberheim OB 1, Les Paul Custom, Rickenbacker 4001, Ana Classical guitar, Gibson steel-string acoustic, Emmons lap steel guitar, cello, Rogers 7-piece drum set w/Zildjian and Paiste cymbals, Gon Bops congas, and various percussion implements  
 Rates: 8 track recording/mixing/playback \$30/hr; 2, 4 track recording/mixing/playback \$20/hr

•• **MASTER TRACKS RECORDING & MULTI-MEDIA**  
*also REMOTE RECORDING*  
 402 Loma Alta Drive, Santa Barbara, CA 93109  
 (805) 966-6374  
 Owner: T.David Sommers.

•• **MAXIMUM SOUND STUDIOS**  
 2555 17th St., Denver, CO 80211  
 (303) 455-0611  
 Owner: J. Max Hannum  
 Studio Manager: Mark C. and Carolyn C. Peterson

•• **McCUNE STUDIOS**  
 951 Howard St., San Francisco, CA 94103  
 (415) 777-2700  
 Owner: McCune Audio-Visual  
 Studio Manager: Pat Maloney  
 Engineers: Pat Maloney, Chris Michie, Don Geis  
 Dimensions of Studios: 16' x 26'  
 Dimensions of Control Rooms: 15' x 19'  
 Tape Recorders: Otari MX 5050-8 Mark III 8 track, Otari MX 5050 BQII 4 track; (2) MCI JH-110 2 track, Ampex 440 2 track; Ampex/Inovonics 350 2 track; Ampex 351 mono; Ampex 350 mono  
 Mixing Consoles: Amek TAC 1682 16/8  
 Monitor Amplifiers: Hafler DH200 (biamped)  
 Monitor Speakers: McCune SM-4B (Altec 604s with active



x-over including time-correction and E.O. circuitry); Auratones  
 Echo, Reverb & Delay Systems: AKG BX-10; Scamp S-24 Time Shape Module

Other Outboard Equipment: Scamp rack including compressor/limiter, parametric E.O., D.N.F., auto-pan, time-shape, etc.; 2 UREI 1176 LN limiter/compressors; 2 Technics SL 1200 MK2 turntables with Burwen TNE 7000 A Transient Noise Eliminator; other devices available from McCune rental stock.

Microphones: Neumann U-87, RCA 77, 44; AKG C451, 202; Sony C-37; Shure SM-56, 47, 58, plus many others from rental stock

Instruments Available: On request.

Video Equipment & Services: 3/4" production studio or location, 3/4" editing, duplicating 3/4", BETA, VHS, 16 mm and side to video transfers, SMPTE coding, audio control room equipped w/video PB and monitor

Rates: Audio \$50/hr., video on request

Extras: Free parking next to building.

Direction: McCune Studios are fully equipped to service the needs of all our media clients, from radio spots to multi-track multi-image presentations and video productions. We have recently remodelled and re-equipped with the intention of maintaining our position as San Francisco's leading media production studio.

McCUNE STUDIOS  
 San Francisco, CA



•• **MELON STUDIO**  
 P.O. Box 22504, San Francisco, CA 94122  
 (415) 665-6171

Owner: Robin Woodland and Steve Rosen.  
 Studio Manager: Robin Woodland and Steve Rosen  
 Engineers: Robin Woodland and Steve Rosen.  
 Dimensions of Studios: 20 x 20 x 8 with small iso booth.  
 Dimensions of Control Rooms: 8 x 16.  
 Tape Recorders: Tascam 38 8 track; Tascam 34 4 track, Revox PR99 2 track, Revox B77 2 track; TEAC A-33405 4 track, TEAC 230 1/4 track stereo, (10) Sony TC-FX44 cassette; (4) Pioneer CT-F500 cassette  
 Mixing Consoles: Yamaha RM 1608 16/8; TEAC model 3 8/4, Fostex 2050 8/2  
 Monitor Amplifiers: Dynaco SCA-80 Q; NAD 3020, Fisher, Marantz  
 Monitor Speakers: Dynaco A25-XL's; Auratones; Infinity  
 Echo, Reverb, and Delay Systems: MICMIX XL-210 stereo reverb, Fostex 3050 digital delay, tape delay  
 Other Outboard Equipment: dbx noise reduction (Type I - 12 channels, Type II - 10 channels), dbx 160 compressor/limiter (2 channels), ADC graphic EQ (12 channels), Pioneer PL-12D II turntable, Korg electric tuner  
 Microphones: Sennheiser 421's; Shure SM-57's, 58's & 81's; AKG SE-5E's; Electro-Voice RE-55; direct boxes  
 Instruments Available: Krakauer 6' grand piano (excellent action and tone), Traynor "Twin" amp, Pre-CBS Fender Delux amp.  
 Rates: 8 track \$20/hr; 2 and 4 track: \$16.50/hr; block rates for 50 hrs or more Production Consultation: \$10/hr. Hands-On Recording Workshops: \$185 for 30 hour course. Call for our special real-time cassette duplicating rates.  
 Extras: Private lessons in production and engineering are available. Referrals for top quality studio musicians  
 Direction: Since 1971, we've provided expert production work

and friendly, supportive service in a relaxed and comfortable environment. Our specialty is artist produced albums and singles, along with demos and soundtracks for slide shows, film and theater. We also offer the highest quality real-time cassette duplicating (now with even lower prices and faster service!) and the unique Hands-On Workshops. Come see and hear for yourself. Call for an appointment to inspect our facilities and plan your project.

MELON STUDIO  
 San Francisco, CA

# Melon Studio



## Quality Recording Cassette Duplicating Recording Workshops

•• **MIX-MASTER RECORDING**  
*also REMOTE RECORDING*  
 4096 North Branam, Merced, CA 95340  
 (209) 383-1718  
 Owner: Jim Schriber.  
 Studio Manager: Beth Andren.

•• **NORTHWEST SOUNDTRACK RECORDING STUDIO**  
 P.O. Box 7822, Eugene, Oregon 97401  
 (503) 683-8663  
 Owner: Edward C. McManus  
 Studio Manager: Edward C. McManus

•• **NOVA RECORDING SERVICES**  
*also REMOTE RECORDING*  
 9937 Rainier Ave. So., Seattle, WA 98118  
 (206) 723-1295  
 Owner: The Nova Music Group.  
 Studio Manager: Paul Speer.

•• **OCEAN BREEZE RECORDING**  
*also REMOTE RECORDING*  
 2021 Bluebell Dr., Santa Rosa, CA 95401  
 (707) 527-8131  
 Owner: Ben Rothenberg, William R. Williams.  
 Studio Manager: Ben Rothenberg, William R. Williams  
 Engineers: Ben Rothenberg, William R. Williams  
 Dimensions of Studios: 18' x 35'  
 Dimensions of Control Rooms: 10' x 18'  
 Tape Recorders: TEAC 80-8, Otari MX5050, Aiwa M700  
 Mixing Consoles: TEAC model 5.  
 Monitor Amplifiers: Pioneer, Fender & Yamaha, AB systems, model 710C; Crown DC300.  
 Monitor Speakers: JBL 48313, Auratone, JBL 2360  
 Echo, Reverb & Delay Systems: Tapco reverb, PCM 41 digital delay  
 Other Outboard Equipment: Ashly SC-66A parametric EQ, MXR 3rd octave EQ, dbx 161, dbx 162.  
 Microphones: SM47, SM58, EVPL20, EVPL80, EVPL99, Countryman FET85 direct boxes, AKG 451's, and more.  
 Instruments Available: Music Man bass, Yamaha console piano, Fender Rhodes piano, Ibanez guitars, Sho-bud pedal steel guitar, Ovaton bass, Ibanez electric guitar, Ovaton legend acoustic guitar, Ovaton 12 string acoustic guitar, Ovaton classical guitar, Barcus Barry electric violins, instruments/amps by Fender, Lab Series, Yamaha.  
 Rates: \$18.50/hr.; bulk rate and demo package rates available. Prices include everything.

•• **PARALANDRA PRODUCTIONS**  
*also REMOTE RECORDING*  
 840 E. 3925 S. Greenbank, WA 98253  
 (206) 321-6697  
 Owner: Michael Bade.  
 Studio Manager: Michael Bade

•• **PEAK RECORDING & SOUND**  
*also REMOTE RECORDING*  
 P.O. Box 1404, Bozeman, MT 59715  
 (406) 586-1650  
 Owner: Peak Recording & Sound, Inc  
 Studio Manager: Gil Stober

•• PEARL'S PLACE  
4163 Doane St., Fremont, CA 94538  
(415) 651-7187  
Studio Manager: Joey Horten, Vickie Horten  
Engineers: Niles Anders

•• PUGET SOUND  
P.O. Box 369 Northgate Station, Seattle, WA 98125  
(206) 523-9933  
Owner: Image Records  
Studio Manager: Pat Hewitt

•• RAINBOW VENTURES STUDIOS  
also REMOTE RECORDING  
2219 W. 32nd Ave., Denver, CO 80211  
(303) 433-7231  
Owner: Reed F. Williams  
Studio Manager: Michael Moryn

•• RECORD WEST  
Santa Rosa, CA 95401  
(707) 526-7361  
Owner: Bruce Bond  
Studio Manager: Eivyn Duncan

•• ROCKY MOUNTAIN PRODUCTIONS  
also REMOTE RECORDING  
P.O. Box 1233, Provo, UT 84603  
(801) 489-7850  
Owner: Walt C. Jones and Carl Fritch  
Studio Manager: Walt C. Jones

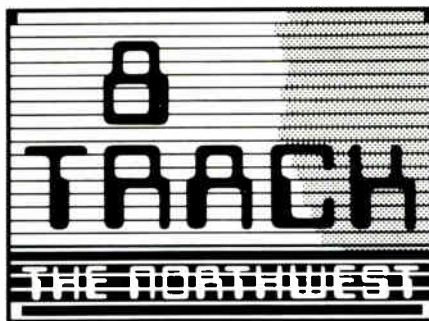
•• RUBBER PARK PRODUCTIONS  
also REMOTE RECORDING  
P.O. Box 120, Tahoma, CA 95733 (Lake Tahoe)  
(916) 525-6554  
Owner: Steve Teshara, David F. Chance  
Studio Manager: Steve Teshara

•• S.B. PRODUCTIONS  
also REMOTE RECORDING  
43 William Ct., Danville, CA 94526  
(415) 820-2070  
Owner: Scott C. Boorey  
Studio Manager: Scott C. Boorey

•• RANDALL SCHILLER PRODUCTIONS  
also REMOTE RECORDING  
1207 Fifth Ave., San Francisco, CA 94122  
(415) 661-7553  
Owner: Randall Schiller  
Studio Manager: Randall Schiller  
Engineers: Randall Schiller, Cathy Cohn, Don Maclean  
Dimensions of Studios: 12½' x 15', Drum Room 9' x 9'  
Dimensions of Control Rooms: 12½' x 15'  
Tape Recorders: TEAC/Tascam 80-8 8 track, Otari 5050B 2 track; Sony TC-854-4S 4 track, Sony TC-850-2T 2 track, Pioneer RT-707 2 track, Sony TC-K 81 cassette  
Mixing Consoles: TEAC/Tascam 5B 8 in x 4 out, TEAC/Tascam M-35EX, 12 in x 4 out, TEAC/Tascam Model 1 8 in x 2 out, Tapco Panjo 7416 16 in x 2 out  
Monitor Amplifiers: SAE 2201, 2400L, BGW Model 100-01  
Monitor Speakers: JBL 4311B, Auratone 5C, Altec A7-500 (modified & bi-amplified), and Pioneer CS-88  
Echo, Reverb, and Delay Systems: DeltaLab DL-2 Acoustic-computer stereo digital delay, Sound Workshop 242 stereo reverberation unit, Eventide 910 Harmonizer  
Other Outboard Equipment: UREI 427 ½-Octave graphic EQs, MXR dual 15-band graphic equalizer, dbx 154 declinear noise reduction, UREI 1178 stereo compressor/limiter, dbx 161 compressor/limiter, Crown VFX-2A dual channel electronic crossover/filter, SAE 5000 impulse noise reduction unit, Orban 62 parametric EQ and assorted patch bays, necessary support equipment  
Microphones: AKG C-414's, E-V RE-15's, 635A's, Shure SM-81's, SM-57's, SM-58's, SM-78's, Sony ECM-33P, ECM-16, and Sennheiser MC-421's and MD-431's  
Instruments Available: Story & Clark console piano  
Rates: Studio recording 8-track \$25/hr.; 4-track \$20/hr.; 2-track \$20/hr. Location recording prices available upon request  
Extras: Kitchen facilities

Direction: We are a multi-faceted company providing facilities and services in the areas of audio, video, film and theatre. We are dedicated to providing the highest quality in a relaxed but professional environment. Immediate expansion plans call for complete sixteen track facilities. In addition to recording studio services, we provide sound reinforcement for venues ranging from small clubs to large outdoor concerts, audio design and installation, film and video production and lighting services.

•• SHANE STUDIOS  
114 Edison Ave., Corte Madera, CA 94925  
(415) 924-2109  
Owner: Craig Shane  
Studio Manager: Eric



•• SHYNE SOUND  
also REMOTE RECORDING  
40 Woodland, San Rafael, CA 94901  
(415) 459-2833  
Owner: Leroy Shyne  
Studio Manager: Leroy Shyne  
Engineers: Leroy Shyne  
Dimensions of Studio: 50 x 50  
Dimensions of Control Rooms: 20 x 15  
Tape Recorders: TEAC 80-8 8 track, Pioneer 4022 4 track, MCI 110 B ½ track master  
Mixing Consoles: Soundcraft 1S 20/5  
Monitor Amplifiers: BGW, Sweet C  
Monitor Speakers: Mastering Lab 'Big Reds'  
Echo, Reverb, and Delay Systems: Delta Lab DL-2, Orban reverb  
Other Outboard Equipment: UREI & MXR EQ's, dbx comp/limiters, Symetrix comp/limiters  
Microphones: Shure, EV, Sennheiser, Crown PZM's  
Instruments Available: Piano, drums, bass, Alembic guitar, pre CBS Fender amps  
Video Equipment & Services: Sony U-Matic ¾" deck, Panasonic camera, JVC 19" monitor, JVC stereo VHS  
Rates: \$25-\$35/hr.

SHYNE SOUND  
San Rafael, CA



•• SOUND CAPSULE STUDIOS  
also REMOTE RECORDING  
P.O. Box 6363, Tahoe City, CA 95730  
(916) 583-1836  
Owner: Michael D. Loomis  
Studio Manager: Michael D. Loomis

•• SOUNDMARK, LTD.  
also REMOTE RECORDING  
4950-C Nome St., Denver, CO 80239  
(303) 371-3076  
Owner: David C. Howard  
Studio Manager: Robert F. Wolff

•• STARSHIP STUDIOS  
3651 E. Marginal Wy. S., Seattle, WA 98134  
(206) 587-0112  
Owner: Stacy Sidener  
Studio Manager: Stacy Sidener

•• STEELHEAD PRODUCTIONS  
also REMOTE RECORDING  
Box 366, Blackfoot, ID 83221 (By Appointment Only)  
(208) 785-7298  
Owner: Jon Lyksett  
Studio Manager: Jon Lyksett

•• STOTZ'S SOUND  
also REMOTE RECORDING  
576 Cypress St., Monterey, CA 93940  
(408) 375-9718  
Owner: Gary M. Stotz  
Studio Manager: Gary M. Stotz



STUDIO SEA  
Wheatland, CA

•• STUDIO SEA  
also REMOTE RECORDING  
418 Front St., Box 1078, Wheatland, CA 95692  
(916) 633-4277  
Owner: Curt Burrows, Robert Ncciotti, J. Hafner  
Studio Manager: James Hafner  
Engineers: Curt Burrows, James Hafner, Steve Donovan  
Dimensions of Studio: 20' x 30' x 14'  
Dimensions of Control Rooms: 13' x 15'  
Tape Recorders: Otari MX 505D Mark III 8 8 track, Otari MX 5050 II 3 2 track, TEAC 3340 4 track, TEAC A4010 S 2 track, Technics RM 235 (cassette) 2 track  
Mixing Consoles: Sound Workshop series 30 16/16  
Monitor Amplifiers: Phase-Linear 400 II (2)  
Monitor Speakers: JBL 4430, Auratones (control room), JBL 4311A (studio), JBL 4311B (studio)  
Echo, Reverb, and Delay Systems: DeltaLab Effectron ADM10C4, Orban reverb 111B  
Other Outboard Equipment: Orban 424A compressor/limiter, de-esser (2) Biamp EQ 270 A-½ Octave EQ, Biamp EQ 210 octave EQ, Roland guitar preamp, Orban 245E stereo synthesizer, Tascam 4H40 headphone amp, Ccountryman direct boxes  
Microphones: AKG, Sennheiser, Shure, EV  
Instruments Available: Gulbransen, 5' grand piano, Sohmer upright piano, Rhodes 88, Korg Delta synthesizer, Hammond C3 organ w. Leslie, assorted electric, acoustic and bass guitars  
Video Equipment & Services: Available on request  
Rates: Call for rates. Very reasonable, includes outboard gear and listed equipment

•• STUDIO Z RECORDING  
2612 J St. #1, Sacramento, CA 95816  
(916) 448-0370  
Owner: Zack Boles  
Studio Manager: Zack Boles  
Engineers: Zack Boles, Jay Lemmons  
Dimensions of Studio: 6 x 12  
Dimensions of Control Rooms: 14 x 12  
Tape Recorders: MCI 110-C 8 track, Scully 280 2 track; Otari 5050B 2 track, Ampex 440 B 2 track, Nagra 4 2 mono  
Mixing Consoles: Sound Workshop series 30 16/8  
Monitor Amplifiers: Crown  
Monitor Speakers: JBL 4311  
Echo, Reverb & Delay Systems: MICMIX, Masterroom B, Super C  
Other Outboard Equipment: Valley People Dynamite, MXR graphic EQ's  
Microphones: Neumann U-87's, Shure SM-58's, Sennheiser 815 & 415  
Video Equipment & Services: Sony ¾" off-line system, complete Arriflex 16 mm SR2 film package, grip truck  
Rates: Audio \$50/hr.; film upon request

•• TANGLEWOOD RECORDING  
P.O. Box 5996, Reno, NV 89513  
(702) 747-1041  
Owner: Michael Eardley  
Studio Manager: Michael Eardley

•• 3-B PRODUCTIONS  
also REMOTE RECORDING  
701-16B Kings Row, San Jose, CA 95112  
(408) 289-1383  
Owner: Kevin Boone  
Studio Manager: Russell Billock, Alan Woodie



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World Radio History

# 8 TRACK THE NORTHWEST

•• **TRANSPARENT RECORDINGS**  
883 Golden Gate Ave., San Francisco, CA 94102  
(415) 563-6164

Owner: Marian Lolly Lewis  
Direction: Transparent Recording is committed to the highest quality in live music remote recording. Technical (Studer) excellence supports the recording of music in ensemble and in performance. Engineers are experienced in live-to-stereo mixing of acoustic (large ensembles and chamber music), as well as electric styles. 8-track production facilities and live recording are also available.

•• **TRULLION STUDIO**  
P.O. Box 23051, Sacramento, CA 95823  
(916) 393-3783  
Owner: Kurt & Nancy Bischoff  
Studio Manager: Kurt Bischoff

•• **TWILIGHT STUDIO**  
642 Palm Ave., Watsonville, CA 95076  
(408) 722-7819 or (408) 728-1294  
Owner: Steve Loveless  
Studio Manager: Steve Loveless



**ULTRA SOUND STUDIOS**  
San Jose, CA

•• **ULTRA SOUND STUDIOS**  
1751 Villa Stone Dr., San Jose, CA 95125  
Mail: P.O. Box 1346, Campbell, CA 95009  
(408) 286-3721

Owner: Derek Jones  
Studio Manager: Vickie Jones  
Engineers: Derek Jones, Skip Cramer, Independents  
Dimensions of Studios: 16 x 34 with 18' ceilings, isolation booth. Built in mike inputs and cue outputs for easy access.  
Dimensions of Control Rooms: 12 x 16 with 8' window.  
Tape Recorders: Otari MX-5050B-Mark III 8 track (w/VSO Real Time counter, full function remote and dbx 150s on all channels), Ampex AG 440 2 track, Sony TC-K77R cassette w/remote Sansui SC3390 cassette, MCS 3552 cassette, Pioneer 909 2 track.  
Mixing Consoles: Tascam 5B w/5EX expander in custom console, 20x4x7 (with direct outputs on all channels), Sony MX-16, 8x4x7, Fostex 2050 line mixers 8x2.  
Monitor Amplifiers: Sansui AU 717, MCS 3650 (true amp).  
Monitor Speakers: MCS 3-way Auratones 1BL 4311's.  
Echo, Reverb, and Delay Systems: Orban 111B dual reverb, Deltalab Electron ADM 1024 digital delays (with over one second delay over full band width).  
Other Outboard Equipment: Sansui SE 7 graphic EQ, dbx 160X limiter, Sansui SR 838 Quartz Servo turntable, 12H point patchbay.  
Microphones: Sony C-48's, E.V.RE.20's, Sennheiser 421's, Shure

SM 81's, SM-77's, and various others. Conquest Sound Conqueror direct boxes, E.V. AC 24M Phantom Power Supply.  
Instruments Available: Various instruments upon request.  
Rates: Block rates available. Please call for information.  
Extras: Complete record production assistance available, sound tracks and voice-overs for film, video or slides, lounge area, refreshments, microwave, refrigerator, library in receptionist area, clubs and restaurants nearby, versatile musicians available.  
Direction: QUALITY. At Ultra Sound Studios our aim is to provide our clients with the finest professional recordings of the highest quality, utilizing professional equipment unmatched by other systems in the 8 track format. In addition to our fine 8 track facilities, the Ultra Sound recording team also uses the finest state-of-the-art 16 and 24 track facilities, carefully selected for your projects total needs. When the demand is high and the budget is low, Ultra Sound Studios is today's musicians's alternative. Come see and hear. We're located off The Almaden Expressway and San Jose Avenue, in San Jose.

•• **VERSATILE VIDEO INC.**  
151 Gibraltar Court, Sunnyvale, CA 94089  
(408) 734-5550  
Studio Manager: Richard Hamnerstrom

**VERSATILE VIDEO INC.**  
Sunnyvale, CA



•• **WESTMONT RECORDING COMPANY**  
6034 Shawn Ave. S.W., Olympia, WA 98502  
(206) 943-6328  
Owner: Richard E. Quick  
Studio Manager: Richard E. Quick



**XANDOR RECORDING STUDIOS**  
Orinda, CA

•• **XANDOR RECORDING STUDIOS**  
also REMOTE RECORDING  
407 Camino Sobrante, Orinda, CA 94563  
(415) 254-9077  
Owner: Bill Mitchell, Lee Payne, Jim Weyeneth  
Studio Manager: Jim Weyeneth

# Mix

## 1984 EDITORIAL SCHEDULE ADVERTISING DEADLINES

■ **JANUARY:** Northwest Studios

■ **FEBRUARY:** Independent Engineers & Producers (NAMM); Electronic Keyboards

■ **MARCH:** Southeast Studios; Religious Recording Update; Miking Techniques

■ **APRIL:** Video Production Supplement/NAB (Listings of Video Facilities)

■ **MAY:** Northeast Studios; Automation Systems; AES Conference

■ **JUNE:** Remote Recording & Sound Reinforcement (NAMM)

■ **JULY:** Southwest Studios; Audio Education/School Listings; Music Video Production Update

■ **AUGUST:** Studio Design Issue (Listings of Designers and Suppliers)

■ **SEPTEMBER:** Southern California Studios; Film Sound Update

■ **OCTOBER:** AES Show/New Products Directory; Video Production Supplement

■ **NOVEMBER:** North Central Studios; Canadian Recording Update

■ **DECEMBER:** Tape-to-Disk Issue (Listings of Mastering, Pressing, Duplication Facilities)

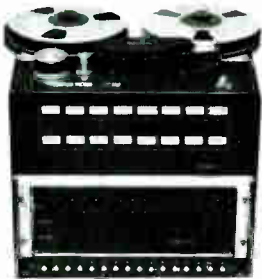
**Closing for Space Reservations:**  
7th of the Month, 2 months prior to cover date.

**Deadline for Ad Materials:** 15th of the Month, 2 months prior to cover date.

**For more information, please call the Advertising Director at (415) 843-7901.**

# SYSTEMS OF THE 80'S

\*ITAM model 1610  
1" - 16  
track, 7½,  
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ips, + 4  
in/out, full  
function  
remote  
standard.



Whether you're building an 8 or 16 track studio, these Professional Performers from Allen & Heath, Otari and Itam will give you master quality results for the price of a semi-pro - 10 dBm system.



\*Allen & Heath's amazing #1616, 16 track recording console with full 16 track monitoring, + 4 in/out.

Both as shown above for under \$16,000

\* Both Consoles Feature:

- \*External Power Supply with Phantom Power option.
- \*3 Band EQ with Mid sweep and selectable shelving.
- \*Long travel fader. \* Peak LED on all inputs.
- \*Insert points on inputs and outputs.



\*Otari #MK III-8,  
½"-8 track,  
+ 4 in/out



\*Allen & Heath #168, 8 track recording console with full 8 track monitoring, + 4 in/out.

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for under \$9000

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99 East Magnolia ■ Suite 215 ■ Burbank, California 91502

# 16 TRACK THE NORTHWEST

••• ALL WORLD PRODUCTIONS INC.  
4805 N. Pearl St., Tacoma, WA 98407  
(206) 759-4480  
Owner: Maunce Killenbeck  
Studio Manager: Maunce Killenbeck

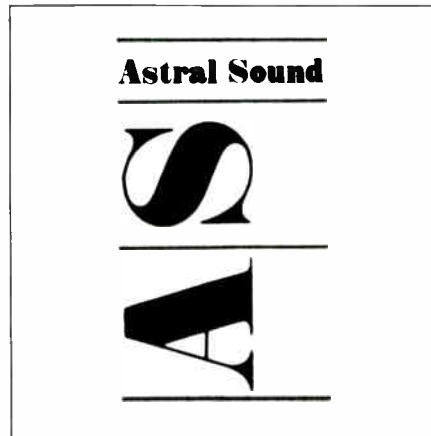
••• JOHN ALTMANN RECORDING  
1310 20th Ave., San Francisco, CA 94122  
(415) 564-4910  
Owner: John Altmann.  
Studio Manager: Colette Salaun.  
Engineers: John Altmann, Steven O'Hara, Woody Simmons, Michael Raskovsky  
Dimensions of Studio: 23 x 15 x 11½ high, including vocal booth, piano booth, and drum booth  
Dimensions of Control Rooms: 15 x 15 x 11½  
Tape Recorders: MCI JH-16 16 track, MCI JH-110 2 track, Otari MX-5050 2 track; Revox A-77 2 track, (2) Aiwa 6900 cassettes  
Mixing Consoles: Audionics (modified) #501 26/24  
Monitor Amplifiers: BGW 250.  
Monitor Speakers: (2) Ed Long's MDM4's, Auratones, Bi-Amp third octave room equalization.  
Echo, Reverb, and Delay Systems: Lexicon 224 digital reverb, Parasound III reverb, Lexicon Prime Time digital delay, Marshall Time Modulator analog delay.  
Other Outboard Equipment: SAE, Soundcraftsmen and Bi-Amp EQ's, UREI LA4 compressors, Conn Strobotuner, UREI 1176 limiters, ADR Vocal Stresser, Symetrix noise gates, Symetrix DeEsser, ADR spectrum analyzer  
Microphones: AKG D12, Neumann U-87s; E-V RE-20s, RE-15s; Shure SM-58s, SM-56s, 566s; AKG D-50s, C-451s, D-202; Sony 33Ps, C36 Ps, ECM 989s, Beyer 101; Sennheiser MD-421s, RCA 44BX  
Instruments Available: Steinway upright grand 1905 (a great instrument, very popular)  
Rates: Please call for rates. Discounts available and vary with job  
Extras: Kitchen, delicious & free coffee, easy parking  
Direction: We are perfectionists in our art, honest, and we love our work. We sincerely care about your work as well. Our continued success depends on it. We've put together a completely professional yet relaxed and comfortable studio. We've tried to create an environment where musical creativity is encouraged, not stifled. We invite you to give us a call to discuss your recording needs, or stop by to check us out. We specialize in working with groups on a continuing basis throughout their development, i.e. demos to albums. We offer full production service and assistance as well.

••• AMERICAN RECORDING STUDIO  
also REMOTE RECORDING  
400 So. Lipan St. #19, Denver, CO 80223  
(303) 777-1693  
Owner: Dan Diamond, Steve Avedis  
Studio Manager: Dan Diamond, Steve Avedis

••• ASTRAL SOUND  
482 Reynolds Cr., San Jose, CA 95112  
(408) 294-5153  
Owner: Cindy Clark  
Studio Manager: Cindy Clark

Engineers: Jeff Tracy, KC Craine, Tom Harman  
Dimensions of Studio: 28' x 18' x 12'  
Dimensions of Control Rooms: 18' x 12' x 12'  
Tape Recorders: Tascam 16 track, Tascam 80-8 8 track, TEAC 3340 4 track; Tascam 35-2 2 track, TEAC CX-315 cassette  
Mixing Consoles: Dynamix 16/8  
Monitor Amplifiers: ESS 500 watt, Toshiba stereo headphone amp  
Monitor Speakers: ESS, Auratones  
Echo, Reverb, and Delay Systems: Tapco 4400 stereo reverb, MXR digital delay.  
Other Outboard Equipment: Parametric EQ, Tapco 2202 stereo 10 band EQ, Southwest Tech stereo 10 band EQ, Symetrix compressors, MXR limiter, Haeco limiter, stereo headphone mixing.  
Microphones: Aitec, Beyer, Electro-Voice, Sennheiser, Sony  
Instruments Available: Bass piano  
Video Equipment & Services: 1 camera and 2 camera mobile video  
Rates: 8 track \$20/hr., 16 track \$30/hr., bulk rates available

## ASTRAL SOUND San Jose, CA



••• AUGUSTWOLF RECORDING FACILITY  
also REMOTE RECORDING  
1250 Pine St. No. 102, Walnut Creek, CA 94596  
(415) 932-4599  
Owner: Augustwolf, Inc  
Studio Manager: Doug Reid

••• AVALANCHE STUDIO  
14000 W. 58th Ave., Arvada, CO 80002  
(303) 424-5296  
Owner: Harry Warman  
Studio Manager: Karen Hing



## AVATAR SOUND RECORDING Santa Rosa, CA

••• AVATAR SOUND RECORDING  
also REMOTE RECORDING  
244 South A St., Santa Rosa, CA 95401  
(707) 576-0547  
Owner: Gary Glover, Lisa Glover, Don Kruse  
Studio Manager: Gary Glover.  
Engineers: Don Kruse, Ricky Lee Lynd, Les Stuck, Independents welcome  
Dimensions of Studio: 25' x 22' x 14'  
Dimensions of Control Rooms: 21' x 22' x 12'  
Tape Recorders: 3M M-56 16 track, Scully 2350 2 track, Sony PCM Digital 2 track; (5) Hitachi D-7500 cassette decks; Otari MX5050-B 2 track  
Mixing Consoles: API 20/16  
Monitor Amplifiers: McIntosh 2300, 2105, Yamaha EM-300 for headphone mixing  
Monitor Speakers: UREI 813, Auratones, Fisher  
Echo, Reverb, and Delay Systems: 20' x 50' live chamber, AKG BX-20E, Cooper Time Cube, Lexicon Model 92  
Other Outboard Equipment: (4) Roger Meyer Noise Gates, (2) Kepelex, (2) Gain Brains, (2) API compressors, Aphex Aural Exciter, MXR phaser/flanger.  
Microphones: AKG C-61 tube (2), 414 (4), D-1000, C-24 stereo tube, Neumann KM-54 tube (2), KM-84 (2), U-67, U-87, EV RE-20, Sennheiser 421  
Instruments Available: Fender Stratocaster, Fender DuoSonic, Ovation, Music Man Sabre, Guild, Fender Precision fretless bass, Gibson Grabber and Ripper basses, Fender Rhodes, Yamaha CS 5, Yamaha studio grand, Ludwig drums  
Video Equipment & Services: IVC 2650 ½" stereo video, IVC G253 camera.  
Rates: \$30/hr.; \$25/blocks of 10 hrs. or more. Video and remote per job basis, call for information  
Extras: Digital mastering and live digital recording. Multi-camera with special effects generator and switcher on ¾" video available for remote or studio production. Session musicians and production assistance available. Real time cassette duplication.  
Direction: From San Francisco, take 101 north to downtown Santa Rosa exit, turn right and bear right, up the ramp to stop sign. Turn right and proceed 2½ blocks to 244. We're on the left next to Luther Burbank Park, working hard to make the best sounding recordings possible.

••• BAY SOUND REPRODUCTION  
5 Yorkshire Drive, Oakland, CA 94618  
(415) 655-4885  
Owner: Glenn Oey, Gene Mick  
Studio Manager: Gene Mick  
Engineers: Glenn Oey, Gene Mick,  
Dimensions of Studio: 30 x 19  
Dimensions of Control Rooms: 16 x 14  
Tape Recorders: 3M 79 16 track, Otari MX 5050 2, 4, 8 track, Sony TC-D5m, Denon DR-330 cassette deck.  
Mixing Consoles: Soundcraft Series II, 16 in x 16 out.  
Monitor Amplifiers: Acoustat TNT 200, Nakamichi 620, McIntosh 2105  
Monitor Speakers: Ed Long TA-3 Time Align, JBL 4311, Auratones  
Echo, Reverb, and Delay Systems: MICMIX MasterRoom Super C column reverb, MXR digital delay, Eventide Clockworks Instant Phaser, DeltaLab DL-2 Acousticcomputer  
Other Outboard Equipment: (2) UREI LA-4s, 1176; dbx 160 compressor/limiters, ADR Scamp F300 expander, S04 parametric EQ, S-23 pan effect, F100 dual noise gates and (2) S01 comp./limiters; EXR exciter; dbx noise reduction; SAE 1800 parametric EQ; Nakamichi 610 control pre-amp; (2) UREI 539 ½ octave graphic EQ, Ivie spectrum analyzer; Peterson strobe tuner, Valley People Dyna-mites, Furman parametric EQ.  
Microphones: E-V, Sennheiser; Shure, Neumann; Beyer; AKG; FRAP guitar pickup; Countryman, Uni-Sync and Tubecube direct boxes, Crown PZM's  
Instruments Available: Yamaha C-5 conservatory grand piano 6'6", Fender Precision bass, Zildjian cymbals, Roto-toms, various

percussion instruments, Martin 000-18 guitar, MESA/Boogie amp w/JBL speaker, Moog Prodigy, Syndrums, Sonor Signature Series drums, wide selection of snare drums, DX digital drums, Yamaha recording series

**Rates:** 16 track \$30 \$40/hr, 8 track \$20-\$30/hr; 2 track \$30/hr Special rates are available for block booking Excellent facilities for recording and mixdown

••• **BEAR CREEK RECORDING STUDIO**  
20711 Bear Creek Rd., Los Gatos, CA 95030  
(408) 354-2351

**Owner:** Justin Mayer  
**Studio Manager:** Justin Mayer, Denny Mayer  
**Engineers:** Justin Mayer  
**Dimensions of Studios:** 12' x 15'  
**Dimensions of Control Rooms:** 10' x 15'  
**Tape Recorders:** 3-M M56 16 and 8 track, Tascam 80-8 8 track, TEAC A-3300SX 1/2 track, TEAC 2300S 2 track, TEAC C-3X 2 track cassette  
**Mixing Consoles:** TMS studio mixer, model II, 17 in/18 out; (3) TEAC model I 8 in/2 out  
**Monitor Amplifiers:** BGW  
**Monitor Speakers:** JBL 4311, Auratone  
**Echo, Reverb, and Delay Systems:** Custom Plate Reverb, custom spring reverb, DDL's, Harmonizer  
**Other Outboard Equipment:** (2) dbx 161 compressor limiters, TEAC DX8 noise reduction, noise gates, Furman parametric EQ, MXR stereo 10 band EQ

**Microphones:** Neumann U87, Electro-Voice PL20, Sennheiser 421's, Sony ECM 22p's, Shure SM57's, AKG D1000E  
**Instruments Available:** Chamberlin MI (modified) with violins, cellos, double bass, flute, oboe, bassoon, pipe organ, choir, tenor sax, trumpet, trombone, french horn, tuba, clarinet, bass clarinet, harpsicord, celeste, baroque organ, Hammond B-3, harp, tympani; and more Braumbach grand piano, E-MU Drumulator, Martin 12 string guitar, Gibson Hummingbird 6 string guitar  
**Rates:** \$25/hr for 2" 16 track and 1" 8 track, \$15/hr for 1/2" 8 track, block rates available

••• **ROBERT BERKE RECORDING**  
2227-31st Ave., San Francisco, CA 94116  
(415) 661-6316  
**Owner:** Robert Berke  
**Studio Manager:** Mark Esrott

••• **BRANDT'S RECORDING STUDIOS**  
1030 48th St., Sacramento, CA 95819  
(916) 451-3400  
**Owner:** C M & Edna M Brandt  
**Studio Manager:** C M Brandt

••• **BROWN BAG PRODUCTIONS**  
482 S. Jasmine, Denver, CO 80224  
(303) 388-9245  
**Owner:** Dr Michael Lee, Robert Lee  
**Studio Manager:** Robert Lee

••• **CALYPSO RECORDS**  
41-M Hamilton Dr., Novato, CA 94947  
(415) 883-4768  
**Owner:** Michael Verciani  
**Studio Manager:** Tina Verciani

••• **RICK CHAISSE PRODUCTIONS**  
*also REMOTE RECORDING*  
19 Locke Way, Scotts Valley, CA 95066  
(408) 438-2331  
**Owner:** Rick Chaisse  
**Studio Manager:** Rick Chaisse

••• **CORASOUND RECORDING**  
122 Paul Dr., San Rafael, CA 94903  
(415) 472-3745  
**Owner:** Stephen Hart, J.D. Sharp  
**Studio Manager:** Patty Matthews  
**Engineers:** Michael Raskovsky, Stephen Hart, J.D. Sharp, Warren Harris, Scott Church  
**Dimensions of Studios:** 26 x 16  
**Dimensions of Control Rooms:** 9 x 12  
**Tape Recorders:** Otari MTR 90 16 track, Otari MX5050 MKIII 8 track Otari MX5050B 2 track, TEAC A3340S 4 track, Aiwa 800 cassette  
**Mixing Consoles:** Neotek Series 2, 20 in x 16 out  
**Monitor Amplifiers:** Phase Linear, Crown, SAE  
**Monitor Speakers:** Eastern Acoustic Works, JBL 4311, Auratone  
**Echo, Reverb, and Delay Systems:** Ursa Major Space Station digital reverb, DeltaLab DL 4, Ibanez AD230, Sound Workshop 262 stereo reverb, Roland Space Echo  
**Other Outboard Equipment:** ADR stereo comp/limiter, dbx compressors, Ashly parametrics, EXR exciter, dbx noise reduction, 1/3 octave room EQ, Symetrix signal gates, Countryman direct boxes.



**Microphones:** AKG, Beyer, E-V, Neumann, Shure, Schoeps, Sennheiser  
**Instruments Available:** Drum set, Yamaha U-3 upright grand piano, string synthesizer, percussion instruments, Hohner clavinet  
**Rates:** 16 track \$50/hr, 8 track \$32/hr; block rates: 16 track, 50 hrs or more 10% discount, 8 track, 10 hrs or more 10% discount, 10% discount is available off any rate for full payment in advance  
**Extras:** Good sounding room, experienced engineers  
**Direction:** For eight years, Corasound has been recording LPs and singles, radio, TV and film soundtracks. We also offer complete production service, from arranging to pressing. Corasound product has received national airplay, and recent product is being distributed internationally

••• **CROW RECORDING STUDIO**  
4000 Wallingford N., Seattle, WA 98103  
(206) 634-3088  
**Owner:** John Nelson  
**Studio Manager:** Mike Fuller

••• **DESITREK STUDIOS**  
3415 S.E. Hawthorne Blvd., Portland, OR 97214  
(503) 232-8606  
**Owner:** Joe A. Perez, David B. Harrison, Michael Demmers, Douglas Durbrow  
**Studio Manager:** Michael Demmers



*DRAGON STUDIOS*  
Menlo Park, CA

••• **DRAGON STUDIOS**  
346 Santa Monica Ave., Menlo Park, CA 94025  
(415) 325-5575  
**Owner:** Charles Albert  
**Studio Manager:** Sally Uhrig  
**Engineers:** Charles Albert, Amadeo Barrios  
**Tape Recorders:** Ampex MM1100 16 track; Tascam 80-8 w/dbx 8 track; Tascam 40-4 w/dbx 4 track; Pioneer RTU-11 1/2 track; Sony TC-K81 cassette, 3 head; TEAC 124 cassette, sync.  
**Mixing Consoles:** Sound Workshop series 30 20/16.  
**Monitor Amplifiers:** Sweet C 2300, Pioneer.  
**Monitor Speakers:** JBL 4311, Auratone, Sweet C S8W.  
**Echo, Reverb, and Delay Systems:** Lexicon PCM41 Digital Delay, Master Room XL 121 (2); Roland RE-201 Space Echo.  
**Other Outboard Equipment:** UREI 1176LN (2) Limiter; Symetrix CL-100 comp/limiter; TEAC GE-20 2ch graphic EQ; Countryman type 85 direct box (2); Tascam PB-64 (4) Patch Bay; Carrottron preamp; chorus, phase, distortion, etc. boxes.  
**Microphones:** Neumann U-89, KM-84; Sennheiser 421 (3); Electro-Voice RE-20; Sony ECM-33F; Shure SM-57; AKG

**4, 8 & 16 Track Recording**

The best value in the Bay Area.

**DRAGON STUDIOS**  
**(415) 325-5575**

Circle #037 on Reader Service Card

D1000E, Beyer M500 (2), ATM41 etc  
**Instruments Available:** Baldwin grand piano, Hammond organ, Fender Rhodes, Hohner clavinet, ARP 2300, Gretsch recording drums w/Ludwig & Tama snares, Roto-Toms, Zildjian, Paiste cymbals, Gibson Les Paul Custom '60, G-3 bass; Ibanez Artist; Yairn Alvarez DY90 acoustic, Sweet C Dynapactor amps (4), Gemeinhardt open hole flute, various synthesizers & percussion  
**Video Equipment & Services:** Call for details  
**Rates:** Lowest rates in area include engineer and all extras; range \$10-\$30/hr  
**Extras:** Free set-up, cassette dubs Engineers are also top quality musicians, all services included. Full range of arranging, production and session musicians available Free coffee, parking in relaxed, centrally located rustic setting near highway  
**Direction:** Dragon was founded by professional musician/engineers with years of experience on both sides of the board Whether you're a beginner or a veteran — we've been there, and we can work with you We treat every project with the care of major label recording, and we treat your budget like our own. For better product for less money, call us

••• EASTERN WASHINGTON UNIVERSITY STUDIOS  
 also REMOTE RECORDING  
 Fine Arts Complex, EWU, Cheney, WA 99004  
 (509) 359-6390

••• EL DORADO RECORDING  
 642 El Dorado, Oakland, CA 94611  
 (415) 655-3497  
 Owner: Mike Butterfield, Robert Keller  
 Studio Manager: Mike Butterfield, Robert Keller



EMERYVILLE RECORDING CO.  
 Emeryville, CA

••• EMERYVILLE RECORDING CO  
 1331 61st St., Emeryville, CA 94608  
 (415) 655-9490; 527-4941  
 Owner: Randy Rood  
 Studio Manager: Randy Rood  
 Engineers: Randy Rood  
 Dimensions of Studios: 14 x 22 x 25  
 Dimensions of Control Rooms: 8 x 12½ x 17  
 Tape Recorders: Ampex MM1000 16 track, Ampex 351/440 2 track, TEAC cs 210 cassette  
 Mixing Consoles: Ramsa WR8816 16/4/16  
 Monitor Amplifiers: Dynaco  
 Monitor Speakers: JBL 4311, Altec 604E, Auratones  
 Echo, Reverb, and Delay Systems: Great British spring, DeltaLabs "Acousticcomputer" DL2  
 Other Outboard Equipment: Teletronix LA2A, UREI LA4 and dbx 161 compressor/limiters, Symetrix signal gates, Eventide Omnipressor; Furman parametric equalizers  
 Microphones: Newmann, Sony, AKG, Sennheiser, Beyer, Shure, Electro-Voice, RCA, including several vintage models  
 Instruments Available: Vintage Fender amps, piano  
 Rates: (Block rates) \$25/hr after 6 pm, \$22 50/hr before 6 pm

••• FEATHERSTONE RECORDING  
 also REMOTE RECORDING  
 8996 Fruitridge Rd., Sacramento, CA 95826  
 (916) 381-5243  
 Owner: Featherstone Recording Studios, Inc  
 Studio Manager: Tom Conrad

••• FREEWAY RECORDING INC.  
 also REMOTE RECORDING  
 2248 E. 14th St., Oakland, CA 94606  
 (415) 532-3700  
 Owner: Bernie Rivera, Billy Rivera  
 Studio Manager: Jan Waling, Jamie Bridges  
 Question: What would a professional musician do with a 13,600 sq ft brick building?  
 Answer: Build a complete music production facility that includes



16 track 2" master quality recording (studio A), 8 track ½" presentation/demo recording (studio B), tape duplicating, two large rehearsal rooms with P.A., storage space, deluxe sound stage (50 x 70 x 20), concert sound reinforcement, instrument and equipment rentals, cartage, and an in-house music store  
**Direction:** As we celebrate our 10th Anniversary serving the bay area, we sincerely wish to thank our many customers for their continued support and interest. Special thanks to our dedicated staff for their inspired service through thick-n-thin

Although our facilities will continue to be upgraded, our policy will remain the same. Professional service, quality recordings, and a clean, spacious environment. For rates and technical information, call for appointment

••• GOLDEN STATE RECORDERS, INC.  
 also REMOTE RECORDING  
 665 Harrison St., San Francisco, CA 94107  
 (415) 781-6306  
 Owner: Corporation  
 Studio Manager: Leo de Gar Kulka, Kenneth Lee, assistant

••• HOT TRACKS RECORDING  
 also REMOTE RECORDING  
 2217A The Alameda, Santa Clara, CA 95050  
 (408) 554-1117  
 Owner: Phil Jamison and Don Heinsen  
 Studio Manager: Phil Jamison  
 Engineers: Phil Jamison, Don Heinsen, Bob Langlie, Eric Becker, and Ronnie Beck  
 Dimensions of Studios: 448 sq ft  
 Dimensions of Control Rooms: 208 sq ft - entire facility is 2,000 sq ft  
 Tape Recorders: Tascam 85-16B w/Autolocator & dbx 16 track, Tascam 80-8 w/dbx 8 track Tascam 35-2 w/dbx 2 track, Pioneer 2/2 4/2 track  
 Mixing Consoles: Sound Workshop Series 30, w/28 VCA inputs  
 Monitor Amplifiers: Yamaha P2201, BGW 100  
 Monitor Speakers: UREI 813's, JBL 4311's, and Auratones  
 Echo, Reverb, and Delay Systems: DeltaLab ADM 256 digital delays (2), ADM 1024 digital Effectron, Marshal Time Modulator, Loft 440 delay line/flanger, MICMIX Dynaflinger, Valley People Dyna-Myte, AKG BX10 reverb  
 Other Outboard Equipment: (2) dbx 161 compressors, Orban 622B dual parametric EQ, Ashly SC66A dual parametric EQ, Tapco C201 and MXR dual graphic equalizers  
 Microphones: Neumann U-87's, AKG 414's, AKG 451's, E-V RE-20's, Sennheiser MD421's, Shure SM57's and 58's  
 Instruments Available: Hamilton 5' baby grand piano, Fender Rhodes, Twin reverb, Precision bass, Gibson Les Paul  
 Rates: Call for quote

••• HYBRID PRODUCTION  
 also REMOTE RECORDING  
 1357 Nord Ave., Chico, CA 95929  
 (916) 891-6815  
 Owner: Steven C. Smith  
 Studio Manager: Steven C. Smith

••• IRONWOOD STUDIO  
 20816 23rd Ave. W., Alderwood Manor, WA 98036  
 (206) 775-7905  
 Owner: Paul Scoles  
 Studio Manager: Paul Scoles  
 Engineers: Paul Scoles, Bob Benson, Norma Jean Jaeger  
 Dimensions of Studios: 15 x 22, plus two isolation rooms  
 Dimensions of Control Rooms: 11 x 15  
 Tape Recorders: Studer A-80 16 track, Otari 5050 8 track, Otari 5050 2 track, Akai GX630 ¼ track, Sanyo STD1800 cassette  
 Mixing Consoles: Spectra Sonics custom, 16 in x 16 out  
 Monitor Amplifiers: Marantz, Optonica  
 Monitor Speakers: JBL 4311, Auratones  
 Echo, Reverb, and Delay Systems: MasterStudio 305 reverb, DeltaLab DL-2 stereo digital delay  
 Other Outboard Equipment: Symetrix compressors (2), Symetrix signal gates (2), custom stereo synthesizer, AudioArts parametric EQ, Neptune graphic EQ (2), dbx 155 8 channel noise reduction, Symetrix headphone amps (2), Real Time analyzer, strobe tuner, Symetrix parametric EQ, Roland stereo flanger, Roland Dimension D, and assorted effects, Teletronix LA-2A

limiter, dbx 900 rack w/compressors, gates and de-esser, Roland SRE 555 Chorus echo, MXR pitch transposer  
 Microphones: Neumann U-87's, U-47's, KM-84's, KM-56's, PML DC-63's and DC-73's; Sennheiser 441's, E-V RE-20, Beyer M-500; Shure SM-58's, SM-57's, 545, 546; AKG C-12, Nakamichi CM-300's, Sony C-37A tube, Sony C-500  
**Instruments Available:** Grand piano, Hammond M-3 w/Leslie, Fender Rhodes, Roland string ensemble, Hohner clavinet, conga drums, Guild Starfire guitar, Octavation bass, Music Man amp, Pearl drums, MOOG synthesizer  
**Rates:** \$45/hr 16 track recording & mixing, \$30/hr 8 track recording & mixing, tape extra

••• JUNIPER STUDIOS  
 P.O. Box 1405, Evergreen, CO 80439  
 (303) 333-8326 or 838-5526  
 Owner: Jim Little, John Macy  
 Studio Manager: John Macy



Rob Kingdom Mobile Recording  
 Sunnyvale, CA

••• ROB KINGDOM MOBILE RECORDING  
 ONLY REMOTE RECORDING  
 120 Remington #415, Sunnyvale, CA 94087  
 (408) 732-5305  
 Owner: Rob Kingdom  
 Studio Manager: Rob Kingdom  
 Engineers: Rob Kingdom, Doug Hopping  
 Dimensions of Studios: The Western World  
 Dimensions of Control Rooms: 7 x 12, enclosed in a stepvan.  
 Tape Recorders: Tascam 85-16 16 track; Otari MX-5050B 2 track; Revox A-77 2 track  
 Mixing Consoles: Studiomaster 20 x 4, 20 in x 20 out  
 Monitor Amplifiers: Uni-Sync model 50, Kenwood 7002  
 Monitor Speakers: JBL 1-100, Auratones  
 Echo, Reverb, and Delay Systems: Lexicon Prime Time 93, Lexicon 92 DDL, Audi-ence RFS-2  
 Other Outboard Equipment: EXR Exciter, dbx 160 compressors, Delta Graph 10 band EQ, Symetrix signal gate, custom mike splitter  
 Microphones: Neumann U-87, KM-86, KM-84, Beyer 500-C, E-V RE-20; RCA 77D; Shure SM-57; Sony ECM 33P; Sennheiser 431, K2U; Countryman direct box  
**Instruments Available:** Moog Micromooog, many others on request  
**Rates:** 16 track \$25/hr (overdubs, mixing, etc.); 2 track \$18/hr, 16 track \$350/day; 18 cents/mile travel charge over 15 miles  
**Extras:** Video interface available  
**Direction:** Demo clients included: Uncle Rainbow, The Pace, Wayne Sloan, Chanter, Mersey's Cadillac, Deep Sky, Electric Wood, Joe Shanno, Ted Sanchez, Cobra and others Album clients included: Tim Abbot, Michael Silversher, Joe Ferrara, Larry Vanucci, The Contraction. Video clients include: Tim Abbott and the Santa Clara County Transit Authority We specialize in quality location recording at reasonable rates

••• THE LAST RECORDING STUDIO  
 also REMOTE RECORDING  
 2539 Pearl, Boulder, CO 80302  
 (303) 442-1158  
 Owner: Mark Barnett  
 Studio Manager: Mark Barnett

••• LIKEWISE PRODUCTIONS  
 P.O. Box 5447, Berkeley, CA 94705  
 (415) 654-3112  
 Owner: Likewise Productions  
 Studio Manager: Jeffrey O. Holt  
 Engineers: Jeffrey O. Holt, Graeg Grifneith, plus independents; Technicians: Randy Sladman, John Imholz  
 Dimensions of Studios: A: 16 x 24; B: 12 x 22; C: 6 x 12  
 Dimensions of Control Rooms: 10 x 14 new tuned room  
 Tape Recorders: Tascam 85-16 w/dbx 16 track w/pitch control



Because every  
Sound

ends in  
Silence

## THE C460B

condenser microphone is designed for applications requiring the widest dynamic range. With its low self-noise (15dB SPL), the C460B captures sounds from silence to the most demanding sound pressure levels (140dB) with no change in THD even with selectable attenuation. For information on additional unique features, write to us.



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Stamford, CT 06902  
203-348-2121

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TEAC A2340 SX 4 track; Otari MX-5050B 2 track w/pitch control.

**Mixing Consoles:** Sound Workshop Series 20 = 20x16x2

**Monitor Speakers:** Tannoy SRM 12B, Gauss, E.V., Auratones.

**Echo, Reverb, and Delay Systems:** Lexicon Prime Time digital delay M93, stereo chorus, Master Room stereo reverb XL 305, tape delay.

**Other Outboard Equipment:** (2) UREI LA-4 compressor/limiter, stereo chorus, Boss chorus-vibrato-distortion, Dr. Rhythm clock track, drum machine, Countryman direct boxes Dyna Comp, In-ovonics peak limiter, volume pedal, Korg guitar tuner, (any outside rentable equipment).

**Instruments Available:** Prophet 5, Yamaha CP-70 electric baby grand, drums by Gretsch, Lindrum, Yamaha wood snare, bass amp, acoustic and electric guitars, percussion.

**Direction:** Credit: Ray Obiedo, Squares, Billy Satellite, The Looters, Rubinos, Barry Beam, Private Eye, Sheila Escovedo, KMEI, Teresa Trull, Curtis Lawson, Hans Naughty, The Luke, Curtis Ohlson, Joaquin Lévano, Alex Ligertwood, June Millington, Teaser, Norman Greenbaum, Holly Near, Jesse Bradman, Dave Margen, KSAN, Chris Williamson, Mary Watkins, Robbie Dunbar, KNEW, Tony Kilbert, Mark Russo, Larry Schneider, Vicki Randall, Dan Chauncey, Meg Christan, Alan Pasqua, Bob Banks, Bill Church, Monty Byrom, Tim Toomay, TJ Bergren, Preston Phillipps, and so many other talents, film scores, video, soundtracks...Thanks.

### \*\*\* MAGIC SOUND

also REMOTE RECORDING

1780 Chanticleer Ave., Santa Cruz, CA 95062

(408) 475-7905

**Owner:** Alan Goldwater.

**Engineers:** Alan Goldwater, Merle Sparks.

**Dimensions of Studio:** 16 x 20 x 12 (asymmetrical wedge ceiling) 12 x 14 isolated drum room; 5 x 6 x 7 booth.

**Dimensions of Control Rooms:** 12 x 14 x 16.

**Tape Recorders:** MCI/Inovonics JH 10-16 15/30 ips 16/8 track; Rockwell computer auto locator; Ampex AG 440B 15/30 ips 2 track; ElectroSound 505 2 track, (2) Kenwood KX 1060 cassette; Otari MX5050 2 track.

**Mixing Consoles:** Custom 36 input 8 buss, separate 16 track fully equalized monitor section, full patchbay API 550 mix board EQ.

**Monitor Amplifiers:** Dynaco 150 and Phase Linear 400.

**Monitor Speakers:** Altec/UREI 811, White EQ 4100, Sennheiser & AKG headphones.

**Echo, Reverb, and Delay Systems:** Ecoplate II, Multi-Track reverb, Marshall Time Modulator, Roland Space Echo

**Outboard Equipment:** (2) MXR flanger, (2) MXR 2/3 octave graphic EQ, UREI LA4 limiter, (2) Universal Audio 175B tube limiters, Allison Gain Brain, Mayer noise gates; API 550A EQs (8); UREI LA4A limiters (2), Thorens/Rabco disc player.

**Microphones:** Neumann KM-54a, U-67; AKG (2) 414-EB, C-451, D-190, D-160, D-12, C28-A (tube); Beyers M-260, X1N (2); Sennheiser MD-421 (2); Shure SM-57, 58, B1 (several each); Sony C-377, C-22, C-37A (tube); Altec M30's (tube), RCA BK5 (ribbon); AKG C61a tube (2), C12 (tube); Shure SM-7.

**Instruments Available:** Cable upright piano, ARP Odyssey, Hohner D6 clavichord, Apple computer 16 voice synthesizer system; Guild F30, Danelectro and Rickenbacker 12-string guitars; Fender Princeton and Deluxe amps, Polytone amps, CB drums w/Zildjian cymbals, E-MU Systems Emulator w/all software, E-MU Systems Drumulator w/computer sequencer.

**Video Equipment & Services:** Panasonic NVS200 w/computer search.

**Rates:** \$35/hr 16 track; \$25/hr block (10 hrs or more), \$20/hr 8 track; 1 hour free set-up and rehearsal with 3 hours or more session, free pot (of coffee).

### \*\*\* MARIN SOUND RECORDERS

448 DuBois, San Rafael, CA 94901

(415) 459-5152

**Owner:** Dr. Sam Waxler, Al Lachtman, John Thorup, Fred Waxler.

**Studio Manager:** Richard Rose.

**Engineers:** Dr. Richie Moore, Chief Engineer; Fred Waxler, Richard Rose, and independents with projects.

**Dimensions of Studio:** A: 48 x 30 x 13; B: 13 1/2 x 9 1/2 x 9.

**Dimensions of Control Rooms:** A: 18 1/2 x 14 x 10, B: 13 1/2 x 9 1/2 x 9.

**Tape Recorders:** Tascam 85-16 1" 16 track mod. w/dbx & autolocator; Otari 5050B modified 2 track; TEAC 3300 SX modified 2 track; Technics RSM-280 cassette.

**Mixing Consoles:** Tangent modified series 3216 22; Bi-amp model 829 12.

**Monitor Amplifiers:** AB Systems precedent 600, Phase Linear AIS, SAE 220, Bi-amp TC120, Phase Linear 700B.

**Monitor Speakers:** UREI 813A; JBL 4333; Yamaha NS-10M, Auratone, Tannoy Blue 15's in Lockwood cabinet.

**Echo, Reverb, and Delay Systems:** Echoplate II, DeltaLab EffectronADM256 and (2) ADM1024, Ursal Major Space Station, MYR flanger/doubler, Phillips tape echo (tube version w/4 discrete outputs), large concrete hall for long RT 60.

**Other Outboard Equipment:** (2) dbx 165, dbx 161; Spectra-sonics 610 comp./limiter; (2) Roger Meyer gates; (3) Symetrix SG-200 gates; Daury Propus stereo Dyna-Mite, (2) Biamp PQ140 parametric EQ, Orban De-esser stereo, (2) McMitchell 1004 compressors.

**Microphones:** (2) AKG C-451E w/CK-1 capsules (1 CK-22 Omni), (2) Neumann KM-84, (1) Sony C-3P, (1) Sony G38, (2)



ECM-50, and so on

**Instruments Available:** Rental Instruments available, Hamicon baby grand, Drummulator

**Video Equipment & Services:** Post production dubbing

**Rates:** Call for rates

Marin Sound Recorders  
San Rafael, CA



### \*\*\* PETER MILLER RECORDING STUDIO

Union Street (at Fillmore), P.O. Box 11013,  
San Francisco, CA 94101

(415) 567-7040

**Owner:** Peter Miller

**Studio Manager:** Peter Miller.

### \*\*\* MOON RECORDING STUDIO

156 Otto Circle, Sacramento, Ca 95816

(916) 392-5640

**Owner:** David L. Houston, George Whyler

**Studio Manager:** George Whyler

### \*\*\* MUSIC ART RECORDING STUDIO M.A.R.S.

5944 Freedom Blvd., Aptos, CA 95003

(408) 688-8435

**Owner:** Ken Capitanich

**Studio Manager:** Ken Capitanich

**Engineers:** Ken Capitanich, Will Holt

**Dimensions of Studio:** 14 x 18

**Dimensions of Control Rooms:** 14 x 15

**Tape Recorders:** Ampex MM-1100 16 track; Tascam 80-8 w/dbx 8 track; Ampex 440-C 2 track, Sony TC756 2 2 track, Sony TC-K81 cassette 2 track

**Mixing Consoles:** Tangent 3216 16 in x 16 out

**Monitor Amplifiers:** Crown DC-300A, D-150-A (2) DC-75

**Monitor Speakers:** JBL 4315, 4313B, MDM4, Auratones

**Echo, Reverb, and Delay Systems:** AKG BX10 reverb, AT-R S-24 Time Shape module, Lexicon Prime Time, Eventide Harmonizer, Aphex Exciter

**Other Outboard Equipment:** 10 channels dbx MXR phaser, (2) ADR expander gates, (3) ADR compressor/limiter, (2) AER parametric EQ

**Microphones:** Neumann, AKG, Sennheiser, Sony, Shure, E.V., Beyers

**Instruments Available:** Chickering 6'6" grand piano, amps

**Rates:** 16 track \$40/hr, 8 track \$25/hr

### \*\*\* MUSICAL IMAGE PRODUCTIONS

also REMOTE RECORDING

1560 Geer Rd., Suite N, Turlock, CA 95380

(209) 632-8415

**Owner:** Gary L. Shriver.

**Studio Manager:** Gary L. Shriver

**Direction:** Being a fully equipped 16 track recording/production facility, we here at Musical Image Productions have been serving

the west coast for eight years. We specialize in radio commercials, TV commercial audio beds, jingles "Artist" LP and demo productions, slide show presentations and a complete recording facility for both the musician and advertising communities. Our studio is fully equipped and boasts a full line of musical instruments available to the client at no extra charge. Our staff at Musical Image Productions you'll find producers, musicians, vocalists, arrangers, arrangers and writers. No matter what the job, give us a call collect. We would love to hear from you.



OASIS RECORDING STUDIO  
San Francisco, CA

### \*\*\* OASIS RECORDING STUDIO

395 Sussex St., San Francisco, CA 94131

(415) 587-3564

**Owner:** Greg Goodwin

**Engineers:** Greg Goodwin, Wayne Lewis, Brad Bailey, Henry Palm

**Dimensions of Studio:** 16 x 32, 10 x 12, iso booth for piano

**Dimensions of Control Rooms:** 12 x 16

**Tape Recorders:** Ampex MM-1100 w/search to cue (and V5C) 16 track, Tascam 80-8 8 track; Ampex AG 440B 2 track, Retox A77 2 track, Ampex FR-10 2 track, TEAC C-3 cassette, (3) Sony TC-FX2 cassette, Aiwa AD-1250 cassette

**Mixing Consoles:** Soundcraft Series, w/sub-grouping and 4 band/2 sweep EQ section

**Monitor Amplifiers:** Yamaha, BGW, Symetrix

**Monitor Speakers:** JBL 4311's acoustically balanced, E.V. Sentry JBL's Auratone

**Echo, Reverb, and Delay Systems:** MasterRoom Orban, Loft 450 delay, Loft 440 delay, Roland SRE-555 chorus/echo tape delay, Aural Exciter, Imagineering Audio 16 second digital delay

**Other Outboard Equipment:** dbx noise reduction, (4) UREI compressor/limiters, Orban parametric EQ, 8 channels/noise gates, Orban 525A de-esser, graphic EQ, Valley People Dynamic compressor/expander/noise gate (2 channel)

**Microphones:** We have a full selection of condensers, dynamics and ribbon mikes including: Neumann, Sennheiser, AKG, Beyers, F.V. Seny, Shure, Audio-technica.

**Instruments Available:** Kawai grand piano, Octave synthesizer, Gallian Krueger 125C (boogie type amp), timbales and various percussion, custom Gibson Les Paul Jr., Gibson ES-335, Martin D18 (vintage), Fender Rhodes, Fender Stratocaster, Oberheim digital drum synthesizer, Ibanez musician bass guitar.

**Rates:** Call for current rates. Our rates are competitive. We offer block rates, discounts and special project prices.

**Extras:** Production assistance available, conveniently located in San Francisco but away from the downtown madness. Studio musicians. Comfortable lounge and plenty of parking.

**Direction:** We are experienced in all types and phases of recording, specializing in album projects, singles and demos. Oasis provides a comfortable, low-keyed, but professional atmosphere. We have continued to expand and improve our facilities to meet your demands; we believe our reputation speaks for itself. Please don't hesitate to see Oasis and hear our work. We're proud of it! Call for an appointment.

**Other Outboard Equipment:** Orban parametric EQ, 8 channels/noise gates, Orban 525A de-esser, graphic EQ, Valley People Dynamic compressor/expander/noise gate (2 channel)

**Microphones:** We have a full selection of condensers, dynamics and ribbon mikes including: Neumann, Sennheiser, AKG, Beyers, F.V. Seny, Shure, Audio-technica.

**Instruments Available:** Kawai grand piano, Octave synthesizer, Gallian Krueger 125C (boogie type amp), timbales and various percussion, custom Gibson Les Paul Jr., Gibson ES-335, Martin D18 (vintage), Fender Rhodes, Fender Stratocaster, Oberheim digital drum synthesizer, Ibanez musician bass guitar.

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**Other Outboard Equipment:** ADR vocal processor, dbx limiters,



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Symetrix signal gates, Furman parametrics, Bi-Amp graphics.  
**Microphones:** AKG 414 EB, D-12, 190, 160, 1000; Beyer M-500, Neumann KM-85, U-87; Sennheiser 441, 421, Shure SM-57, 58; Sony C-37A (tube), ECM 377, 56, 22, 19; Deane Jensen, Sescam direct boxes  
**Instruments Available:** 1948 Kranich & Bach baby grand, Gibson ES 335, J-45; Fender Strat., Deluxe amps; Gretsch drums w/ Yamaha wood snare, Prophet 5; Casio VL-tone, Casio PT 30  
**Rates:** Block rates as low as \$30/hr w/eng. Call for Real Time cassette duplication prices.

••• PARVIN STUDIOS

P.O. Box 16191, San Francisco, CA 94116  
 (415) 359-1853  
 Owner: M.B. Eads Co  
 Engineers: Lee Parvin and Henry Parvin  
**Dimensions of Studios:** 22 x 16  
**Dimensions of Control Rooms:** 12 x 13  
**Tape Recorders:** Ampex MM-1000 16 track, Ampex 440-B 8 track; Ampex 440-B 4/2 track; Ampex AG500 1/2 track, Akai GX-630D stereo 1/4 track, Akai 950-B stereo cassette  
**Mixing Consoles:** Audiotronics 501-26, 18 in x 16 out.  
**Monitor Amplifiers:** Marantz 15, Crown DC300  
**Monitor Speakers:** Altec 604-9G, UREI Time Align, Auratone 5Cs, JBL 4311  
**Echo, Reverb, and Delay Systems:** Master-Room Stereo C Series reverb, AKG Wien Stereo  
**Other Outboard Equipment:** UREI Model 1176 LN limiters, UREI Model LA4 compressor limiters, Orban/Parasound parametrics, UREI 530 equalizer, dbx noise reduction, Eventide Harmonizer, El-Tech take finder  
**Microphones:** Neumann U-87, U-47, KM-86, KMS-85, Sennheiser 421, 441, AKG 1000; Shure SM-81; AKG D-200; Shure SM-58, MB 301 ribbon, Shure 549; Electro-Voice RE-20  
**Instruments Available:** Emerson baby grand piano, Hammond B-3 organ, Fender Rhodes piano.  
**Rates:** Call for rates

••• PRUNE PRODUCTION & RECORDING

12 Locust Ave., Mill Valley, CA 94941  
 (415) 383-0230  
 Owner: Alan J. Rappoport  
 Studio Manager: Chns Morris  
 Engineers: Bob Olsson, Chris Morris, Jerry Marquez  
**Dimensions of Studios:** Main room: 300 sq ft; includes iso booth.  
**Dimensions of Control Rooms:** 250 sq ft.  
**Tape Recorders:** TEAC 85-16 16 track; Ampex ATR100 2 track, Otari 50/50 2 track, TEAC A-3340-S 4 track, Awa cassette decks  
**Mixing Consoles:** (2) Sound Workshop 1280's linked, 24 in x 16 out  
**Monitor Amplifiers:** Phase Linear 1000, BGW 250, BGW 100, Randell 250  
**Monitor Speakers:** JBL L112's, JBL 4311's, Auratones  
**Echo, Reverb, and Delay Systems:** Lexicon 224 digital reverb (completely updated), MICMIX Spring reverb, DeltaLab DDL, plus tape delay  
**Other Outboard Equipment:** Lexicon Prime Time, Marshal Time Modulator, Eventide Harmonizer, Scamp rack with 4 noise gates, sweep EQ, stereo pan mod and limiter, LA-2 limiter, stereo LA-4 limiters, Orban Paragaphic EQ, Furman parametric EQ, (2) UREI 530 monographic room EQs  
**Microphones:** Neumann 87s, 86s, 84s, Beyer M-88s, 201's AKG 452, 414s, E-V RE-15, Shure 56s, 57s; Sennheiser 421s, 441s  
**Instruments Available:** Yamaha upright piano, Ludwig, Sonor and Rogers drums; percussion equipment and anything pertaining to guitars via Prune Music  
**Rates:** \$25/hr with engineer; \$15/hr for tape copying.

••• RAIN RECORDING

Box 297, Mt. View, HI 96771  
 (808) 968-6042; 968-6346  
 Owner: Ken Chikasuye  
 Studio Manager: Ean Chikasuye  
 Engineers: Ken Chikasuye, Larry Joseph, Carlton Pung, Brian Crandell  
**Dimensions of Studios:** 32' x 40' w/14' ceiling  
**Dimensions of Control Rooms:** 14 x 12  
**Tape Recorders:** MCI JH 24 16 track, Tascam 70 4 track, Tascam 70 2 track, Technics RSM 85 MKII cassette, Nakamichi 500 cassette  
**Mixing Consoles:** Audio Concept 16/16, Kelsey (DMI) 1/2  
**Monitor Amplifiers:** Crown DC 300 A, DC 300, D 60  
**Monitor Speakers:** Custom JBL Altec, Audio Concepts, Auratone  
**Echo, Reverb, and Delay Systems:** MICMIX 305, DeltaLab DL 2.  
**Other Outboard Equipment:** dbx 160X, UREI LA4A, MXR dual limiter, Orban 622 B, Roland Dimension D, Furman bandpass filter, ADA flanger, (Sescam, Jensen, direct boxes), Symetrix noise gates, Accessit distribution amps, Edcore headphone amps  
**Microphones:** U87's, SM81, SM57's, Altec 626A's, MD421, AKG D109  
**Instruments Available:** Hammond C3, acoustic upright, Boogie MKII, Korg guitar synthesizer, Fender vintage concert, various guitars.



••• RAINBOW SOUND STUDIOS

also REMOTE RECORDING (by advance arrangement only)  
 24289 Mission Blvd., Hayward, CA 94544  
 (415) 582-9980 or 886-6048  
 Owner: T. Malcolm Rockwell  
 Studio Manager: T. Malcolm Rockwell  
 Engineers: Mal Rockwell, Ken Massey, Paul Allen (Live & Remotes), Louie Neutrino (nd & maint.), other independents  
**Dimensions of Studios:** Main studio 18 x 20 x 8 1/2, Iso & Vocal Room 10 x 10 x 8, Dubbing Booth (under construction) 7 1/2 x 10 x 9  
**Dimensions of Control Rooms:** 11 1/2 x 12 x 8  
**Tape Recorders:** Custom Ampex MM-1100 with continuously variable tape speed, 2 inch 16 track, TEAC/Tascam 80-8 w/8 channel dbx, 1/2 inch 8 track, TEAC A440 1/4 inch 1/2 track 2 channel stereo, custom Ampex A300 1/4 inch 1/2 track mastering deck, TEAC, Sony & Marantz cassette recorders.  
**Mixing Consoles:** Custom Quantum QM-168 w/QM-120 expansion modules, 20 in x 16 out and 250 point patchbay, Yamaha PM700, 12 in x 2 out (remote)  
**Monitor Amplifiers:** Phase Linear PL100 (stereo); (2) McIntosh MC60's; Fisher headset monitor amp (stereo), SAE 2900 EQ/pre-amp (stereo)  
**Monitor Speakers:** (2) JBL 4311, (2) Auratone 5Cs; (2) Bogus custom 804X1's, Sennheiser, Jensen & Beyer 'phones  
**Echo, Reverb, and Delay Systems:** GBS stereo Spring reverb system, DeltaLab DL-2 stereo digital delay, custom Echoplex tape delay unit (mono)  
**Other Outboard Equipment:** Moog 3-band parametric EQ, (2) Furman PQ3's, SAE 2900 parametric EQ - stereo; (2) dbx 160 compressor/limiters, Fender instrument amplifiers, more  
**Microphones:** Neumann U-87, Sennheiser 441's, 421's; E-V RE-11 Shure SM-56, Beyer M260's, AKG's, more  
**Instruments Available:** Yamaha CP30 electronic piano (stereo), Yamaha & Casio synthesizers, Hammond "Solovox" organ, custom Fender jazz/Precision bass (Stars Guitars modified), Yamaha acoustic guitar, Dobro & National guitars (appt only), Quatro, Fender Lap steel (c 1948); access to many other rare and obscure string and percussion instruments, live horn and string sections by arrangement  
**Video Equipment & Services:** Video demo services are available 24 hours - call for availability and rates.  
**Rates:** 16 track: \$40/hr; 8 track: \$35/hr, live-to-2-track: \$30/hr; Real Time duplication and 1/2 1/4 track reel-to-reel dubbing \$20/hr, editing and leadering \$20/hr, discounts for bulk, block and lock-out bookings; BASF, Scotch and Ampex tape in stock, Ernie Ball strings and guitar accs always in stock, record mastering and pressing services; hi-speed cassette duplication also available - call for rates

RAINBOW SOUND  
 Hayward, CA



••• REAL TO REEL RECORDING STUDIO

1135 Mill St., Eugene, OR 97401  
 (503) 485-5977  
 Owner: Cliff Nagler

Studio Manager: Cliff Nagler

Engineers: Cliff Nagler, Forrest Faubion, Michael Ayling  
**Dimensions of Studios:** Studio: 19 x 28, drum booth: 12 x 15.  
**Dimensions of Control Rooms:** 12 x 15  
**Tape Recorders:** TEAC 85-16 16 track, Ampex ATR-100 2 track; Ampex ATR-700, Technics 1500 2 track; Nakamichi 550 cassette; Sansui SM 1110 cassette  
**Mixing Consoles:** Tangent 18 in x 16 out.  
**Monitor Amplifiers:** BGW and Crown  
**Monitor Speakers:** JBL 4311, Auratones; B&O 5.45  
**Echo, Reverb, and Delay Systems:** AKG BX-5 stereo reverb; Advanced Audio D-250 digital delay.  
**Other Outboard Equipment:** Eventide Harmonizer, UREI LA-4 compressor/limiters (2); dbx-160 compressor/limiters (2), MXR doubler/flanger; dbx-150 noise reduction.  
**Microphones:** Neumann U-87, AKG 414, 2000E, 1000E (2), 140E, 190E, 200E, 707E, Shure SM-57, Sennheiser 421, E-V 1776; Sony ECM 33F, ECM 22P, ECM 23F  
**Instruments Available:** Kawai Studio upright piano  
**Rates:** Upon request.

••• RECEIVING STUDIOS

ONLY REMOTE RECORDING  
 931 Pardee, Berkeley, CA 94710  
 (415) 548-8152  
 Owner: J.J. LaCrampe, Tumbleweed  
 Studio Manager: J.J. LaCrampe, Tumbleweed.

••• REX RECORDING CO.

also REMOTE RECORDING  
 1931 S.E. Morrison, Portland, OR 97214  
 (503) 238-4525; (800) 547-5715  
 Owner: Sunny Day Productions  
 Studio Manager: Rhiner Johnson  
 Engineers: Russ Gorsline, Rhiner Johnson, Cal Scott, Greg Branson, Harvey Goodling, Tony Kozar, Ken Bladow, Sheila Rubin  
**Dimensions of Studios:** 1: 22 x 25, 2: 7 x 12.  
**Dimensions of Control Rooms:** 1: 22 x 17; 2: 12 x 16; 3: 11 x 10, 4: 12 x 16  
**Tape Recorders:** 3M 79 16 track; Otari 5050B Mark III, 3M 23 4 track; Sony 854-4S 4 track, TEAC 40 4 track; Otari MTR10-2 w/auo locator, (2) Scully 280-B 2 track w/vari speed, Otari 5050 2 track; Scully 250 2 track; Sony 756 2 track; (2) Scully 250 full tracks, (6) Technics 1500US 2 track; Technics 9900 cassette, Technics M85-MK2 cassette; Akai 8T-C Quad/8 track cartridge, Nagra 4 full track, Magnasync 16 mm single stripe recorder; Wollensak 25 AV cassette; Wollensak 2770 H S cassette, Wollensak 2780 H S cassette, 6 M244 Technic cassette decks  
**Mixing Consoles:** Electrodyne (modified) 1604, 16 x 16 x 4, TEAC 5 x 5 ex, 16 x 16 x 4  
**Monitor Amplifiers:** Technics 9060, (4) Opticonica SM3300  
**Monitor Speakers:** (4) Klein & Hummel H04, JBL 4301, Technics SB700A, (8) Auratone 5C  
**Echo, Reverb, and Delay Systems:** EMT 140, 140ST, custom dual BBD, Bi-Amp MR140  
**Other Outboard Equipment:** (4) Scamp 501, (2) 504, (2) 5100, (4) 5300, UREI 1176 LN; Spectra Sonics compressor/limiter; (6) dbx 180, (6) dbx 160, dbx 157, dbx 155; Countryman 968 phase shifter; SAE 5000 impulse noise reducer, Technics SH9010 parametric EQ, Soundcraftsmen 20-12 graphic EQ, Technics SP1200 MK2, EMT 930-ST, Symetrix T1-101, (4) Loftec TS-I, Audiscan A/V pulsar; Grampian, Gotham, Presto mono disk lathe  
**Microphones:** Neumann U-67, (2) U-87's, U-47, KM-88, KM-841, Sony (2) C-500, C37T, (2) ECM-377, (3) ECM-22P, ECM-64P; Shure (2) SM-57, (2) SM-81; E-V (4) RE-15, CO-90, Sennheiser K2U, 421, ME-80, (4) custom PZM's  
**Instruments Available:** Chickerinn 7 1/2' piano, Hammond B-2 w/ Leslie, other instruments also available  
**Rates:** \$35-\$50/hr Please call for specifics

••• RHYTHMIC RIVER PRODUCTIONS

250 Napoleon St., San Francisco, CA 94124  
 (415) 285-3348  
 Owner: Robert L. Richman  
 Engineers: Gary Mankin, Pat Maloney, Chris Michie, Joe Tarantino  
**Dimensions of Studios:** 48 x 36 (large live room)  
**Dimensions of Control Rooms:** 12 x 17  
**Tape Recorders:** 3M M-56 16 track; MCI JH-110 1/2" 2 track; Otari 5050B 2 track, Technics M-280 cassette  
**Mixing Consoles:** MCI JH-636 automated 24 in x 24 out.  
**Monitor Amplifiers:** Phase Linear, Crown  
**Monitor Speakers:** UREI 811A, JBL 4301, 4313; Auratones  
**Echo, Reverb, and Delay Systems:** AKG BX10-IIe reverb; DeltaLab DL-4 digital delay, Echoplex III plate reverb.  
**Other Outboard Equipment:** DeltaLab DL-5 Harmoniccomputer, UREI compressor/limiters, ADR Scamp rack; Orban parametric EQ; ADR parametric EQ, Dynamite limiters  
**Microphones:** Sennheiser 421, 441, 416U, Sony C-48 condenser, E-V RE-20, Shure SM-81, AKG 451; Sony ECM 22P, Sony ECM 33p  
**Instruments Available:** Sequential Circuits Prophet V, Pro-1, Emu modular synthesizer, Dyno-my piano, Rhodes pianos  
**Rates:** Available upon request.

# 16 TRACK THE NORTHWEST

••• **TIM RUDOLPH'S RECORDING**  
1211 E. Kentwood Ave., San Jose, CA 95129  
(408) 725-8019  
Owner: Tim and Dianne Rudolph  
Studio Manager: Duane Hayes

••• **SENSA**  
1016 Morse Ave. #16, Sunnyvale, CA 94089  
(408) 734-2438  
Owner: Sensa Corp  
Studio Manager: Doug Hopping  
Engineers: Doug Hopping, Steve Mancini, independents  
Dimensions of Studios: Main studio 15 x 18, 2 isolation booths 8' x 10' and 8' x 6'  
Dimensions of Control Rooms: Approx 12 x 15  
Tape Recorders: Ampex MM-1000 16 track, Ampex 350 (w/440 electronics) 2 track, Revox B-77 2 track, TEAC A3300 SX 2 track, JVC KD-D4 cassette  
Mixing Consoles: Soundcraft 400 B (modified for 16 track monitoring) 24 x 4 x 2, Roland CPE-800 Compu-editor (16 track automation) 15 x 15 (plus 1 track SMPTE time code), (2) Amper-MX-10s (vintage tube mixers) 4 x 2  
Monitor Amplifiers: BGW 250D, BGW 50A  
Monitor Speakers: MDM-4 near field monitors, Auratones  
Echo, Reverb, and Delay Systems: Echoplate III reverb (stereo), Eventide 910 Harmonizer, Ibanez DM-1000 digital delay, Loit series 440 analog delay, MXR flanger/doubler.  
Other Outboard Equipment: UREI 1176 LN compressor/limiter, JREI LA-4 compressor/limiter, (2) dbx 160 compressor/limiters, Ashly SC-50 peak limiter/compressor, MXR stereo 15 band graphic EQ, Ross stereo 10 band graphic EQ  
Microphones: Electro-Voice Shure, Sennheiser, Neumann, Countryman, Crown PZM  
Instruments Available: Packard 6' grand piano (built 1918), Gleeman pentaphonic synthesizer  
Rates: \$35/hr. One hour set up time free for session w/drum set up. Discounts for block time.



SHOWCASE SOUND  
San Jose, CA

••• **SHOWCASE SOUND**  
also REMOTE RECORDING  
3090 S. Bascom Ave., San Jose, CA 95124  
(408) 377-5864 (message)  
Owner: Jim Bruno  
Studio Manager: Randy Widen  
Engineers: Randy Widen, Chief, Tom Carlson, Dan Lynch  
Dimensions of Studios: 19' x 19' x 10'  
Dimensions of Control Rooms: 19' x 19' x 10'  
Tape Recorders: MCI 16 track, TEAC/Tascam 80-8 B track, TEAC/Tascam 3300SX 2 (1/2) track, TEAC/Tascam A-500 cassette  
Mixing Consoles: TEAC/Tascam Model 15, 24 in x 16 out  
Monitor Amplifiers: GMT 1000S, Dynaco 100

Monitor Speakers: JBL 4311, Auratones 5W  
Echo, Reverb, and Delay Systems: Tapco 4400 reverb, Korg stage echo, Lexicon Prime Time, MXR flanger/doubler.  
Other Outboard Equipment: dbx 161 compressors, Bi-Amp graphic EQ, MoogCL 100 parametric EQ, Symetrix compressors and noise gates, MXR pitch transposer, dbx noise reduction.  
Microphones: AKG C-414EB; Sennheiser 421's; E-V RE-20, RE-10s, DS-35's, Shure SM-57's, 58's, Beyer X1-N's; Sony ECM 23F, Sescam SM1A direct boxes  
Instruments Available: Upright piano, studio drum kit, various guitar and bass amps, Korg string ensemble  
Rates: Please call for rates

••• **SIERRA SOUND LABS**  
1741 Alcatraz Ave., Berkeley, CA 94703  
(415) 655-7636  
Owner: R C de Sousa  
Studio Manager: R C de Sousa

••• **SOLAR TRACKS**  
Box 181, Blue Lake, CA 95525  
(707) 668-5810, 668-4244  
Owner: Bert Pectol  
Studio Manager: Bert Pectol

••• **SOUND DANCE STUDIO**  
5854 Colby St., Oakland, CA 94618  
(415) 547-3669  
Owner: Tony Mills  
Engineers: Tony Mills  
Dimensions of Studios: 14 x 22  
Dimensions of Control Rooms: 12 x 14  
Tape Recorders: Ampex 1100 16 track, Ampex 440B 2 (1/2) track; TEAC 6100 2 (1/2) track, Sony 777X cassette; Technics cassette  
Mixing Consoles: Soundcraft Series 800 18x8x16  
Monitor Amplifiers: McIntosh, Technics  
Monitor Speakers: 604E (custom cabinets), JBL 4311, Auratones, Paradox Time Align, customized miniature monitors  
Echo, Reverb, and Delay Systems: EMT-Plate, MICMIX Master Room III, DeltaLab DL-2 Acousticcomputer, MXR digital, MICMIX 121  
Other Outboard Equipment: dbx 160 limiters, LA-3 limiter, Valley People gate/limiters, outboard parametric EQ.  
Microphones: full selection of AKG, Sony, Shure, Sennheiser, E-V, Beyer, etc  
Instruments Available: Full drum set (tuned), Yamaha electric grand, Fender Rhodes, Korg Poly-6, guitars, basses, custom studio amps, strobe tuners, drum machine  
Rates: (Please see "Direction")  
Extras: Since the owner is a studio player and producer, these services can be used to whatever level desired. The ears are, however, those of a musician and not simply a technician.  
Direction: This isn't a commercial studio in the classic sense of the word. It's privately owned and has been opened to those outside projects serious about quality demos or records. The rates will remain comparatively very low in the hopes of attracting those who want the sound to be right and not simply adequate

••• **SOUND RECORDING COMPANY**  
also REMOTE RECORDING  
503 W. Indiana Ave., Spokane, WA 99205  
(509) 326-0222  
Owner: Corp  
Studio Manager: Irene Carter

••• **THE SOUND SERVICE (VIDEO DEPARTMENT)**  
also REMOTE RECORDING  
860 Second St., San Francisco, CA 94107  
(415) 433-3674  
Owner: David Dobkin, Steven Pinsky  
Studio Manager: David Dobkin

••• **SOUNDTEK STUDIOS**  
85 South Second St., Campbell, CA 95008  
(408) 370-3313  
Owner: Bob Berry  
Studio Manager: Greg Noga

••• **STARSOUND AUDIO INC.**  
also REMOTE RECORDING  
2679 Oddie Blvd., Reno, NV 89512  
(702) 331-1010  
Owner: Scott Bergstrom  
Studio Manager: Mark Ishikawa  
Engineers: Scott Bergstrom, Mark Ishikawa, Lee Taggart  
Dimensions of Studios: 35 x 30, 3 iso rooms: 8 x 14, 7 x 10, 8 x 16  
Dimensions of Control Rooms: 15 x 25  
Tape Recorders: Tascam 85-16 16 track, Tascam 35-2B 2 track, Tascam 122 2 track, TEAC 22-2 2 track, TEAC A-800 2 track  
Mixing Consoles: Tascam M-15 24 in, Roland/Studio 54S 800 Compu-Editor  
Monitor Amplifiers: Crown PSA-2D, BGW 100s  
Monitor Speakers: JBL 4333, 4312, 4411, Auratones, Altec 604s  
Echo, Reverb, and Delay Systems: MasterRoom Super "C"

# T&B

A U D I O L A B S

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**JRF COMPANY**  
101 LANDING ROAD, LANDING, NJ 07850  
201/398-7426

Circle #040 on Reader Service Card

reverb, Prime Time, DeltaLab, Roland, and Advanced Audio delays.

**Other Outboard Equipment:** dbx available for all channels, dbx de-esser, compressors, noise gates, parametrics, DeltaLab DL-5, MXR and Eventide 910 Harmonizers, Roland/Studio phase shifter, stereo flanger, Dimension D; TEAC parametric, Ashly noise gate.

**Microphones:** Sennheiser 441s, 421s, 431, 409, 402, 211; E-V PL-20s, RE-15, 18, 20; AKG 414, 460, 330, 320; Shure SM-56, 57s, 81; A-T 21s, 10s, 11s; PZMs; Countryman 101s.

**Instruments Available:** Steinway upright, Gulbransen grand, Prophet 5, JP-8, Memory Moog, Gleaman Pentaphonic, Rhodes Chroma and pianos, and many more

**Video Equipment & Services:** Simple VCR available.

**Rates:** \$30-\$45/hr, depending on time and number of tracks

**Extras:** Over 2,000 instruments available in Starsound Audio/Bizarre Guitar complex. Almost any type & year. Repair and customizing facilities, concert sound and live multi-track available

**Direction:** Project Success stressed. Facility is set up to be very cost effective. No charge set-up, efficient engineering, computer assist mixdown, and \$1 million in instruments and gadgets available

\*\*\* STARTSONG

also REMOTE RECORDING

3218 E. LaSalle, Colorado Springs, CO 80909  
(303) 634-2045

Owner: Tom Gregor

\*\*\* STERLING SOUND MOBILE RECORDING

ONLY REMOTE RECORDING

Box 41, Huson, MT 59846  
(406) 728-8398

Owner: Phillip Hamilton

Studio Manager: Phillip Hamilton.

\*\*\* SURREAL STUDIOS

2328 Captain Cook Dr., Anchorage, AK 99503  
(907) 248-3754

Owner: Kurt Riemann

Studio Manager: Kurt Riemann.

Engineers: Kurt Riemann, Jack Hill

Dimensions of Studio: 16' x 20'

Dimensions of Control Rooms: 12' x 14'

**Tape Recorders:** MCI JH 16-16 16 track, MCI JH 110-B 2 track, Tascam 25-2 2 track, Tascam 80-8 8 track, (3) Tascam 122 cassette 2 track

**Mixing Consoles:** MCI JH-618 18/16, (2) Tascam model 3 8/4

**Monitor Amplifiers:** UREI, Audionics

**Monitor Speakers:** Tannoy SRM 12 B, JBL 4313 B, Visonik, Auratone, custom JBL array.

**Echo, Reverb, and Delay Systems:** Master Room XL 500 reverb, Super PrimeTime, Prime Time, PCM 41, HM 910 Harmonizer, MXR doubler, Eventide Flanger, Roland space echo, 2 Tapco stereo reverbs

**Other Outboard Equipment:** Roland Vocoder, UREI graphic, UREI limiter, Symetrix comp/limit (2), Symetrix parametric stereo, Orban stereo limiter, Orban stereo para-graphic, ompressor, pitch to voltage converter, Symetrix dual gate, Tapco graphic, Sonic hologram generator, EXR Exciter, Moog parametric, Moog phaser

**Microphones:** Neumann U-87 (2), U-47, KM 84, PZMs, Sony C37, AKG C414, D 12E, 452, 202, Shure, E-V, Audio Technica, others (2) Countryman direct boxes.

**Instruments Available:** Kimball baby grand, Tama drum kit with Zildjans.

**Rates:** Please call for rates



Engineers: Gregory Jones, Mark Ellinger

Dimensions of Studio: 500 sq ft

**Tape Recorders:** MCI JH-114 16 track, MCI JH-110 2 track; Technics RS-M253X cassette; Sony TCD5M cassette.

**Mixing Consoles:** Neotek Series II 20 in x 16 out.

**Monitor Amplifiers:** McIntosh, Yamaha  
**Monitor Speakers:** MDM TA-2A, Tannoy "Super Red" SRM 10, Auratone, JBL 4311

**Echo, Reverb, and Delay Systems:** Lexicon 200 digital reverb, Master Room XL-305, Lexicon Prime Time, DeltaLab Elfection II.

**Other Outboard Equipment:** UREI 1176-LN peak limiters; Teletronix LA-2A tube type limiter; Orban 622B stereo parametric EQ, White room EQ; custom gates; click track generators and processor; sequencers

**Microphones:** Telefunken U-47 tube type, Neumann U-87, AKG, Countryman, Sennheiser, E-V, Shure

**Instruments Available:** Kawai baby grand, Linn Drum, Prophet 5, Serge modular synthesizer, Yamaha DX-7, Roland RS-90 strings/organ, Steiner horn synthesizer, Ludwig drums.

**Video Equipment & Services:** Post-production audio sweetening for video/film

**Rates:** \$40/hr including engineer, block rates and packages available

\*\*\* TELEMATION PRODUCTIONS/AUDIO

1200 Stewart St., Seattle, WA 98101  
(206) 623-5934

Owner: Telemation Productions, Inc

Studio Manager: Gwen Yazzolino

Engineers: Peter B. Lewis, Susan McArthur, qualified freelancers welcome

Dimensions of Studio: A: 28 x 38 x 15, B: 9 x 13 x 8

Dimensions of Control Rooms: A: 18 x 16, B: 15 x 13

**Tape Recorders:** Studer A800 16 track; MCI JH-110 4 track; Ampex Inovonics 351 4, 2, & mono

**Mixing Consoles:** Neve 5116 24 x 12 + 8, Neve 5432 10 x 2 + 2

**Monitor Amplifiers:** BGW

**Monitor Speakers:** Altec, JBL, Auratone

**Echo, Reverb, and Delay Systems:** EMT 190, Ursa Major Space Station, Clover 500

**Other Outboard Equipment:** ADR Vocal Stresser, Neve compressor/limiter, (2) Ashly SC130, Orban parametric EQ (2), (2) UREI LA-4A, (2) UREI graphic EQs

**Microphones:** (2) AKG 414 EB, (2) RCA 77 DX (reconditioned), E-V RE-20, RE-15, (2) Crown P2M, Sennheiser 814. More great and good mikes available for rent

**Instruments Available:** Limited percussion. Latest synthesizers for rent. No piano yet.

**Video Equipment & Services:** JVC 3/4" VCR, Q-Lock 310 Synchronizer, Sony 25" color monitors (CR & studio), total sweetening, incl. 16 & 35 mm film

**Rates:** Studio A sweetening \$125/hr, 16 track record/mix \$80/hr. Studio B 4 track, 2 track or mono \$60/hr, music/efx search \$40/hr

\*\*\* TIOGA RECORDING STUDIO

P.O. Box 205, Allegany, OR 97407  
(503) 267-2330

Owner: Jim Flanagan

Studio Manager: Spook Flanagan

\*\*\* T.J. RECORDING, INC.

also REMOTE RECORDING  
2718 E. 96th, Tacoma, WA 98445  
(206) 537-0123

Owner: Thomas J. Landon (Pres.)

Studio Manager: Thomas J. Landon.

Engineers: T.J. Landon and independents

Dimensions of Studio: 24 x 18 w/2 10 x 10 iso. rooms

Dimensions of Control Rooms: 17 x 16

**Tape Recorders:** Ampex w/autolocator, MM1100 16 track; Ampex ATR 102 2 track, Otari MX 5050 8 track; Tascam 35-2B 2 track, (4) Nakamichi 480 & 500 cassettes; Technics 686 DS cassette

**Mixing Consoles:** Quantum 1010 26 x 16.

**Monitor Amplifiers:** UREI 6500, Crown DC 300, Crown D 60, Dynaco S 70 (Tube), Bose 1801.

**Monitor Speakers:** Altec 604E w/Mastering Lab crossovers, JBL 4315, Auratones, E-V Sentry 100

**Echo, Reverb, and Delay Systems:** (2) Plates, Master Room XL

305, Live chamber, Lexicon 93, (2) MXR digital delays, MXR pitch transposer, Ibanez MD 1000 digital delay, Ibanez harmonizer.

**Other Outboard Equipment:** UREI 1176's, Gain Brain's, Roger Mayer noise gates, System 4000 flanger, Mutron Bi-phase, DOD flanger doubler, (8) assorted graphic EQ's

**Microphones:** Neumann, AKG, Sennheiser, Beyer, EV, RCA, Shure, Sony, Crown, etc.

**Instruments Available:** Chickering grand piano, Rhodes 73 piano, Casio P1000 keyboard; Fender & Gibson guitars; Fender & Rickenbacker bass guitars; Ampeg, Fender, Music Man, Vox amps, Ludwig drum. "If we don't have it we'll get it"

**Video Equipment & Services:** Video system to be installed soon  
**Rates:** Please call for full details

\*\*\* UNREGULATED RECORDING STUDIO

Box 81485, Fairbanks, AK 99708  
(907) 456-3419

Owner: Unregulated Record Co., Inc

Studio Manager: Michael States

# TOPS

## IN THE BUSINESS

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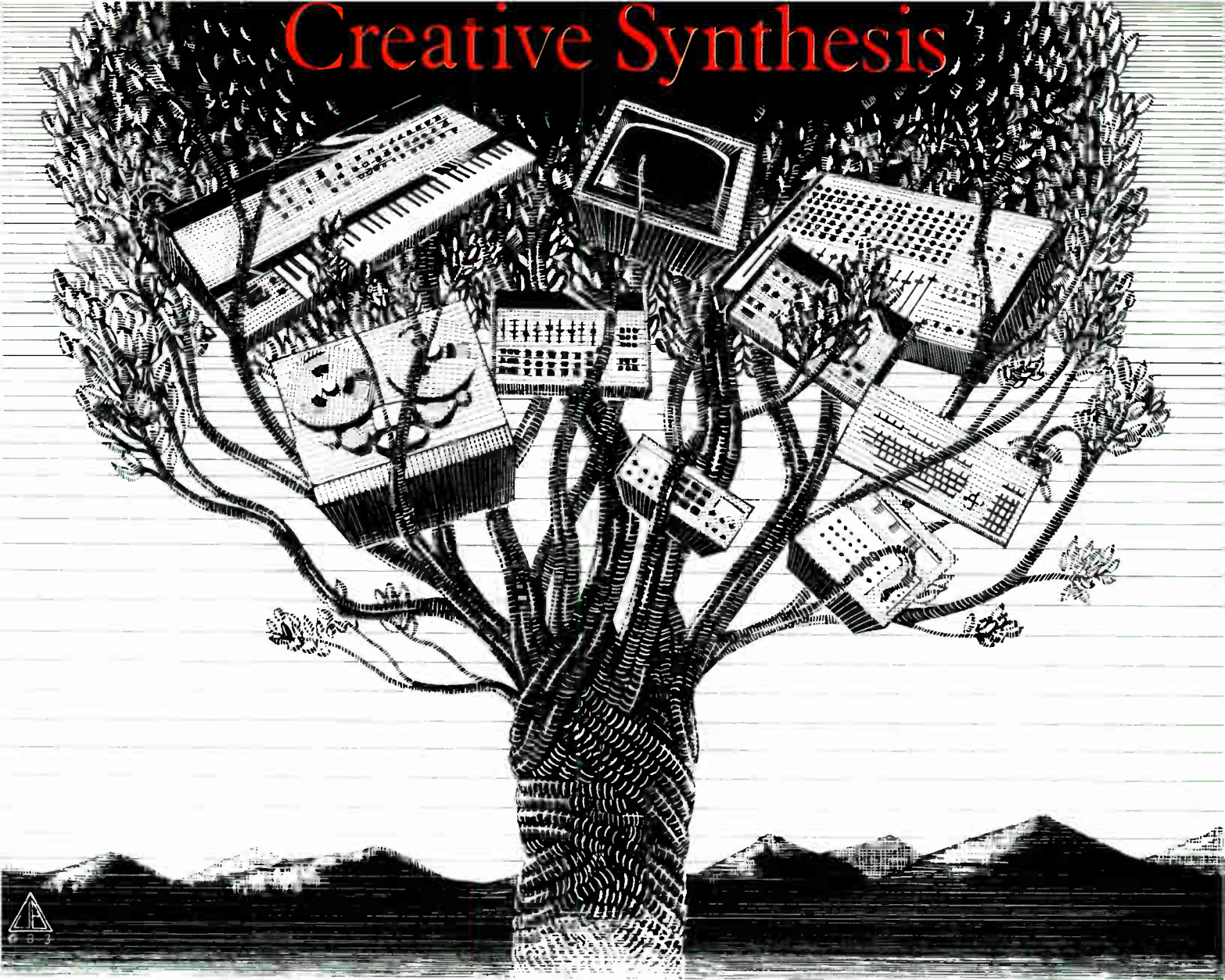
T&B AUDIOLABS  
San Francisco, CA

\*\*\* T & B AUDIOLABS

3018 22nd St., San Francisco, CA 94110  
(415) 821-3065

Owner: M. Kelley, J. Schlesinger  
Studio Manager: Maryann Moise

# Creative Synthesis



**I**t's about time for a new generation of recording studio that interfaces creativity with the latest in computer technology. We at Live Oak Recording Studio, with the talented help of Leo's Professional Audio and Sonic Landscape, have put together the finest state of the art recording facility in Berkeley.

**B**y thoroughly researching into the basic needs of producers, engineers, and recording artists we feel our equipment, staff and personal service will transform your ideas into reality.

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list of artists, Eddie has helped engineer many gold records.

**L**ive Oak Studio offers the finest in recording equipment:

- MCI 636 Automated Console
- MCI JH24 24/16 w/Autolocator III
- Otari MTR 10 1/4" and 1/2" Master Recorder
- Sony PCM F1 Digital Cassette
- Dolby 350 Noise Reduction
- JBL 4430 Bi-Radial w/Crossover Cords
- Lexicons new 224x Digital Reverb w/Larc Command
- The complete Oberheim "System"
- Music to Video SMPTE interfacing
- And a full selection of microphones and outboard gear

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**L**ook forward to our informative seminars, where we will be auditioning advanced digital synthesizers and equipment. Many thanks to Leo's Professional Audio for their support. Rates on request. For more information please contact: Priscilla and Jim Gardiner 415-540-0177 Berkeley, CA

Live Oak  
STUDIO

LEO'S  
PROFESSIONAL AUDIO

# 29 TRACKS THE NORTHWEST

**Monitor Speakers:** JBL 4311; UREI 813; Big Reds w/Mastenng Lab crossovers; Auratones, John Meyer/ACD; Yamaha; Visonik 9000

**Echo, Reverb, and Delay Systems:** (3) EMT stereo echo chambers, remote controlled, Prime Time digital delay; (3) Lexicon 224 digital reverb; (3) live echo chambers, (2) Lexicon PCM 42 digital delays.

**Other Outboard Equipment:** Prime Time, Dolby, Sennheiser Comm System; Marshall Time Modulator; ADR Compex-Limiter; Inovonics 201 limiter; Eventide Omnipressor & Harmonizer; dbx 165; UREI digital metronome; Orban parametric EQ; EMT compressor, MXR phaser & flanger, Kexep (2); Auto-correlator, Orban D'Esser, Countryman phaser, 6 channels of Dynamite gates; anything available upon request

**Microphones:** AKG 414, 452, C-11, Beyer M-160, E.V RE-15, RE-20, Shure SM-56; Sony C-37, 377; Sennheiser 421, 441, 805; Neumann U-67, U-87, KM-84, M-49, KM-88; Telefunken U-47; anything available upon request

**Instruments Available:** Yamaha CP-70, Baldwin piano, Yamaha grands, Yamaha drums, Quad bass, acoustic guitar and bass, clavinet, ARP Odyssey, Rhodes electric piano, Wuritzer organ, Cry Baby wah-wah, vocoder, Prophet 5 voice synthesizer, Princeton amp, Music Man amp, Wehr bass amp, Super Reverb amp, Echoplex I & II, Maestro synthesizer system, filter, sample & hold, fuzz, sustainer, full range booster, percussion kid, Compu-rhythm drums, Rhythm King, Maestro, Mutron II, Jet Phase phase shifters, Linn Mofitt drum machine

**Rates:** Call Michelle Zann for rates

**Extras:** Pool table room with juke box, pinball machine room, full kitchen facilities, rehearsal room with 8 track capability

## THE AUTOMATT San Francisco, CA



## AYRE STUDIOS 458-A Reynolds Circle, San Jose, CA 95112 (408) 279-AYRE, 279-2973

**Owner:** Richard Nebel  
**Studio Manager:** Richard Nebel & George Mitchell  
**Engineers:** Richard Nebel, George Mitchell, Tom Paddock, independent engineers encouraged  
**Dimensions of Studio:** 26 x 23 x 14 high, 34' x 23' x 20' high

**Dimensions of Control Rooms:** 17 x 15 x 12 high  
**Tape Recorders:** MCI JH-114 24 w/Autolocator III 24 & 16 track, Ampex AG-440B Servo 2 track, Revox A77 2 track, Scully 280 2 track, Onkyo, TEAC, and Sony cassettes

**Mixing Consoles:** MCI JH-636 Automated, 32 in x 28 out.  
**Monitor Amplifiers:** The Power by Sumo (1600 watts), McIntosh 2205; Crowns; G A S

**Monitor Speakers:** UREI 813-A Time Aligneds, JBL 4311's, Little Davids, B&W LM-1s, Visonik, Auratones

**Echo, Reverb, and Delay Systems:** EMT stereo plate/live chamber, Lexicons Eventide (all stereo outputs), MXR DDL's (2 w/full memory), Roland Pro 555 chorus echo, tape echo, etc

**Other Outboard Equipment:** Valley People Dynamites (4), EXR II & IV psychoacoustic exciters, Kexep, Pultec tube EQ's, UREI LA2A's, LA3A & LA4, RCA tube limiters (4), Inovonics 201 compressor/limiters, Eventide Flanger & Omnipressor; Mutron Bi-Phase, Bi Amp 1/2-octave & octave graphic EQ's, EMS signal processing synthesizer & much more (anything with notice)

**Microphones:** Neumann U 89s, U-87s, U-67s (tube), U 48 (tube), U-47s (tube & FET); KM-84s, AKG C414-EBs, C 12s (tube), 452s, 451s, Sennheiser 421s, 441s, Shure SM-56s, 57s, 58s, 81s; Beyer M 500, M-260, M-69, Sony's, Altec/AKG tube mics, Countryman and much more

**Instruments Available:** Chickering "Masterpiece" 7' grand piano, Linn drum, Prophet, ARP, Emu & EMS synthesizers, Gibson, Fender, Martin & Rickenbacker guitars and basses, Marshall, Hiwatt, Fender, Vox & Gibson Amps, other instruments and devices on request

**Video Equipment & Services:** Audio for video, sweetening, complete packages arranged

**Rates:** \$50 to \$75/hr. Block & lock-out discounts available. Please phone for quote

**Extras:** Production, arranging, studio musicians. Pressing & video available. Free coffee and bottled water, refrigerator & lounge.



## ANGEL VOICE RECORDING San Jose, CA

## ANGEL VOICE RECORDING 2460 Senter Rd., San Jose, Ca 95111 (408) 292-1171

**Owner:** L O W Inc  
**Studio Manager:** David Price  
**Engineers:** Vincent Sanchez (chief engineer), Niles Anders, independents encouraged  
**Dimensions of Studios:** 40' x 38'; iso booth 15' x 8', iso booth B 8' x 7'

**Dimensions of Control Rooms:** 24' x 20'  
**Tape Recorders:** Ampex 1200 w VSO 24/16 track, Ampex ATR 102 2 track, TEAC 3300 2 track, Technics cassette

**Mixing Consoles:** Sphere Eclipse A, 32 in x 32 out

**Monitor Amplifiers:** Crown DC300, D75

**Monitor Speakers:** UREI 813A Time Aligned

**Echo, Reverb, and Delay Systems:** Audicon Stereo Plate  
**Other Outboard Equipment:** UREI LA4 limiters (4), DeltaLab Acousticcomputer, DeltaLab DL4, Eventide Harmonizer, Eventide Instant Phaser

**Microphones:** E.V RE-20s, PL 95s, Sennheiser 421s, AKG 414s, 451s, Shure SM-57s

**Instruments Available:** Grand piano, Hammond organ w/Leslie  
**Rates:** 24 track \$45/hr., 16 track \$35/hr., 2 track \$20/hr. Substantial discounts for block bookings and demo packages

## APPLEWOOD STUDIOS also REMOTE RECORDING 680 Indiana St., Golden, CO 80401 (303) 279-2500

**Owner:** Applewood Studios Inc  
**Studio Manager:** Robert Lambert

## AUDIO VISION STUDIOS 74 East Center, London, UT 84062 (801) 785-0077 Owner: Sam Foster Manager: Susie Foster

## AUDIO VISION STUDIOS London, UT



## AUTHENTIC SOUND ONLY REMOTE RECORDING 30 Princess Ct., Sausalito, CA 94965 (415) 331-2889

**Owner:** John Overton  
**Studio Manager:** David Turner

## THE AUTOMATT 829 Folsom St., San Francisco, CA 94107 (415) 777-4111

**Owner:** David Rubinson  
**Studio Manager:** Michelle Zann  
**Engineers:** Michael Fusaro, chief engineer, Fred Catero, Leslie Ann Jones, Dave Frazer, Ken Kessie, Wayne Lewis, Maureen Droney, Ray Pyle; Paul Stubblebine, mastering engineer; Vince Casper, maintenance engineer

**Dimensions of Studios:** A: 1500 sq ft, B 500 sq ft, C 750 sq ft, D 1200 sq ft

**Dimensions of Control Rooms:** A 320 sq ft, B 320 sq ft, C 500 sq ft, D 1200 sq ft

**Tape Recorders:** (2) Studer 24 track, 1/4" & 1/2" Studer 2 track, (2) MCI 24 track, Nakamichi, JVC and Technics cassettes, MCI 2 track; TEAC 8 & 4 track

**Mixing Consoles:** Studio A Trident TSM w/Allison 65K automation, 40 in x 32 out; Studio B Harrison w/Allison 65K automation, 36 in x 24 out; Studio C Trident TSM 40 in x 32 out w/Allison 65K automation

**Monitor Amplifiers:** McIntosh, Pioneer, UREI and AB Systems

deli w/games around corner (Located 1 miles from San Jose airport, many hotels & 24-hour restaurants)  
**Direction:** Ayre Studios, Northern California's first MCI Automated 24 track studio, now has the pleasure to offer you a very private, highly creative "One on One" alternative. Discover the difference. Ask Aldo Nova, Amsterdam, A J & the Delenders, Iso Diddle, Bill Gibson (Huey Lewis & the News), Bill Summers, Emu, Fever, Hot Ice, Humans, Kingston Trio, Pete Escovedo, Population R, Tsunami, Vis-a-Vis, and so many more. The difference is in the Ayre!

**AYRE STUDIOS**  
 San Jose, CA



•••• BEAR CREEK STUDIO  
 6313 Maltby Rd., Woodinville, WA 98072  
 (206) 481-4100  
**Owner:** Bear Creek, Inc.  
**Studio Manager:** Nancy Merklingshaus  
**Engineers:** Joe Hadlock, Tim Sean Killeen, Brian Crabb  
**Dimensions of Studios:** 30 x 40 x 12  
**Dimensions of Control Rooms:** 20 x 17

**Tape Recorders:** MCI JH-24/16 w/Autolocator; ATR 100 & 700, Revox; Sony  
**Mixing Consoles:** Trident/TSM, 32 in x 24 out  
**Monitor Amplifiers:** Crown, Spectra Sonics, BGW  
**Monitor Speakers:** JBL 4333 and 4311, Auratone  
**Echo, Reverb, and Delay Systems:** Lexicon 224 digital reverb, MICMIX MasterRoom MR-2 Echoplex, Lexicon Prime Time  
**Other Outboard Equipment:** UREI 1176 LN, LA3A limiters, UREI parametric EQ's, Orban Sibilance Controller, Trident stereo limiter, Kexex; Gain Brains, Scamp rack; MXR digital delay, auto-flanger.  
**Microphones:** Neumann, AKG, Sony, Beyer, Shure, RCA, Sennheiser.  
**Instruments Available:** Steinway B 7' grand, ARP, claret, Fender Rhodes, Ludwig drums, Prophet V  
**Rates:** Call for rates  
**Direction:** Studio in the country - relaxed atmosphere - hot tub, horses, etc. State of the art equipment. Friendly staff.

•••• BEAR WEST STUDIOS  
 915 Howard St., San Francisco, CA 94103  
 (415) 543-2125  
**Owner:** Ross J. Winetsky  
**Studio Manager:** Larry Kronen  
**Engineers:** Mark Needham, Vance Frost, Larry Kronen, Mark Sewasac, independents  
**Dimensions of Studios:** A: 50 x 30 x 25 ceilings, (3) iso booths; B: 30 x 20 x 15 ceilings, (1) iso booth.  
**Dimensions of Control Rooms:** A: 25 x 20; B: 15 x 15  
**Tape Recorders:** MCI JH-114w/Autolocator 24 track, Tascam w/dbx 70-8 8 track; (2) Ampex 350 2 track; Ampex AG350 2 track  
**Mixing Consoles:** A: API DiMecho custom, 24 in x 24 out; B: (2) TEAC Model 5, 16 in x 16 out.  
**Monitor Amplifiers:** McIntosh, BGW, SAE White.  
**Monitor Speakers:** JBL 4332, 1413, L100, Auratones.  
**Echo, Reverb, and Delay Systems:** Live chamber, Multi-track, MICMIX, MXR DDL, MXR Doubler flanger, Yamaha analog delay  
**Other Outboard Equipment:** UREI 1176 limiters, dbx compressors, API 550 EQ, Furman parametrix, Symetrix noise gates  
**Microphones:** Shure, AKG, Sennheiser, Beyer, EV  
**Instruments Available:** Yamaha C3 grand piano, Hammond C3 organ w/Leslie, Drumulator, Prophet 5  
**Rates:** Call for rates. Special block bookings.



**BEGGAR'S BANQUET RECORDING STUDIOS**  
 Santa Rosa, CA

•••• BEGGAR'S BANQUET RECORDING STUDIOS  
 540 B East Todd Rd., Santa Rosa, CA 95407  
 (707) 585-1325  
**Owner:** Warren Dennis  
**Studio Manager:** Theresa Stoops  
**Engineers:** Warren Dennis, Mark Lyon, Denis Hulett, Rick Sheldon, Jon Richardson  
**Dimensions of Studios:** 1,000 sq. ft. with 3 iso booths  
**Dimensions of Control Rooms:** 400 sq. ft.  
**Tape Recorders:** MCI JH16 (Autolocator III) 24 (16 track headblock), Otari 5050B 2 track w/dbx 150 noise reduction option; Technics 1500 (isolated loop) 2 track; Aiwa 6900 Mark II cassette deck, Akai GX-F71 w/Dolby B & C cassette deck.  
**Mixing Consoles:** Amek "Angela" 28/24/24 w/62 total returns to mix, parametric equalization on 28 inputs & 4 stereo subgroups 6 sends/inputs  
**Monitor Amplifiers:** Nikko Alfa I 350 watts per channel; Crown D-60; Symetrix HA-10 headphone amplifier; Accuphase C-200 pre-amp; Sony direct drive turntable with Stanton 681EEE cartridge  
**Monitor Speakers:** JBL 4330 bi-radials, JBL L-100's; Auratones;



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**orban** Orban Associates Inc., 645 Bryant Street  
 San Francisco, CA 94107 (415) 957-1067  
 TLX: 17-1480

misc others Headphones: (6) AKG K240 & K140, (7) Sony DR53, (6) Sennheiser HD 414.

**Echo, Reverb, and Delay Systems:** (2) Eventide H949 Harmonizers, Echoplate reverb III, Effectron delay 1024, Lexicon Prime Time delay; Orban III B reverb; multiple tape echo taps  
**Other Outboard Equipment:** (3) UREI LA-4 limiter/compressor; Valley People Dyna-mite limiters/gates, Ashley parametric EQ, (2) Electro-Voice 1/3 octave graphic EQ's; digital drum machine; Peterson strobe tuner, Countryman active direct boxes, (3) Symetrix passive direct boxes, Boss phaser, flanger, delay overdrive, MXR phaser, line driver and noise gate

**Microphones:** Neumann U-87, AKG 414, AKG 451, AKG D-200E, Sennheiser 441, Electro-Voice's RE-20 & Crown P2M, Shure SM 47 & Sony ECM 23-F

**Instruments Available:** Yamaha C-3 conservatory grand piano; Gretsch, Ludwig, Slingerland, Zildjian, Paiste drum kit; Gibson Les Paul guitar, Gibson L95 "Ripper" bass guitar; Fender Rhodes piano, Gleeman Pentaphonic digital synthesizer, Boogie Marshall, Yamaha & Fender guitar amplifiers, EMU digital drum machine; full array of percussion instruments

**Rates:** \$45/hr including engineer Special bulk, spiritual and non-profit music rates "Night Owl" special rates of \$28/hr. Call for quotes

**Extras:** Beautiful country environment 1/2 mile from Hwy. 101 in Santa Rosa Fully air conditioned Would you believe indoor basketball?? Good coffee \*Great production assistance and musicianship



**Direction:** This year has been one of tremendous growth for Beggar's Banquet. In May we moved to a deluxe, new studio location after having spent months in construction and acoustic design.

Since that time we've been able to expand our format to 24 track with a beautiful new MCI/Amek combination. And what grand studio instruments. The addition of new staff (Hi, Theresa!), extended hours and rete options, makes us, without a doubt, the Bay Area's best recording value.

Santa Rosa, too far from the Bay, you say? How about saving \$30 an hour on the rate you'd have to pay for a comparably equipped 24 track studio in the city? You won't find a better studio at a better price anywhere! Call Theresa and arrange for a casual, personalized tour.

Just ask Bozz Beggar. He'll tell you... "Beggars Banquet is the place to make that great recording at a fantastic price!"

◆◆◆ BONNEVILLE PRODUCTIONS

130 Social Hall Ave., Salt Lake City, UT 84111 (801) 237-2400

**Owner:** Bonneville International Corp.

**Studio Manager:** Dave Michelsen

**Engineers:** Jeff Ostler, Orval Fox, Matthew Nickel

**Dimensions of Studios:** A: 19 x 30; B: 20 x 16; C: 27 x 36

**Dimensions of Control Rooms:** A: 20 x 20; B: 14 x 18; C: 20 x 20

**Tape Recorders:** Ampex MM1200 24 track, MM1100 16 track, (2) ATR100 2 track, AG440C 8 track; (4) Scully 280B 2 track; 3M 79 4 track; (2) Nakamichi 680ZX cassette decks; Sony 2660A video recorder; Nagra IV & III; Magna Sync Full Coat recorder; MCI 1" video lay-back

**Mixing Consoles:** Neotek Series III C (totally transformerless), 36 in x 24 out; (2) Bonneville custom consoles

**Monitor Amplifiers:** Crest 3501, Crown, BGW

**Monitor Speakers:** UREI 813 Time Align, Big Reds, JBL 4332, Auratones

**Echo, Reverb, and Delay Systems:** EMT 140ST, AKG BX20E, Eventide 1745M, DDL with pitch changer

**Other Outboard Equipment:** UREI LA3A's, dbx 160 limiters, Orban de-essers, Kepex, MICMIX Dynaflinger, Q-lock 310 SMPTE generator/synchronizer, DeltaGraph, UREI & MXR graphic EQ, ITI & Orban parametric EQ, 28 Dolby, 44 channels dbx, UREI Dig metronome, Bruwen 1000 noise filter, Sony video monitors, full video capability

**Microphones:** Neumann U-87s, U-67s, U-47s, KM-86, KM-84; AKG Transformerless C414EB, C452EB, C-12A, CK-9 shotgun; Sennheiser 421-U; Sony C-500; E-V RE-20s, RE-16s; Shure SM57, RCA 77-BX, 44-DX, P2M, Jensen & UREI DI's

**Instruments Available:** Steinway 9' concert grand, ARP Omni, Ampeg guitar/bass amp, many other on request

**Rates:** 40 track \$95/hr; 24 track \$75/hr; 16 track \$75/hr; 8 track \$44/hr; audio for video sweetening \$64/hr

◆◆◆ BREAKAWAY

also REMOTE RECORDING

1906 E. 115 Pl., Northglenn, CO 80233 (303) 457-0730

**Owner:** Technical Sounds, Inc.

**Studio Manager:** Terry McMurtry, Wayne Gerbrandt

◆◆◆ CARIBOU RANCH RECORDING STUDIO

Box 310, Nederland, CO 80466 (303) 258-3215

**Owner:** James Wilham Guercio

**Studio Manager:** Jerry Mahler, Richard Markowitz

◆◆◆ COAST RECORDERS

1340 Mission St., San Francisco, CA 94103 (415) 864-5200

**Owner:** United Recording Corp.

**Studio Manager:** Steve Atkin

**Engineers:** Steve Atkin, Bob Lindner, Jim Hilson

**Dimensions of Studios:** A: 25 x 40; B: 12 x 18; Dialogue: 6 x 12

**Dimensions of Control Rooms:** A: 18 x 20, B: 16 x 18; Dialogue: 10 x 12; Production: 14 x 14.

**Tape Recorders:** MCI 24 track, 3M 16 track, 3M, Ampex 8 tracks; Ampex, Scully 4 tracks; Ampex, Westlake, MCI 2 tracks & monos

**Mixing Consoles:** MCI automated JH-428B, 28 in x 24 out; Bushnell, 20 in x 12 out; Quantum, 20 in x 4 out

**Monitor Amplifiers:** UREI 6500, Crown, United Audio

**Monitor Speakers:** UREI 813, JBL 4320, 4311, L-65, Auratone

**Echo, Reverb, and Delay Systems:** E.M.T. (4), MICMIX

**Other Outboard Equipment:** UREI LA-3A, 1176LN, 527, 530, 537, 545, 565T, Orban De-esser, Kepex, UREI DDL, UREI digital metronome

**Microphones:** Neumann U-87, U-67, U-47, E-V RE-20, RE-15, Sennheiser 405, AKG 451, 414, RCA 44, 77; Shure SM-56, 57

**Instruments Available:** Steinway grand piano, Celeste Video Equipment & Services: 3/4" VCR and Monitor · JVC & Sony

**Rates:** \$45 - \$75/hr.

**Extras:** Hi-speed open reel and in cassette recording. Total tape mailing service. Direct remote phone lines.

**Direction:** The leader in audio services geared to the advertising industry. Total service except film and location

# There are many ways to split a mic, but only one way is best

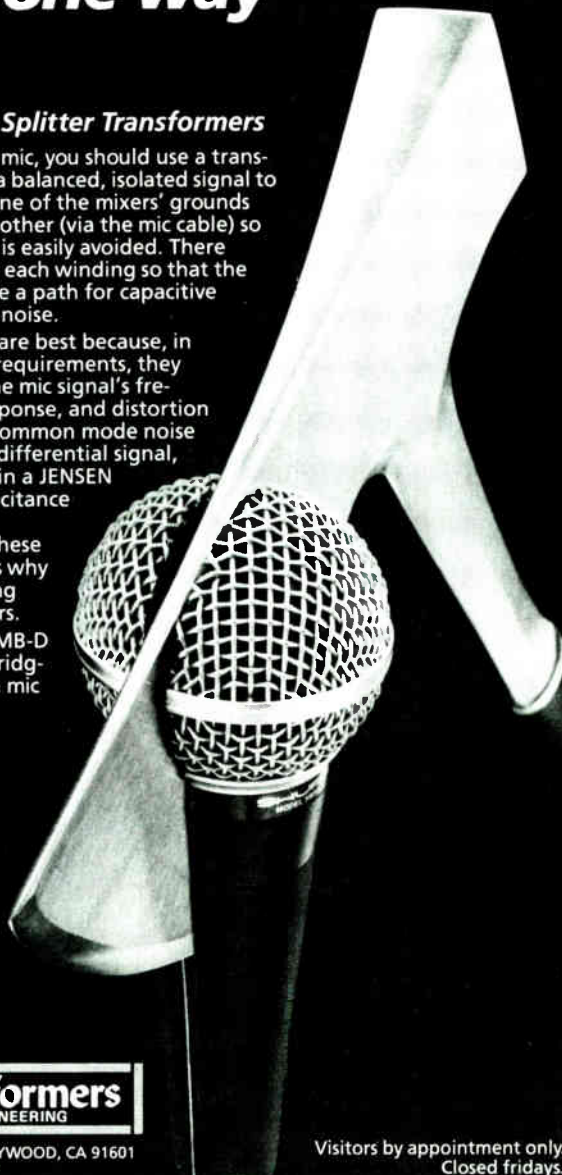
## Jensen MB-series Mic Splitter Transformers

When you need to split a mic, you should use a transformer because it provides a balanced, isolated signal to the input of each mixer; none of the mixers' grounds need be connected to each other (via the mic cable) so ground-loop induced noise is easily avoided. There must be a Faraday shield on each winding so that the transformer will not provide a path for capacitive coupling of common mode noise.

JENSEN TRANSFORMERS are best because, in addition to meeting these requirements, they minimize degradation of the mic signal's frequency response, phase response, and distortion characteristics. To prevent common mode noise from being converted to a differential signal, each end of every winding in a JENSEN TRANSFORMER has its capacitance precision-matched to that winding's Faraday shield. These are just a few of the reasons why most engineers end up using JENSEN splitter transformers.

The JENSEN JE-MB-C, JE-MB-D and JE-MB-E microphone bridging transformers will split a mic signal to 2, 3 or 4 mixers.

**Insist on the best... insist on a JENSEN.**



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**COLOR ZONE PRODUCTIONS**  
Novato, CA

**\*\*\*\* COLOR ZONE PRODUCTIONS**  
P.O. Box 1911, Novato, CA 94947  
(415) 892-8027

Owner: Peter Gifford  
**Studio Manager:** Elissa Allford  
**Engineers:** Michael Williamsen, Peter Gifford  
**Dimensions of Studios:** 9' x 12' iso.  
**Dimensions of Control Rooms:** 19' x 17'  
**Tape Recorders:** MCI JH-2424 w/Autolocator III 24 track, Otari 5050 B2 1/2 track  
**Mixing Consoles:** Soundcraft 1600 prod series  
**Monitor Amplifiers:** AB series 900, B1-amp TC:60  
**Monitor Speakers:** UREI 811A, JBL 4311B, Edlong TA-2 near field  
**Echo, Reverb, and Delay Systems:** Lexicon 224X w/Larchhead, Orban 11B reverb, (3) DellaLab Electronics  
**Other Outboard Equipment:** Valley People Dyna-mite, Orban gated comp/limited 424A, Orban 622B parametric EQ, Aphex Aural Exciter, MXR Flanger/doubler, dbx 161 compressors  
**Microphones:** Sennheiser 421, 441, AKG C414, 452EB, B330BT; Sony ECM56F, 23F; Beyers 600, Neumann U87



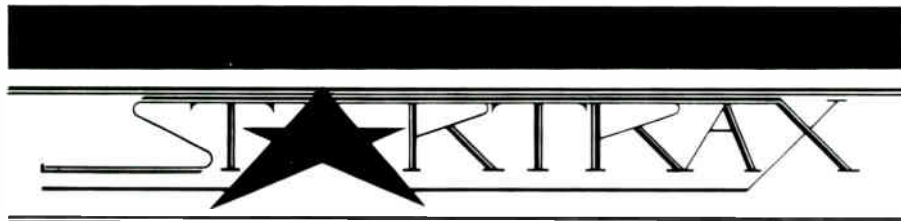
**Instruments Available:** Rhodes 73 key piano, Chroma synthesizer, F-mu Drumulator, Fender P-bass, Fender London reverb amp, Martin acoustic guitars, Yamaha Ce-20 synthesizer  
**Rates:** Too low to print! We are negotiable  
**Extras:** Other independent engineers available on request  
**Direction:** Primarily a post-production/direct recording studio. We can accommodate live bands who are on a budget. Specially designed room ideal for mixing and overdubbing, vocals to keyboards

**\*\*\*\* COLORADO SOUND RECORDING**  
3100 W. 71st, Westminster, CO 80030  
(303) 430-8811  
Owner: Kevin Clock  
**Studio Manager:** Kevin Clock

**\*\*\*\* COMMERCIAL RECORDING HAWAII**  
333 Cooke St., Honolulu, HI 96813  
(808) 536-5439  
Owner: Commercial Recording, Inc  
**Studio Manager:** Donn V. Tyler  
**Engineers:** Jim Linkner, Rick Stanley, Donn Tyler, David Lemley  
**Dimensions of Studios:** A. 12 x 18, B. 24 x 36  
**Dimensions of Control Rooms:** A. 12 x 18, B. 18 x 22  
**Tape Recorders:** Ampex MM1200 24 track, (5) Ampex ATR 4/2 track; Magnetek 35/16mm mag film recorders

**Mixing Consoles:** A: custom, 8 in x 4 out; B: Tangent 1643, 32 in x 32 out.  
**Monitor Amplifiers:** Crown DC300, D150  
**Monitor Speakers:** JBL 4333A, JBL 4310, Auratones  
**Echo, Reverb, and Delay Systems:** AKG BX-10 reverb, DellaLab DL2, Eventide Harmonizer, Marshall Time Modulator, Loft analog delay, Lexicon 224.  
**Other Outboard Equipment:** Orban parametric EQ, Inovonics limiter/compressor, Orban stereo synthesizers, Orban de/esser, Eventide Omnipresser, Tempo check digital metronome, Omni Craft gates.  
**Microphones:** Neumann, AKG, Shure, Sennheiser, Sony, RCA  
**Instruments Available:** Steinway piano, Tack piano, ARP 2600 synthesizer, Slingerland drum set  
**Rates:** A \$50/hr, B \$100/hr

**\*\*\*\* COMMUNI-CREATIONS**  
2130 S. Bellaire, Denver, CO 80222  
(303) 759-1155  
Owner: Don Spencer  
**Studio Manager:** Paul Vastola  
**Engineers:** Paul Vastola, Tom Virtue, Ben Tanler  
**Dimensions of Studios:** 50' x 60' sound stage (24 track); 16' x 24' (8 track); 12' x 16' (24 track)  
**Dimensions of Control Rooms:** 12' x 16' (24 track), 10' x 16' (8 track)  
**Tape Recorders:** Otari MTR-90 II 24 track, Ampex AG 440 C 8 track, (2) Ampex AG 440 B 2 track, (2) ATR-102 2 track, (2) 351 1 track, 350 3 track, high speed duplicator (4 slaves); Magna Sync 16 mm recorder  
**Mixing Consoles:** Gately customized 16-24 30/24, Quantum customized QM-8 16/4  
**Monitor Amplifiers:** McIntosh, Crown  
**Monitor Speakers:** JBL 4313, 4301  
**Echo, Reverb, and Delay Systems:** (2) EMT 140, AKG BX-20, MXR DDL, Effectron 1024, Harmonizer (Eventide), Roland 301 space echo  
**Other Outboard Equipment:** LA-2A, (4) LA 3A, 1176, (6) Gain Brains, (10) Kepeex, Orban de-esser, MXR auto flanger & auto phaser, UREI Digital Metronome, Roland vocoder, (2) Aphex B, MXR stereo chorus  
**Microphones:** Neumann U67, U87's; AKG 414's, 451, D-224's; Sennheiser 421's, 441's, Sony C-37 A's, ECM-22P, ECM-50; Shure SM-57, Schoeps CMT-56, Wahrenbrock PZM's; Beyers M-500, EV-666, RE55, RE11, etc  
**Instruments Available:** Baldwin baby grand, Rhodes, Prophet-5, OBX-A & DSX sequencer, MOOG Sonic 5, G-50, Yamaha GTR AMA, Gibson ES-335  
**Video Equipment & Services:** 3/4" VTR & Hitachi SK-80 camera, Arnlflex SR-2 16 mm camera, Sound Stage 50' x 60' x 16', Nagra 4-L  
**Rates:** 24 track \$90/hr, 8 track \$70/hr, mono \$60/hr



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**\*\*\*\* COUGAR RUN MUSIC STUDIOS LTD.**  
*also REMOTE RECORDING*  
P.O. Box 5039, Incline Village, NV (Reno/Lake Tahoe)  
89450  
(702) 831-1766  
Owner: Cougar Run, Inc.  
**Studio Manager:** Jody and Polly Jo Peterson  
**Engineers:** Jody Peterson, Sr., Mark Lindsay, Mark Ishakawa, Beau Melia, Dave Kubin  
**Dimensions of Studios:** Lakeside design (lava rock and rough timber)  
**Dimensions of Control Rooms:** Lake side design  
**Tape Recorders:** MCI JH 114 AL III 24 track; MCI JH 110A 2 track, Ampex ATR 102 1/2" 2 track  
**Mixing Consoles:** MCI w/Aphex VCA's, model 528B, 28/28  
**Monitor Amplifiers:** UREI 6500  
**Monitor Speakers:** UREI 813, Lakeside LM-1, Yamaha NS10, Auratone 5C  
**Echo, Reverb, and Delay Systems:** Lexicon 224, MICMIX, AKG reverb systems, (2) Lexicon Prime Time, Eventide Harmonizer, DL-2  
**Other Outboard Equipment:** Full complement of compressors, limiters, external EQ inc., numerous 1176LN, LA 3A, LA 2A, ADR vocal stressor, dbx 165 and 160, Kepeex, etc  
**Microphones:** Neumann U-87, U-47, U-48, U-67, AKG 414 P48, plus ATM, EV, Shure, Sony, Beyers, UREI direct boxes (active)  
**Instruments Available:** Yamaha C7 piano, Rhodes, LinnDrum LM-1, various analogue and digital synthesizers, vintage Telecaster and jazz bass, Yamaha and Lab LS amp, excellent choice of rentals available from Buzzard Guitar and Starsound Audio locally.  
**Video Equipment & Services:** (2) JVC KY1900 and K4400 3/4" video w/SMPTE interlock; JVC 64869 & 2650 1/2" VCR & camera, Camrac, viewfinders, Nevada Video Services available locally  
**Rates:** \$45/hr (Discounts available)

**\*\*\*\* CUSTOM RECORDING/STUDIO C**  
2220 Broadridge Way, Stockton, CA 95207  
(209) 477-5130  
Owner: Dr. Thomas T. Chen, M.D.  
**Studio Manager:** Drew M. Palmer  
**Engineers:** Drew Palmer, Ralph Stover, Dr. Tom Chen  
**Dimensions of Studios:** 32 x 30  
**Dimensions of Control Rooms:** 12 x 8  
**Tape Recorders:** Otari MTR-90 24 track w/Autolocator; 3M M56 8 track w/Autolocator, Ampex AG-351 2 track; Otari MX-5050 4 track, Otari high speed duplicator, Yamaha TC-1000 cassette,

Tandberg TCD-330 cassette; Otari MTR-10 2 track.  
**Mixing Consoles:** Sound Workshop automated Series 30, 28 in x 24 out; Interface Electronics, 8 in x 4 out  
**Monitor Amplifiers:** Spectra Sonics Model 701, Crown D-60.  
**Monitor Speakers:** Ed Long's TA-3, MDM-4, Auratone, Community Light & Sound PBL studio monitors.  
**Echo, Reverb, and Delay Systems:** AKG BX-20 reverb, Lexicon Model 224 digital reverb, Lexicon Model 102 stereo digital delay.  
**Other Outboard Equipment:** Allison Gain Brain, Eventide flanger, Eventide Harmonizer H910, Eventide Harmonizer H949, White Series 4000 1/2 octave EQ, dbx noise reduction, Orban/Parasound stereo matrix, Orban Model 526A de-esser, In-ovonics Model 200 limiter, UREI graphic EQ, ITI parametric EQ, Countryman phaser, EXR Exciter EX2, UREI 1178 dual peak limiter, Valley People Kepex II, Valley People MAXI-O EQ.  
**Microphones:** AKG C451 E system including cardioid, omni, shotgun, D200, E-V RE-15; RE-16, RE-20; FRAP for wind instruments; MB 215, MB 301; Microphone substitution devices; Neumann KM-84, U-67, U-47FET, MN-421, MKH-405; Shure SM-58, SM-57, SM-53, SM-60, SM-81; custom built guitar and drum microphones, Countryman direct boxes, PZM 130.  
**Instruments Available:** Steinway grand piano, Hammond B-3 organ w/Leslie, Oberheim eight voice synthesizer w/sequencer, Alembic bass cabinet, Oberheim studio amplifier, Fender Vibroverb amplifier w/JBL speakers, Fender Deluxe Reverb amplifier, Legend Rock "N" Roll guitar amplifier, Fender Precision bass w/custom noiseless electronics, custom individually microphoned drum set, Ludwig drums, Paiste cymbals, Roto-Tom tympani, assorted percussion instruments, Hohner clavinet w/custom electronics, New England Digital Synclavier II w/computer terminal support.  
**Rates:** 24 track: \$60/hr., 8 track: \$50/hr. (Block booking rates available)

•••• CYPRESS STAR RECORDING STUDIO  
 also REMOTE RECORDING  
 600 E. Franklin St., Suite E, Monterey, CA 93940  
 (408) 372-7827, (372-STAR)  
 Owner: Nancy Doolittle, Phil Kaye  
 Studio Manager: Phil Kaye



Different Fur Recording  
 San Francisco, CA

•••• DIFFERENT FUR  
 3470-19th St., San Francisco, CA 94110  
 (415) 864-1967  
 Owner: Patrick Gleeson  
 Studio Manager: Mana Angela  
 Engineers: Howard Johnston, Dale Everingham. Independents: Stacy Baird, Dony Cody. Systems Engineer: Tom Paddock.  
**Dimensions of Studios:** 25 x 35 x 12 plus iso booths.  
**Dimensions of Control Rooms:** 17 x 21 x 12.  
**Tape Recorders:** Studer A80 VU MKIII 24 track; Studer A80 VU MKIII 2 track (1/2" & 1/4"); MCI JH 110A 2/4 track; (4) Technics M85 cassettes.  
**Mixing Consoles:** Harrison modified for dual 32 track digital, model 4032, 35 in x 32 out, Allison 65K automator  
**Monitor Amplifiers:** Crown, BGW, Spectra Sonics, Phase Linear, Yamaha  
**Monitor Speakers:** Westlake TM-1's, 604E's; JBL 4310's, 4311's, Auratones.  
**Echo, Reverb, and Delay Systems:** Lexicon 224 digital reverb, EMT 240 Gold Foil, Eventide Digital Delay, Lexicon Prime Time (2), live echo chamber 17 x 10 x 10.  
**Other Outboard Equipment:** Dolby A 26 channels. Effects: Kepex II's, Gain Brain II's, 1176's, LA4A's, Eventide Harmonizer, White 1/6 octave digital spectrum analyzer, digital metronome, MXR flanger, 32 voice Synclavier II.  
**Microphones:** Neumann U-87's, KM-84's, AKG 414's, 452's; Beyer; Sennheiser; Sony, E-V, Shure; etc. Many rare tube mikes available.  
**Instruments Available:** Yamaha C-7B grand piano, vocoder, Fender amplifiers, drum machines.  
**Video Equipment & Services:** SMPTE 1/4" JVC 6200 record, 25" Mitsubishi monitor

**Rates:** Telephone for rates, engineer availability, block booking and special d-mo rates  
**Extras:** Copying facilities, shower, sauna, lounge w/kitchen, color TV and free off-street parking.  
**Direction:** Custom service in a state of the art studio designed by John Story of Sugarloaf View. Offering both analog and digital recording capabilities. Complete seclusion in a very private atmosphere for musician, producer and manager. Media voice-over and jingle record. Recent clients include George Winston, Edwin Hawkins, Herbie Hancock, Sylvester, The Units, Walt Disney Corp and CBS.



DNA Productions  
 Seattle, WA

•••• DNA PRODUCTIONS  
 4034 N.E. 195th St., Seattle, WA 98155  
 (206) 364-5333  
 Owner: David W. Thompson III  
 Studio Manager: David W. Thompson III.  
 Engineers: David Thompson, Don Dodge, Douglas Rayburn.  
**Dimensions of Studios:** 18 x 37  
**Dimensions of Control Rooms:** 18 x 30.  
**Tape Recorders:** Otari MTR 90-2-24 24 track, Otari MTR-10-4 1/2 track 1/2", Otari MTR-10-2 2 track 1/4"

**Mixing Consoles:** Transformerless Sound Workshop series 40, 36 in 32 out fully automated w/built in spectrum analyzer & high resolution meters.  
**Monitor Amplifiers:** Crown, UREI, Symetrix.  
**Monitor Speakers:** JBL 4435 and 4312, Sentry 100-A, Auratone  
**Echo, Reverb, and Delay Systems:** Lexicon 224X, Super Prime Time, Eventide H949 Harmonizer, DeltaLab Effectron.  
**Other Outboard Equipment:** UREI, dbx, Orban compressor/limiters, vocal stressor, Kepex noise gates, vocal stresser, EXR Exciter, Orban de-esser, Orban stereo EQ, 565 notch filter, Eventide Time Squeeze.  
**Microphones:** Neumann U-47's, 87's, 89's, 84's; E-V RE-20's; AKG 414's, 452's, 421's, 441's; Shure SM57's, 81's; Fostex M88RP, M85RP, PZM's  
**Instruments Available:** Yamaha grand, Fender amp, studio drums available, many guitars and basses.  
**Video Equipment & Services:** BTX shadow controller, BTX sync, SMPTE time code reader generator, (2) JVC 1/4" tape players, 10" Nova Beam video monitor.  
**Rates:** Upon request.

•••• PHIL EDWARDS RECORDING (PER)  
 also REMOTE RECORDING  
 1338 Mission St., San Francisco, CA 94103  
 (415) 861-4439  
 Owner: Phil Edwards  
 Studio Manager: Phil Edwards  
 Remotes: Phil DeLance  
 Engineers: Phil Edwards, Phil DeLance.  
**Dimensions of Control Rooms:** Mixdown A: 14 x 13 x 7. Mixdown B: 12 x 10 x 7. Remote Truck: 21 x 8 x 7.  
**Tape Recorders:** (2) 3M 79 24 track, (2) 79 16 track, (1) 79 8 track; (3) MCI JH-110B 2 track; (2) Ampex 440C 2 track; TEAC A-7030 1/4 track; (5) Sony, Awa cassette decks; ITC 3 deck cart machine  
**Mixing Consoles:** Remote Truck: API/de Medio custom 40/24. Mixdown A: API 1604 16/4. Mixdown B: Langevin custom 10/4  
**Monitor Amplifiers:** Crown DC 300A, McIntosh 2100, McIntosh 250  
**Monitor Speakers:** Remote Truck: UREI 811B, Auratones. Mixdown A: Altec 9845A. Mixdown B: JBL 4315  
**Echo, Reverb, and Delay Systems:** EMT 140 ST stereo plate, AKG BX-10 reverb  
**Other Outboard Equipment:** (7) UREI 1176 and LA-3A limiters; Orban 621B parametric EQ, 516 EC de-esser; 44 channels Dolby

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noise reduction, Adams-Smith 605B 3 machine SMPTE synchronizer

**Microphones:** 20 condensers Neumann (8), AKG (4), Shure (2), Sony (2), EV (4), 40 dynamics Sennheiser (4), Shure (36), EV (4), RCA (2), Countryman direct boxes (5)

**Video Equipment & Services:** We are now equipped to provide multitrack audio post production for video. Our system featuring SMPTE synchronization by Adams-Smith and video monitoring by Sony is ready for commercial, sport, concert and extended musical programs

**Rates:** Please call



**EUREKA TELEPRODUCTION CENTER**  
San Carlos, CA

•••• EUREKA TELEPRODUCTION CENTER  
1250 San Carlos Ave., San Carlos, CA 94070  
(415) 595-3200  
Owner: Eureka Federal Savings  
Studio Manager: Tom Curry



**FANE PRODUCTIONS**  
Santa Cruz, CA

•••• FANE PRODUCTIONS  
115-B Harvey West Blvd., Santa Cruz, Ca 95060  
(408) 425-0152  
Owner: Fane Productions Inc  
Studio Manager: Corie Opperman  
Engineers: Fane Opperman, Peter Carlson, Dave Luke, Corie Opperman  
Dimensions of Studios: 30 x 20 x 16, vocal iso booth  
Dimensions of Control Rooms: 29 x 12  
**Tape Recorders:** MCI JH-16 transformerless 24 & 16 track, MCI JH-110B transformerless 2 track, Otari MX5050 2 track, Tascam 80-8 8 track, Tascam 25 2 track, Sony and AWA cassette decks  
**Mixing Consoles:** MCI JH 636 transformerless 32 in x 24 out w/automation  
**Monitor Amplifiers:** Yamahas, Crown, 4i Amp  
**Monitor Speakers:** Tannoy Berkeleys JBL 4411's Altec A7's Auratones and MDM 4 near field monitors  
**Echo, Reverb, and Delay Systems:** Lexicon 224 digital reverb, Ursa Major Space Station digital reverb, Ori an 111B reverb, Eventide Harmonizer and DDL DeltaLab DL4 digital delay, Delta Lab DL2 Acoustic-computer digital delay, DeltaLab Effectron 1034 digital delay, MXR Pctn Transposer, Iliac analog delay and multi flanger  
**Other Outboard Equipment:** 34 channels dbx noise reduction, EXB Exciter, dbx 160 compressors, UREI 1176 limiters, Symetrix CL100 compressor/deessers, Omni circuit, Symetrix and dbx noise gates, White MXR and UREI 1176 octave graphic EQs, UREI stereo parametric EQ  
**Microphones:** Neumann, AKG, Sennheiser, RCA, E-V, Beyer, Sony PZM, Shure and Countryman  
**Instruments Available:** Yamaha grand piano, Hammond B-3



organ w/ Leslie, Prophet 5 synthesizer w/ Polysequencer, Poly moog, Miromoo, Roland Sequencer, Wuritzer electric piano, Fender and Marshall guitar amps, speakers, Fender Stratocaster, Fender P-bass, Guild Jumbo 12 string, Ludwig 6 piece drum set w/ timbales, Syndrum, many Latin percussion instruments, EMU Drumulator drum machine

**Rates:** Please call for rates. Special discounts available for lock outs, block booking and moonlight recording

**Extras:** Studio musicians, arrangers and jingle writers are available. The studio has a redwood geodesic home lounge

**Direction:** Fane Productions offers automated 24 track transformerless MCI recording at excellent rates in sunny Santa Cruz. Over the past several years we have been one of the busiest studios in the Bay Area. Whether it's an album, demo or jingle we have pride in the quality of our studio and staff



**FANTASY STUDIOS**  
Berkeley, CA

•••• FANTASY STUDIOS  
10th & Parker, Berkeley, CA 94710  
(415) 549-2500, 486-2038  
Owner: Fantasy Records  
Studio Manager: Nina Bombardier  
Engineers: Richie Corsello, Mike Herbick, Danny Kopelson, Maintenance Engineers: John Banuelos, Bill Banyan, George Hubbard  
Dimensions of Studios: A: 30' x 50', B: 20' x 27', C: 27' x 15', D: 30' x 50'  
**Tape Recorders:** (1) Studer A 800 24 track, (3) A 80 2 track, (2) Ampex 1200 16 24 track (2) ATR 100 2 track, MCI 110K 4, 8 track, Mitsubishi X 80 2 track, X 80A 2 track  
**Mixing Consoles:** Neve (Studio D) 810H, 56 in x 48 out, Neve (Studio A) 810B 40 in x 32 out, Neve (Studio C) 810B 32 in x 24 out  
**Monitor Amplifiers:** Crown & McIntosh  
**Monitor Speakers:** Sierra-Hidley, UREI Time Aligned 604 E's w/ Mastering lab crossovers  
**Echo, Reverb, and Delay Systems:** Live chambers EMT 140's, Echoplex, EMT 250, AMS digital reverb  
**Other Outboard Equipment:** Eventide 949 Harmonizers, Eventide DDL Scamp rack, Lexicon Prime Time Acoustic-computer Echoplex space station, Orban De-esser, Dyna Mite, Roland Flanger, ADA Flanger, Complex limiter, ADR vocal stressor & more  
**Microphones:** 164 mikes—ribbon, dynamic, condenser and PZM  
**Instruments Available:** Keyboards and guitar amps  
**Video Equipment & Services:** Video sweetening, Q Lock sync, 3 machine lockup to 1/4" Umatic video, IVC 8200 & BVU-800  
**Rates:** Call Nina, Andrea or Roy

•••• HARBOR SOUND  
301 Harbor Drive, Sausalito, CA 94965  
(415) 332-0983  
Owner: Nancy Evans, Paul Stubblebine  
Studio Manager: Patty Gomez  
Engineers: Dana Chappelle, Bob Hodas, Ken Huncovsky, Paul Stubblebine, Nancy Evans, Tom Anderson

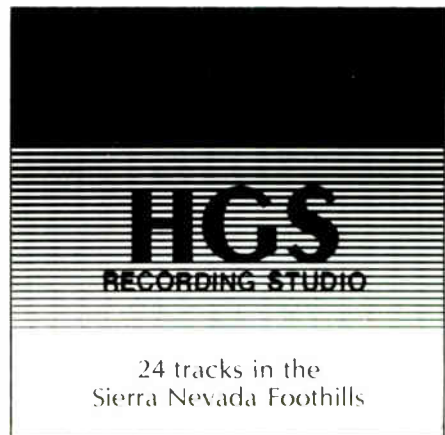
**Tape Recorders:** MCI JH 114 24 track, JH 114 16 track, JH 110 2 track, Ampex 104 2 & 4 track, 1200 24 track  
**Mixing Consoles:** Automated MCI 636, 28 in x 24 out  
**Monitor Amplifiers:** McIntosh, Hafler, BGW  
**Monitor Speakers:** UREI 813, Yamaha NS 10M's, Auratones  
**Echo, Reverb, and Delay Systems:** Stereo EMT, Lexicon 224 X, Eventide 910, DeltaLab DL2, Scamp ADT  
**Other Outboard Equipment:** Dyna Mite noise gates, Scamp noise gates, UREI 1176's, UREI LA 4A, Pultec EQ, Scamp EQ  
**Microphones:** Neumann, AKG, Sennheiser, Shure, E-V, Sony  
**Instruments Available:** Yamaha piano, Turner bass  
**Video Equipment & Services:** Sony BVU 800, Q-Lock, Ampex type C 1"

**Extras:** Rates for 1/2" mixing, 24-to-24, 24-to-16 transfers and 48 track. Full time maintenance, pre-session rehearsal space, free parking, restaurant, bar, massage, hot tub next door. Privacy. Direction: Engineer owned and operated. Full service provides for needs of independent engineers and major labels. Assistance is provided for all aspects of recording including mastering, pressing, and distribution of final product

We feel that demos are equally as important as major label projects and very personalized service is given to our demo clients' projects

1983 album credits include Marty Balin, Con Funk Shun, David Crosby, Gina Schlock of the Go Go's, Van Morrison

•••• HEAVENLY RECORDING STUDIOS  
620 Bercut Drive, Sacramento, CA 95814  
(916) 446-3088  
Owner: Jonsson Communications Corporation  
Studio Manager: Donald Early  
Engineers: Martin Ashley, Chief, Julie Fadness  
Dimensions of Studios: 34 x 37, iso booth 12 x 15, drum alcove 8 x 9  
Dimensions of Control Rooms: 20 x 23  
**Tape Recorders:** MCI JH-16 8/16/24 track, (2) MCI JH-110B 2 track (2) Technics M85 cassette  
**Mixing Consoles:** Quad/Eight Pacifica 28 in x 24 out  
**Monitor Amplifiers:** UREI 6500, McIntosh 2100, MC 240  
**Monitor Speakers:** UREI 813 A Time Aligns, JBL 4333, 4313, 4311, Auratone 5C  
**Echo, Reverb, and Delay Systems:** Lexicon 224 digital reverb, AKG BX-20E reverb, Lexicon 97 Super Prime Time, Eventide H-910 Harmonizer/digital delay, Marshall Time Modulator  
**Other Outboard Equipment:** 28 channels dbx, UREI 1176LN limiters, Teletronix LA-2A limiters, Allison Gain Brains, Quad/Eight CL 22 companders, ADR Scamp expander gates, ADR/Scamp auto-pan, UREI 52/5 EQ, Pultec PEQ 1S EQ's, Pultec HLF 3C filter  
**Microphones:** Neumann U-47FET, U 67, U 87, KM 84, AKG C414, C451, C34, Countryman EM-101, Crown PZM 30, PZM 31, E-V RE-20, 654A, 666, 667A, CO-90, Sennheiser 409, MD-421, Shure SM 7, SM 53, SM 57, SM 58, SM-81, 545, 300, Sony ECM 22, ECM-280, RCA 77 DX, Altec M-30  
**Instruments Available:** Yamaha C-3 grand piano, Synare and various percussion  
**Rates:** Please call for specifics



24 tracks in the  
Sierra Nevada Foothills

**HOME GROWN SOUND**  
Placerville, CA

•••• HOME GROWN SOUND  
3655 Chuckwagon Way, Unit C, Placerville, CA 95667  
(916) 626-1999  
Owner: Jim Lang  
Studio Manager: Jim Lang  
Dimensions of Studios: 500 sq ft. (2 iso booths 17 x 5, 2 8 1/2 x 8)  
Dimensions of Control Rooms: 14 x 27  
**Tape Recorders:** MCI JH-24/24 24 track, JH-110B-UM 2 track, Tascam 80-8 w/dbx 8 track, 25-2 w/dbx 2 track, TEAC 3340 S 4 track, Nakamichi cassette model 600  
**Mixing Consoles:** Sound Workshop 1600 2/24, Sound Workshop 1280 B 8EO 12/8  
**Monitor Speakers:** UREI 813, JBL, Auratone  
**Echo, Reverb, and Delay Systems:** Mic-Mix XL-305, Eventide H 910, MXR digital delay, live chamber

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Other Outboard Equipment: UREI 1178, Valley People Dynamite, Furman SG-10 EQ

Microphones: Neumann, AKG, Shure, Crown PZM, Electro-Voice, Sennheiser

Instruments Available: Zimmerman and Sons baby grand, Roland strings

Rates: Available on request



**HYDE STREET STUDIOS**  
San Francisco, CA

•••• HYDE STREET STUDIOS

245 Hyde Street, San Francisco, CA 94102  
(415) 441-8934

Owner: Dan Alexander Tom Sharple, Michael Ward  
Engineers: Richard Van Dorn, Gary Mankin, Joe Tarantino, Les Stuck, Garry Creiman John Cumbert, Mark Wallner, Ricky Lee Lynd

Maintenance: Don Kruse, Tim Jones Assistant

Dimensions of Studio: A 19 x 39 D 31' x 18, C (Rehearsal only) 33' x 21'

Dimensions of Control Rooms: A 18 x 19, D 18 x 15

Tape Recorders: Otari MTR 90 MKII 24 track, MCJ JH 100/114 24/16; Ampex MM110G 16 track; (2) Otari MTR 10-2 2 track; (2) Otari MX 5050B II 2 track; Scully 280B 1 track; (5) Sony TCK555 2 track cassettes

Mixing Consoles: Trident modified 'B' range 40/8/24, Cetel Electrodyne 2408 24/8/16

Monitor Amplifiers: SAE, Hafler, Crown, McIntosh, etc  
Monitor Speakers: UREI 813, JBL 4333A, 4313, Visoniks; Rodgers, Auratones

Echo, Reverb, and Delay Systems: Acoustic echo chambers, Eventide digital reverb (SP 2016)

Other Outboard Equipment: Lexicon, Eventide and DeltaLab delays, Fultec, ITT, ADR, UREI EQs Teletronix, UREI Valley People limiters, Noise gates, flangers, phasers, Aphex

Microphones: Neumann M49, U87, U67, U47 tube, KM 64, KM 53, SM 69, KM 85, M269, AKG C24 stereo, C12, C12A, 414EB, 45A, D12, D30, D224E; Sennheiser, Sony, Beyer, RCA, Countryman, PZM, etc , etc

Instruments Available: Concert grands by Steinway and Mason and Hamlin, Ampeg B18, drums and other other instruments by arrangement

Rates: Call for rates As low as \$30/hr

Extras: Peets coffee in our game room/lounge Pool Three blocks from BART

Direction: Jazz and Punk Funk and Gospel Country and Folk music and commercial spots. Over 3300 sessions in 3 years. We're proud to have received a Grammy nomination last year Thanks to our clients for their support Newly opened for rehearsal: By the hour day or month.

•••• INDEPENDENT SOUND

San Francisco, CA  
(415) 929-8085

Owner: Peter and Mary Buffett

Studio Manager: Mary Buffett

Engineers: Peter Buffett, Mary Buffett

Dimensions of Studio: 13' x 12'

Dimensions of Control Rooms: 17' x 12'

Tape Recorders: Otari MTR 90 MKII 24 track, Otari 5050B 2 track, TEAC X-3 2 track, Sony TCD5M cassette

Mixing Consoles: Sound Workshop series 30 w/automation 28/8

Monitor Amplifiers: BGW 750, A-B systems 205

Monitor Speakers: JBL 4411's, MDM 4's, Auratones, Yamaha NS10's

Echo, Reverb, and Delay Systems: Lexicon 224 digital reverb, Lexicon Prime Time, Eventide H949 Harmonizer, PAIA Hyperflange

Other Outboard Equipment: Scamp rack including compressor/limiters, expander/gates, parametric EQ, autopanner Orban "paraphonic" EQ

Microphones: Neumann, U-87, AKG414

Instruments Available: Lindrum LM-1, Yamaha DX-7 digital synthesizer, Yamaha CS-80, Yamaha CP-70, Sequential Circuits Pro-One, Vocoder, Fender Rhodes



Video Equipment & Services: Experienced with in-house writing and production of video logos for MTV and network spots

Rates: \$100/hr. This includes everything in this listing, no surcharges Block rates available (good ones)

Extras: Unlike most studios, this one is used extensively by the engineers. If you're recording synthesized dance/pop music in the Bay Area, this is the place to do it The engineers will help you get the sound you're looking for fast

Direction: This studio was built from the ground up for synthesized-based music. We take on each project as if it were our own, and take pride in the fact that everyone comes back for more! Projects include: Barry Beam, Lisa, Sylvester, Paul Parker Dave Burrett Automatic Pilot, MTV

**INDEPENDENT SOUND**  
San Francisco, CA



•••• INFINITE STUDIOS/DENTEN PRODUCTIONS

P.O. Box 1709, Alameda, CA 94501  
(415) 521-0321

Owner: Michael Denten  
Studio Manager: Michael Denten



**STEVE LAWSON PRODUCTIONS**  
Seattle, WA

•••• STEVE LAWSON PRODUCTIONS

2322 - 6th Ave., Seattle, WA 98121  
(206) 625-9153

Owner: Steve Lawson

Studio Manager: Bob Israel

Engineers: Steve Lawson, Bob Israel, Jerry Hill, Terry Date

Dimensions of Studios: A: 30 x 20 (including floating drum booth), B: 13 x 17

Dimensions of Control Rooms: A: 23 x 17; B: 13 x 15

Tape Recorders: Studio A: MCI JH-24 24 track, MCI JH-110C 2 track; Studio B: MCI JH-110C 8 track, MCI JH-110C 2 track. Otari 5050B 4 track, Otari 5050B 2 track; (2) Ampex ATR 700 2 tracks; Technics M85, Technics M65; Sony TCD5M; Nakamichi 250

Mixing Consoles: Studio A: MCI 636 automated, 28 in x 24 out Studio B: Tangent 3216, 12 in x 8 out

Monitor Amplifiers: Crown, BGW, UREI

Monitor Speakers: JBL 4430's, MDM 4's, JBL 4311's, Auratones Echo, Reverb, and Delay Systems: Lexicon 224X, Lexicon Prime Time

Other Outboard Equipment: Symetrix limiters, UREI limiters, EXR Exciter, Symetrix gates, Orban de-esser, Gain Brains & Kepex, assorted parametrics

Microphones: Neumann U-87's; AKG 414's, 451's; Shure SM-5B's, SM-57's, SM-58's; Sennheiser 421's, 441's, E-V RE-20

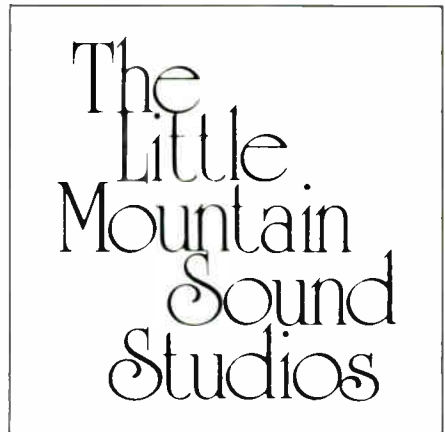
Instruments Available: Yamaha C-7 grand piano, Korg vocoder

Video Equipment & Services: Sony BVU-800 locked to 24 track with O-Lock Full video sweetening complement. Scoring to picture

Rates: Studio A: \$65/hr Studio B: \$60/hr. Video sweetening: \$125/hr Night block rates and 24 track rates on request

Extras: Thirty-two tie lines connect us with Summit Studios, another fine 24 track facility. Their MCI 24 track and automated 636 give us both 48 channel capabilities with video interlock

Direction: We're happy to provide a comfortable, warm atmosphere for recording anything, from album projects to voice-over commercials. Our clients are very special, and we try to make everyone feel like a guest Studio A (designed by Jeff Cooper) offers state of the art acoustics, and first class gear. But our people are what make us shine. We walk that fine line of giving our all without stepping on producers' toes. We are constantly one of the busiest studios in the Pacific Northwest. And last year, we were recognized by the most prestigious international advertising awards, including: Best in the West, Andy, IBA, Clio and Emmy. So, no matter what it is in audio...from audio sweetening for video, to an album or demo project, to a TV voice-over, we're laidback, we're flexible, and we'll make you a hero!



**LITTLE MOUNTAIN SOUND STUDIOS**  
Vancouver, British Columbia, Canada

•••• LITTLE MOUNTAIN SOUND STUDIOS

201 West 7th Ave., Vancouver, British Columbia,  
Canada V5Y 1L9  
(604) 873-4711

Studio Manager: Bob Brooks

Dimensions of Studio: Studio A: 70 x 30 x 22; Studio B: 31 x 30 x 22. Canada's largest recording studio complex

Echo, Reverb, and Delay Systems: (2) Loft Analog delay/flangers; UREI 4 out DDL, Eventide 1745M3 DDL Harmonizer, (2) EMT 140 Plates; (2) EMT 240 GoldFoil Plates; AKG BX-20; Cooper Time Cube, Lexicon 224 digital reverb

Other Outboard Equipment: Dolby NR, (2) UREI 1176N limiters; Kepex II and Gain Brains, (2) Quad-8 noise gates, Marshall Time Modulator; Eventide H910 Harmonizer, FL201 Instant Flanger, Instant Phaser; Countryman phaser; (2) Trident parametric EQs, (2) Orban parametric EQs; Aphex Aural Exciter; UREI digital metronome, Altec tube limiters, Orban De-essers

Instruments Available: Baldwin 9' grand, Howard 6' grand, Fender Rhodes, Hammond A-100 organ, Hohner clavinet D-6 and Pianet Duo, Prophet 5, Yamaha electric grand, Conn strobe tuner, Poly Moog, Mini Moog, Solina string machine, Fender Precision bass, Camco and Pearl drum kits; Fender, Marshall and Mesa Boogie amps, 147 Leslie w/Altec components

Video Equipment & Services: BTR Shadow SMPTE sync, IVC 8200 3/4" VTR, SMPTE Character generator/reader, Sony color monitors

Rates: Studio A 24 track, \$145/hr; Studio B 24 track, \$115/hr; reduced block and 24 hour weekly lockout rates; all rates in Canadian funds (approx 20% discount)

Extras: Enjoy complete home-away-from-home kitchen facilities staffed by a full time chef, plus a game room, lounge, video movies, etc 1/2" 2 track mixdown now available

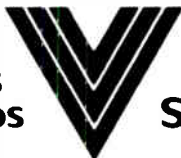
Direction: A proven combination of artistic and innovative technical capabilities in the area of multi-track scoring to picture, utilizing electronic interlock video tape techniques. An internationally

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for the music*



PHOTOS: FRED LYON

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LIVE OAK RECORDING STUDIOS  
Berkeley, CA

•••• LIVE OAK RECORDING STUDIO

1300 Arch #2, Berkeley, CA 94708  
(415) 540-0177  
Owner: Priscilla & Jim Gardner  
Engineers: Edie Harris  
Dimensions of Studios: 350 sq ft, 1000 sq ft, 1000 sq ft  
Dimensions of Control Rooms: 275 sq ft  
Tape Recorders: MCI JH 24, J4 16 track, Otari MTR 10 J, Ampex ATH 102, Sony PCM F1, digital 2 track, 4 track, cassette, Studio Master IV, etc.  
Mixing Consoles: 6th automated ready  
Monitor Amplifiers: Bryston 4, 36 J, Yamaha  
Monitor Speakers: JBL, Beyer, 444, low crossover, Carat Auratones, Tannoy  
Echo, Reverb, and Delay Systems: Lexicon 224X w/Lexicon command, PCM42, Prime Time II, etc.  
Other Outboard Equipment: UREI LA2A 3A 4s, 1176, 1178s, Spectra Sonar 610 F1, Scamp rack, 944 Harmonizer, Dolby noise reduction, most things you could desire.  
Microphones: Full selection  
Instruments Available: Fender Rhodes 88 model "The System" by Oberheim, Kurzweil 250 on order  
Rates: Upon request  
Extras: Film scoring, syn computer programming, SMPTE, inter lock music/video  
Direction: The studio is brand new, designed by Sonor Land scapes. So before you record in the garage or mix at the institutions give us a call, the sound of Platinum — Live Oak Studios.

•••• MOBIUS MUSIC RECORDING

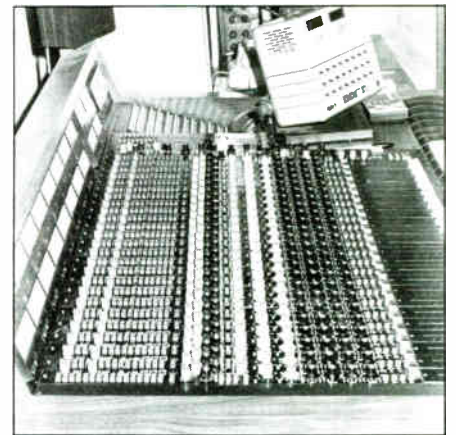
1583 Sanchez, San Francisco, CA 94131  
(415) 285-7888  
Owner: Oliver DiCicco  
Studio Manager: Annette Olesen  
Engineers: Oliver DiCicco, Ken Kessie, Andy Narell, Annette Olesen  
Dimensions of Studios: 25 x 15 (expanding to larger facilities)  
Dimensions of Control Rooms: 16 x 12  
Tape Recorders: MCI JH 114 with Autolocator III 24/16 track, MCI JH-110 2 track; Revox A77HS 2 track; Nakamichi 600 cassette.  
Mixing Consoles: Audiotronics 501 26 in x 24 out, 8 effects returns  
Monitor Amplifiers: Crown D150, Crown D60, Haller DH 500  
Monitor Speakers: UREI 811 Time Aligned, Auratones, Altec 604 w/mastering lab crossovers, Sennheiser headphones  
Echo, Reverb, and Delay Systems: Lexicon 224 digital reverb, MasterRoom MR 3 reverb, Lexicon 92 DDL, DeltaLab DL4 DDL  
Other Outboard Equipment: UREI LA4 limiter/compressors, dbx 160 limiter/compressors, Allison Kepex gates, UREI 530 graphic EQ, Orban 622 parametric EQ, AR turntable  
Microphones: Neumann U 47 tube, U-87s, KM-84s, KM-85s, (2) KM-54 tube, Sennheiser 421s, 402, Beyer M500, M69, Shure SM-57s, E-V RE-15, RE 11, AKG D200E, D160, custom direct boxes  
Instruments Available: Yamaha C3 6' grand piano, Fender Precision bass, Slingerland Radio King Drums, Fender Vibrolux and Bandmaster amps, Lebrecht piano in lounge, Fender Telecaster, Peavey combo bass amp  
Rates: Please call for rates, block booking discounts are available

•••• MONTAGE RECORDING CO.

37532 Sycamore St. Bldg. 1C, Newark, CA 94560  
(415) 794-2992  
Owner: Will Mullins, Bill Walsh  
Studio Manager: David Hartzheim  
Engineers: Will Mullins, David Hartzheim, Bill Llewellyn, Allan

Tomlinson, independents  
Dimensions of Studios: Main room 32 x 38, Drum room 12 x 14, Vocal booth 6 x 4  
Dimensions of Control Rooms: 20 x 16  
Tape Recorders: MCI JH 114 w/Autolocator II 16/24 track; Ampex ATH 102 w remote 2 track, TEAC 3340S 4 track, Tascam 122 cassette deck 2 track  
Mixing Consoles: MCI 416 modified, 24 in x 24 out  
Monitor Amplifiers: Bryston Crown Yamaha Uni-Syn  
Monitor Speakers: UREI 813s, E-M Londa's MDM 4s, Altec 604s, Auratones  
Echo, Reverb, and Delay Systems: Lexicon 224 digital reverb, Lexicon Prime Time delay line, Echo Plate stereo reverb, Lexicon Super Prime Time  
Other Outboard Equipment: Eventide Harmonizer, Aphex Aural Exciter, UREI LA4s limiters, UREI 1178 stereo peak limiter, Audio Arts stereo parametric EQ, Scamp noise gates, expander gates, peak comp limiters, sweep EQ, parametric EQ, auto pan, etc.  
Microphones: AKG 'The Tube', 414s, 452s, Neumann U87, KM44s, E-V RE 20s, Sennheiser 421s, Beyer Ribbons, RCA 77DX Ribbons, Shure SM 56s, 57s, SM 81, 58s  
Instruments Available: Prophet 10 Synthesizer, Rhodes electric piano, Helpinstill grand piano w/stereo direct boxes, Hammond 115 w/John Leslie speaker, Emu digital aram computer, Min. Moog Synthesizer, ORX Synthesizer, Moog Taurus pedals, the Original Chamberlin Orchestral keyboard available, Emu electric violas and synth and electric guitars, Mesa Boogie amp, Roland jazz chorus amp, Gibson RD artist bass, a wide selection of hand held percussion instruments  
Rates: 2 track \$25/hr, 4 track \$40/hr, 6 track \$45/hr, 24 track \$60/hr. Block and lockout rates available, please call for quotes.

MONTAGE RECORDING COMPANY  
Newark, Ca



•••• MOUNTAIN EARS RECORDING

1939 Pearl St., Boulder, CO 80303  
(303) 444-3277  
Owner: MusicMakers Inc.  
Studio Manager: John Aldridge

•••• MOUNTAIN MEADOW RECORDING

570-26th St. #1, Ogden, UT 84401  
(801) 394-3217  
Owner: Ronald J. Watkins  
Studio Manager: Ronald J. Watkins

•••• MOUNTAIN MOBILE RECORDING INC.

**ONLY REMOTE RECORDING**  
Rt. 1 Box 25, Tulelake, CA 96134  
(916) 667-5508  
Owner: Web and Karen Staunton  
Engineers: Alan Philips, Web Staunton, all independents welcome  
Dimensions of Studios: Studio 18 x 8, overdub room  
Dimensions of Control Rooms: 20 x 8, located in a Silver Eagle Bus  
Tape Recorders: Otari MTR 90 24 track; 3M M79 2 track, Sony 3 head cassette-additional 24 track and 2 tracks available  
Mixing Consoles: Neotek Series II 28 in x 28 out, additional con sole available on request  
Monitor Amplifiers: Crown DC 300 A, Altec 9440-A, Unisync 50  
Monitor Speakers: UREI Time Aligns 811-A, E-V Sentry III, Auratone 5c  
Echo, Reverb, and Delay Systems: AKG BX-10, Lexicon Prime Time, LA-2A comp limiter, Gain Brain II comp limiters, Kepex II noise gates, Orban de-essers, Klark Teknik EQ's, etc.  
Other Outboard Equipment: 32 channel splitter 3-way split, 46 input, full communications, video monitoring, wired for (2) 24 track recorders, 12.5 kva generator, SMPTE and misc. outboard gear available upon request  
Microphones: Neumann, Sennheiser, Electro-Voice, Shure, Sony, Countryman, Countryman direct boxes



**Rates:** Tour and Package rates available starting at \$500/day  
**Extras:** Located in a bus, not a truck, it is designed to carry the equipment and personnel in a much smoother relaxed atmosphere to every and any location, giving you a better product. Our lounge has the comforts of home including the kitchen sink, restroom facilities, full air conditioning and heating systems and of course plenty of room for relaxation. We go anywhere at anytime to do almost anything!  
**Direction:** Recent credits include a live L.P. recording for Merle Haggard, also a live L.P. recording for David Crosby from Crosby Stills and Nash. Other clients include Country artists Gene Watson, Denny Rae Lamson, Dayton Street Band, Barbara Price and the Posse, etc.

**MOUNTAIN MOBILE RECORDING**  
 Tulelake, CA



**Dimensions of Studios:** 50 x 30 x 20, piano room, 14 x 20 x 12, vocal booth, 15 x 11 x 8  
**Dimensions of Control Rooms:** 15 x 20  
**Tape Recorders:** Studer A80 II 24 track, A80 II 16 track (plus spare set of 16 track heads), B67 2 track, Ampex (1 1/4" & 1/2" heads) ATR-100 2 track, Revox A77 1/4, Nagra III film sync, JVC computer control cassette deck DD 9, (6) JVC cassette dubbing decks, model KD-All.  
**Mixing Consoles:** Richmond Sound Design 48 in x 22 out x 8 VCA sub-groups w/30 Universal Audio tube preamps.  
**Monitor Amplifiers:** (2) Richmond Sound Design APA-368 180 watt monitor amps, (8) Richmond Sound Design APA-128 60 watt amplifiers.  
**Monitor Speakers:** Altec 604E monitor speakers with Mastering Lab crossover networks and UREI time align horns, Visonik Ambassador 100 speakers, Sound Barrier Concord speakers, Realistic Minimum 7 speakers, BIC Venturi Formula 5 speakers, Auratone SC Super Sound Cube speakers, Arrow ProLine 21 & 51 speakers  
**Echo, Reverb, and Delay Systems:** EMT 240 gold foil, Eventide Clockworks H910 Harmonizer, Lexicon 224, Lexicon "Prime Time" model 93, UREI 920-16 Cooper Time Cube, (2) stereo acoustical echo chambers  
**Other Outboard Equipment:** (5) Allison Research Kepex noise gates, (2) Allison Research Gain Brains, (2) Altec program EQ, (2) Dolby 361 noise reduction units, (2) Furman PQ-3 parametric EQ, (1) ITL CDH-100 "Memory Pack" studio lighting controller, (3) Langevin graphic EQ, (6) Langevin high & low pass filters, (2) MXR auto flangers, (1) NEI 341 4 band parametric equalizer, (1)

•••• MUSHROOM STUDIOS  
 also REMOTE RECORDING  
 1234 West 6th Ave., Vancouver, B.C. Canada V6H 1A5  
 (604) 734-1217  
 Owner: Charlie Richmond  
 Studio Manager: Linda Nicol  
 Engineers: Keith Stein, Rolf Hennemann

Omni-Q TL-1 time code synchronizer unit, (1) Orban Parasound 516EC de-esser (3 channels), (6) RSD graphic EQ's, (2) RSD APA-120 echo chamber amplifiers, (5) Roger Mayer noise gates, (1) U A 175B tube limiter, (1) U A 176 tube limiter, (2) UREI 1176 LN compressor/limiters  
**Microphones:** AKG C-12, C-61, D-12E, D-24E, D 202E, D-224E, D 900E, Beyer MC-713, B & O 200, Electro Voice RE-15, RE-20, 635A; Neumann KM-84, U-47 original vacuum tube condenser, U-87, PML CL-4, DC-63, De-73, F-69, VM-41, RCA 77BX, 10001, Sennheiser MD-421U, DC-421U, Shure SM-57, SM-5E, Sony C-17B, C-37A, C-57, C-220A, Synchron AU-7A  
**Instruments Available:** Yamaha C-7 grand piano, Juehr & Stemmer upright grand piano, Tama drum kit, Fairlight CMI computer music system  
**Video Equipment & Services:** Video monitors and camera, video tape machines on request  
**Rates:** Please call for rates

•••• MUSIC ANNEX RECORDING STUDIOS  
 also REMOTE RECORDING  
 970 O'Brien Dr., Menlo Park, CA 94025  
 (415) 328-8338  
 Owner: Music Annex Inc.  
**Studio Manager:** David Porter, Traffic Manager Sharon Smith  
**Engineers:** Russell Bond, Tom Size, David Porter, Linda Proccassi, Keith Hatschek, Roger Wiersema, Chief Engineer  
**Dimensions of Studios:** A: 35 x 28 plus 10 x 8 iso booth B 13 x 11, C: 20 x 30 audio plus 10 x 12 iso booth plus 43 x 40 audio or video  
**Dimensions of Control Rooms:** A: 25 x 22 B: 23 x 18 C: 28 x 22  
**Tape Recorders:** (2) MCI J-114 24 track, (2) Ampex MM1000 16/8 track, (2) MCI JH-110 2 track, (3) Ampex 440 2 track, Otari 5050 2 track, Sony 850 2 track, Otari 1/2" 8 track  
**Mixing Consoles:** Neve 8036 24x8x24, Amek (TAC) 1682 16x8x16, Amek M-2000 28x16x24  
**Monitor Amplifiers:** BGW, Crown, Yamaha FET  
**Monitor Speakers:** UREI 813 (A), JBL 4333A (B), UREI 811 (C),  
**Echo, Reverb, and Delay Systems:** EMT 140, EMT 240, Lexicon 224 4 4 version.  
**Other Outboard Equipment:** UREI 1176, 1178 limiters, In-ovonics 201 limiters, ADR compressor/limiters, Neve compressor/limiters, ADR vocal stressor, ADR stereo EQ, ADR Scamp racks w/EQ, gates, delay, Pan modules, etc. Eventide Harmonizer, flanger, Lexicon Prime Time, Roger Meyer gates. SMPTE based automation (all studios)  
**Microphones:** AKG, Neumann, E-V, Beyer, Sennheiser, Sony,

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DECAY



# POWER

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Achieve two levels of effects simultaneously—either two reverberations or reverberation combined with effects.

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**Dynamic decay.** Special signal processing capabilities can change reverb time in response to program dynamics.

**Comprehensive delay effects.** The most extensive set of time-delay functions available. Put in a vocal track and get out six independent voices. Create phasing, flanging, and repeats in a single pass. Put in a rhythm track and get out syncopated chords. Use up to six separately adjustable delay taps, with up to 1860-ms delay, each with high-cut and low-cut filters tunable from 170 Hz to 19 kHz.

**36 nonvolatile memories.** All parameters of setups can be stored in memory for instant recall—and can be archived on cassette tape.

### An Investment in the Future

Your investment in a 224X with LARC is an investment that will pay big dividends today—and tomorrow. Your initial purchase price buys you all software updates, subject only to a small media charge.

Look into the Lexicon 224X digital reverb/effects system with LARC\*. Compare it with anything else on the market. You'll find this superb system is, by far, the most powerful of them all.

\*Field conversion is available for owners of existing 224X systems. Contact Lexicon.



## lexicon

Lexicon, Inc., 60 Turner Street, Waltham, MA 02154/(617) 891-6790/TELEX 923468  
Export: Gotham Export Corporation, New York, NY 10014

Circle #056 on Reader Service Card

World Radio History

Calrec, Shure, Countryman, PZM and FET direct boxes  
**Instruments Available:** Yamaha and Steinway grand pianos, snare drums, toms and percussion instruments, Alpha Syntauri digital synthesizer, Ampeg bass amp  
**Video Equipment & Services:** 3/4" U-matic (Sony) 1/2" VHS (RCA) 3000 sq ft sound stage  
**Rates:** \$45-\$125 Call for quote  
**Extras:** Lounge with color TV, kitchen parking for 40 cars, closed circuit TV for security, loading dock  
**Direction:** It is our intent to service both the music and industrial recording markets with the same technical expertise and attention to detail. We encourage independent engineers to use our studios and offer them a most comprehensive technical facility and staff. Our credits include Ronnie Montrose, The Tubes, Bill Withers, George Winston, Will Ackerman, Alex DeGrassi, Todd Rundgren, Blue Oyster Cult, Black Sabbath, Ritchie Cole, Donna Fargo, Steven Halpern, Holly Near and The Toons

**MUSIC ANNEX RECORDING STUDIOS**  
 Menlo Park, Ca



\*\*\*\* MUSIC SOURCE  
 615 E. Pike, Seattle, WA 98122  
 (206) 323-6847  
 Owner: Jim Wolfe  
 Studio Manager: Linda Britton



**OCEAN STUDIO**  
 Stinson Beach, CA

\*\*\*\* OCEAN STUDIO  
 Box 747, Stinson Beach, CA 94970  
 (415) 868-0763  
 Owner: Tim Tomke  
 Studio Manager: Tim Tomke

\*\*\*\* PATCHWORK PRODUCTIONS INC /  
 PATCHBAY RECORDING  
 also REMOTE RECORDING  
 2111 Francisco Blvd., #7, San Rafael, CA 94901  
 (415) 459-2331  
 Owner: Patchwork Productions Inc / Patchbay Recording  
 Studio Manager: Ted Bloya  
 Engineers: Gordon Elliott, Ron Saurman  
**Dimensions of Studios:** A 21 x 24 x 14' - iso booth 10 x 10' - B (voice over) 17 x 13 x 9'  
**Dimensions of Control Rooms:** 16 1/2 x 18 1/2 x 12'  
**Tape Recorders:** MCI JH24/16 w/Autolocator 24/16 track, MCI JH114 2 track, TEAC 80-8 w/DX-8 8 track, TEAC A-800 cassette, Alwa M700 cassette, TEAC A3340S 4 track  
**Mixing Consoles:** Soundcraft Series 3 32x16x16, TEAC Model 55EX 16 in x 16 out, Soundcraft I-S 20x2x2  
**Monitor Amplifiers:** BGW 750's, 250's



**Monitor Speakers:** JBL 4315 4310 LE14C 4311 Auratone  
 Yamaha NS 10-M  
**Echo, Reverb, and Delay Systems:** AKG BX-10/II, Sound Workshop 262 stereo, Furman R-V1's, Lexicon Prime Time, ambient areas  
**Other Outboard Equipment:** 4 dbx 165 2) LA-2A Comper; stereo limiter, Ashly parametric EQ dbx 163 System flanger, Systech dual phase shifter, 32 channels dbx noise reduction, IVE 1/2 octave analyzer, Jensen direct boxes, Countryman phase shifter  
**Microphones:** AKG (2) C451E, (2) 414EB (7) C 61 (2) CK2E N-66E Audio-technica (3) AT812 (2) AT813 (2) ATM-11 2" Beyer M 500, E-V (2) RE 15 (2) RE-20, (20) assorted PA mikes (2) Nakamichi CM700, Neumann M269, (2) U-47, (2) M49, (2) KM-56, (2) KM 54, RCA 77DX, Sennheiser: (8) 421, (2) 441, Shure (2) SM56, (2) SM58, (2) Sony C500, Wahrenbrock PZM 2)  
**Instruments Available:** ARP 2600 vintage guitars (Fender Gibson), classic tube amps, variety of keyboards, Alpha Syntauri composers, workstation w/all options and remote keyboard w/high speed serial transmitter.  
**Video Equipment & Services:** 1/2" stereo color video demos  
**Rates:** Call for details



**THE PLANT STUDIOS**  
 Sausalito, CA

\*\*\*\* THE PLANT STUDIOS  
 2200 Bridgeway, Sausalito, CA 94965  
 (415) 332-6100  
 Owner: Laurie Neumark  
 Studio Manager: Paul Bronek  
 Engineers: Jim Galloway, Bill Newell, Bill & Suzanne Jeffrey, Norman Rosenberg  
**Dimensions of Studios:** A 705 sq ft w/ iso booth, live iso booth, B 245 sq ft w/ iso booth, C 425 sq ft w/ iso booth  
**Dimensions of Control Rooms:** A & B 470 sq ft, C 315 sq ft  
**Tape Recorders:** Studer A40VU MK II 4 track, M M79 24 track, Ampex ATR 101 2 track, JM M4 42 track, Ampex 4414 track, Alwa assorted models cassette decks  
**Mixing Consoles:** Trident TSM w/ Melkust Automation, 40 x 24 x 24, Neve mode III B 28 x 24 x 24  
**Monitor Amplifiers:** Crown, Haer, Phase Linear, Jott, Meyer  
**Monitor Speakers:** Holy Westlakes, Jann Meyers, A'er 604E, Yamaha NS-10M, JBL 4411's, MDM 4's, etc  
**Echo, Reverb, and Delay Systems:** EMT stereo & mono plates, live chamber, Lexicon 224, Lexicon Prime Times, Eventide DDL 3, DeltaLab Acoustocomputer, Marshall Time Modulator  
**Other Outboard Equipment:** Putecs Lang API Fairchild UREI & Teletronix EQ and Limiters, Orban De-esser, EXR Aural Exciter, Roland stereo flanger, Eventide Flanger, Phaser & Harmonizers, and much more  
**Microphones:** Excellent selection of Neumanns, AKG, Telefunken, Shure, Sony E-V & others. We have several tube microphones  
**Instruments Available:** A & B Yamaha grand pianos, Studio C Steinway grand piano, plus Hammond B-3 w/Leslie

**Video Equipment & Services:** Sony 3/4" U-matic video deck and Q Lock Synchroniser available on request for recording & mixing to picture  
**Rates:** Call for rates  
**Extras:** The Plant Studios maintain a 5-bedroom house (sleeps 10 people comfortably) w/full kitchen and jazz. A 2 room producer's cottage is also available w/kitchen. We are the only major studio in the Bay Area offering our own housing for out-of-town clients  
**Direction:** We are a completely professional state-of-the-art 24 track recording complex in a uniquely beautiful and comfortable setting. We are proud of our truly international clientele who come to us because we specialize in what we have always done best - music recording for records, film or video.



**PRAIRIE SUN STUDIO**  
 Cotati, CA

\*\*\*\* PRAIRIE SUN  
 P.O. Box 7084, Cotati, CA 94928  
 (707) 795-7011  
 Owner: Mark "Mooka" E. Rennick  
 Studio Manager: Mark "Mooka" E. Rennick

\*\*\*\* RECORDING ASSOCIATES  
 5821 S.E. Powell Blvd., Portland, OR 97206  
 (503) 777-4621  
 Owner: Jay Webster, Bob Stoutenburg  
 Studio Manager: Jay Webster, Bob Stoutenburg

\*\*\*\* RECORDING TECHNIQUES  
 4724 S.W. Vacuna, Portland, OR 97219  
 (503) 246-6476  
 Owner: Alan Marston and Mark Kautman  
 Studio Manager: Mark Kautman

\*\*\*\* ROAD WEST RECORDING  
 also REMOTE RECORDING  
 964 Lorraine Ave., Salt Lake City, UT 84106  
 (801) 484-6539 and (801) 485-0911  
 Owner: Al Schultz, Charles Buehler  
 Studio Manager: Al Schultz, Charles Buehler

\*\*\*\* ROSEWOOD RECORDING COMPANY  
 2288 W. 300 N., Provo, UT 84601  
 (801) 375-5764  
 Owner: Gary and Kristen Rand  
 Studio Manager: Kristen Rand  
 Engineers: Gary Rand, various independents

**Dimensions of Studios:** 22' x 22' with drum/iso room  
**Dimensions of Control Rooms:** 16' x 14'  
**Tape Recorders:** MCI JH 16 W ALII 24 track, Otari 5050 B 2 track, Pioneer RT 701 4 track, Technics M65 cassette  
**Mixing Consoles:** Tangent series 16 24 16 24, transformerless with full patchbay, LED metering and extra effects returns  
**Monitor Amplifiers:** Haller  
**Monitor Speakers:** EV Sentry 500 time coherent, Auratone 5C  
**Echo, Reverb, and Delay Systems:** 2 plates, 2 DeltaLab ADM series digital delays, Ibanez analog delay  
**Other Outboard Equipment:** dbx & Symetrix limiters, Orban de-esser, Bi-amp graphic EQ's, Omnicar noise gates, Roland studio series stereo phaser, Audio envelope tube/cube  
**Microphones:** Neumann U 64, AKG C414, C505, D190 E, EV RE20 C515, PL77 RE10 RE11, Shure SM81 545 Various quantities of the above  
**Instruments Available:** 1935 Baldwin 9' grand, Fender Rhodes, Prophet Five & Cat synthesizers, vintage Martin D 28 & mandolin, Gibson banjo, dobro, Fender precision, tweed Fender deluxe, Ludwig maple drums w/Paiste & Zildjian cymbals  
**Video Equipment & Services:** Single camera Panasonic VHS videocassette available for demos & session documentation  
**Rates:** Very reasonable, with block rates & production packages available. Please call Kristen.



R O STUDIO  
Concord, CA

•••• R.O. STUDIOS  
3359 Walnut Ave., Concord, CA 94519  
(415) 676-7237  
Owner: Henry Brothers  
Studio Manager: Ralph F. Henry, Jr.  
Engineers: Rick Henry, independents welcome  
Dimensions of Studios: 25 x 15 & 20 x 15  
Dimensions of Control Rooms: 16 x 15  
Tape Recorders: Otari MTR 90 II 24 track Otari MTR 10 2 track, Denon DRD Mill cassette  
Mixing Consoles: Sound Workshop Series 40, 28 in x 24 out, with VCA's, 24 channel hi-resolution metering soon to be fully automated  
Monitor Amplifiers: Hafler DH 500, HGW 750 B, McIntosh 2105  
Monitor Speakers: UREI Time Aligned 811's Auratones KEF listening speakers  
Echo, Reverb, and Delay Systems: Lexicon 244X digital reverb (2) Korg SD-3000 digital delays  
Other Outboard Equipment: UREI 1176LN Peak limiters, (2) Dyna-Mite 430's, UREI LA-4 limiter. Any outboard equipment available upon request  
Microphones: Neumanns, AKGs, Sony Sennheisers Shures E-Vs, all of the best. Any mic available upon request  
Instruments Available: Yamaha grand piano, Roland Juno-60 synthesizer, Fender pre-CBS Jazz bass, Marshall amps, Yamaha DX-7 synthesizer  
Rates: \$100/hr. Call for block rates!  
Extras: Dial-a-Mix Headphone Boxes custom built and designed by Randy Stadman of Leo's Music. Shower and kitchen facilities. Producing and record pressing packages available  
Direction: Here at R.O. we have the most modern state of the art equipment available, along with a very relaxed atmosphere. Come see why R.O. is turning heads. "Work with the best for less!"

•••• RUSSIAN HILL RECORDING  
1520 Pacific Ave., San Francisco, CA 94109  
(415) 474-4520  
Owner: Jack Leahy, Bob Shotland  
Studio Manager: Bob Shotland  
Engineers: Jack Leahy, Richard Greene, Sam Lehmer, Marne Moore, Jeff Kliment, David Colfin, Gary Clayton  
Dimensions of Studios: A: 20 x 30, B: 18 x 28  
Dimensions of Control Rooms: A: 15 x 24, B: 13 x 22  
Tape Recorders: MCI JH-110 4 track, MCI JH-24 24/16 track, MCI JH-110B 2 track, Technics 1506 1/4 track.  
Mixing Consoles: Helios, 52 in x 24 out (A), Neotek Series III, 28 in x 24 out (B).  
Monitor Amplifiers: Yamaha P-2200, McIntosh 2205  
Monitor Speakers: UREI 813 Time Aligned, Control Rooms A & B, JBL 4311, Studios A & B, Auratones, MDM-4  
Echo, Reverb, and Delay Systems: Lexicon 224, EMT 140 stereo plate, Lexicon Prime Time, L'camp ADT  
Other Outboard Equipment: Eventide H-949 Harmonizer, Scamp system, vocal stresser, UREI 1176LN, ADR compressors, Valley People Dynamite, digital metronome, Symetrix gate  
Microphones: Full complement Neumann, AKG, Sennheiser, Shure, RCA, E-V, etc.  
Instruments Available: Steinway and Yamaha grand pianos  
Video Equipment & Services: JVC CR6650 3/4" broadcast compatible VCR Sony 3/4" and Beta recorders. AK Q-Lock 3.10 with ADR and SFX software. Sony color monitors in studios and control rooms. Projection monitor system. DA and complete video interface among all studios and conference room  
Rates: Upon request  
Extras: Conference room equipped with audio and video playback systems. Complete kitchen facilities. Off-street loading. Located in one of S.F.'s best neighborhoods convenient to many restaurants, motels, bars, and transportation services.  
Direction: Our studios, designed by Jeff Cooper, are the very latest expression of acoustical and architectural achievement. Features such as high ceilings, hardwood floors, and tuneable walls finished in oak, velvet and brass help create a graceful ambience for anything from major label albums to voice overs, from mono to 46 track locked to video. Please feel free to ask for a tour

•••• SANGRE STUDIOS  
9844 Business Park Dr., Sacramento, CA 95827  
Owner: Sangre Productions

•••• SEA-WEST STUDIOS HAWAII  
also REMOTE RECORDING  
P.O. Box 729, Hauula, HI 96717  
(808) 293-1800  
Owner: Corporation  
Studio Manager: Donna Alexa Keefer

•••• SKAGGS TELECOMMUNICATIONS SERVICE  
5181 Amelia Earhart, Salt Lake City, UT 84116  
(801) 539-1427  
Studio Manager: Roger Olson

•••• SOUND COLUMN STUDIOS  
also REMOTE RECORDING  
46 E. Herbert Ave., Salt Lake City, UT 84111  
(801) 355-5327  
Owner: Music Central The Sound Column Companies  
Studio Manager: Clive Romney

•••• SOUNDS OF HAWAII, INC.  
1084 Young St., Honolulu, HI 96814  
(808) 537-1442  
Owner: Herbert Ono  
Studio Manager: Herbert Ono  
Engineers: Herbert Ono, Dean Ono  
Dimensions of Studios: 30' x 40' x 18'  
Dimensions of Control Rooms: 22' x 16'  
Tape Recorders: Lyric 24 track, (2) Ampex ATH 2 track  
Mixing Consoles: Neve 803H 24 in x 24 out  
Monitor Amplifiers: Custom built by Mr. Alan Sides of Holy wood CA  
Monitor Speakers: Custom built by Alan Sides  
Echo, Reverb, and Delay Systems: 2 EMT 140 plates EMT Color Foil 240 digital delay time tubes  
Other Outboard Equipment: Exciters, phasers, limiters, EQ etc.  
Microphones: U47 tube type, U67s tube type, Sonys, AKG M49, KM254, Sennheiser about 50 to choose from.  
Instruments Available: Grand piano, drum set, Rhodes electric organ (B3), amps for guitar and bass, percussion equipment. LinnDrum  
Rates: Call for rates

# SOUND TECHNIQUE RECORDING STUDIO

SOUND TECHNIQUE RECORDING STUDIO (STRS)  
Madera, CA

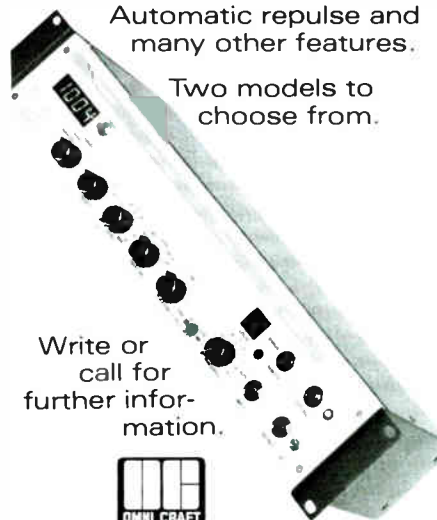
•••• SOUND TECHNIQUE RECORDING STUDIO (STRS)  
also REMOTE RECORDING  
11240 Hwy 41, Madera, CA 93638  
(209) 431-5275  
Owner: Ken & Marilyn Carlton  
Studio Manager: Ken & Marilyn Carlton  
Engineers: Ken Carlton and Justin Souter  
Dimensions of Studios: 20 x 22 plus piano alcove 8 x 8, iso room 9 x 10 and vocal booth 5 x 10  
Dimensions of Control Rooms: 14 x 17  
Tape Recorders: Otari MTR-90 24 track w/16 track capability, MTR-10 1/2" & 1/4" 2 track, 5050B 2 track, Hitachi DE-7 cassettes (13 of them for RT duplication). Numerous other cassettes and 1/4 track reel to reels  
Mixing Consoles: Sound Workshop Series 30 (w/custom 1600 series patchbay) with ARMS automation and Super group 28 channels I/O  
Monitor Amplifiers: AB Systems Design 1200, Hafler DH200, Sansui, Yamaha  
Monitor Speakers: E-V Sentry III's with SEQ, Yamaha NS 1000's, Yamaha NS 10's, Auratones, JBL  
Echo, Reverb, and Delay Systems: Ecomplate II, Ursa Major SST 282, Marshall Time Modulator 5402, Eventide 949 Harmonizer, DeltaLab DL-3, tape delay  
Other Outboard Equipment: ADR Vocal Stressor and Stereo

## TONE GENERATORS

for critical slide synchronizers and other applications.

Zero cross detection. Automatic repulse and many other features.

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Write or call for further information.



Rt 4 Box 40  
Lockport, IL 60441  
(815) 838-1285

Circle #052 on Reader Service Card

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- ▶ CUSTOM CONSOLES
- ▶ PROBLEM SOLVING
- ▶ CONSULTING

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AUDIO ENGINEER

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# TRADE SECRET



Recording engineers, sound engineers and artists all have their trade secrets. A special accent for a vocalist, a unique sound for a solo instrument--these are things that set one's work apart from the others.

Until now, one of the best kept secrets in professional signal processing has been Ibanez.

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Circle #054 on Reader Service Card

Express, (2) UREI 1176LN, (2) UREI LA-4, (4) Allison Research Gain Brain, (2) dbx 165 "over easy," (4) Allison Kepex, Orban 622B parametric EQ, (2) UREI Model 549 graphic EQ, Tapco graphic EQ, 2 channels of Dynafex noise reduction, Aphex Aural Exciter, UREI digital metronome.

**Microphones:** Neumann U-87, U-89, KM-86, AKG 414 (2), AKG 451 EB (5), AKG 501, Sennheiser 441 (2), 421 (9), E-V RE-20 (2), RE-16, Crown PZM (2), Shure 56, Beyer ribbon 160, Countryman FET 85 direct boxes (4) and more.

**Instruments Available:** Yamaha 7'4" grand piano, misc synthesizers, guitars and amps Peterson strobe tuner model 400

**Rates:** \$40/hr. and up. All rates include everything listed above.  
**Extras:** Country setting on route to Yosemite National Park. Sun deck, homelike atmosphere, five minutes from Fresno. Real time cassette duplication, two record labels, music publishing, producing and consultation. In-house band and staff arranging services.  
**Direction:** Over the past three years, our policy of honesty, hard work, personal involvement and concern for our clients needs have made us the number one studio in the Central San Joaquin Valley. We are committed to music and the people who make it. S.T.R.S. is "For Creative People." Let us prove it to you.

◆◆◆ SPECTRUM  
also REMOTE RECORDING  
P.O. Box 757, San Carlos, CA 94070  
(415) 593-9554  
Owner: Paul L. Weaver  
Studio Manager: Jim Conklin, Wes Weaver.



SPECTRUM STUDIOS, INC.  
Portland, OR

◆◆◆ SPECTRUM STUDIOS, INC.  
905 S.W. Alder St., Portland, OR 97205  
(503) 248-0248  
Owner: Michael Carter, Lindsey McGill  
Studio Manager: Michael Carter  
Engineers: Michael Carter, Lindsey McGill, Chns Douthitt, Dave Mathew, Mark Gottwig, Jim Baer  
**Dimensions of Studios:** A: 19' x 34'; B: 18' x 14'; C: 14' x 16'  
**Dimensions of Control Rooms:** A: 22' x 15'; B: 17' x 5'; C: 12' x 16'  
**Tape Recorders:** Ampex ATR-100 2 track, ATR-100 4 track, MM-1100 16 track, Otari MTR-90 II 24 track, MX-5050 4 track; (12) Scully 280B 2 track, (2) 280B 4 track, (2) Nagra 4.2 1 track.  
**Mixing Consoles:** Custom (built in-house) 16/16.  
**Monitor Amplifiers:** McIntosh, Crown, Yamaha.  
**Monitor Speakers:** UREI 811, Auratone.  
**Echo, Reverb, and Delay Systems:** EMT-140S, AKG-BX20E, Eventide Harmonizer  
**Other Outboard Equipment:** Dolby A noise reduction, dbx type 1 noise reduction, Eventide flanger, UREI 1/3 octave EQ's, UREI notch filter, Orban de-esser, Gain Brains, Mayer-noise gates, Jensen direct boxes, Eiki interlock projector, AVL Eagle computerized multi-image programmer, Skotek digital metronome.  
**Microphones:** Neuman U-87, U-47, E-V CS-15, RE-50, RE-16; AKG C-451E, D1000E, D190, D200; Shure SM-54; Sennheiser 815, TRAM lavaliers  
**Instruments Available:** Yamaha G-3 6' grand piano  
**Video Equipment & Services:** Audio-for-video post production utilizing Audio Kinetics Q-Lock, Sony BVH-1100 1" video recorder, 24 track ATR, also, 34" video, also, 16 mm film interlock mixing system which can be used alone or in conjunction with video system.  
**Rates:** \$60/hr. for all formats, except \$125/hr. for audio-for-video post production

◆◆◆ STARLIGHT SOUND STUDIOS  
617 S. 13th St., Richmond, CA 94804  
(415) 236-2281  
Owner: Starlight Sound, Inc  
Studio Manager: Norman Kerner, Assistant Manager: Paul Gatehouse  
Engineers: Chief Engineer: Peter Brown Staff: Karl Derfler.



Norman Kerner, Jamie Bridges, Jimmy Mathews  
**Dimensions of Studio:** 25 x 35 x 12; Piano Room: 15' pentagonal  
**Dimensions of Control Rooms:** 20 x 15 x 12  
**Tape Recorders:** MCI JH-16 w/Autolocator III 24 track, Ampex ATR-102 1/2" & 1/4" 2 track; Otari MX 5050B 2 track, Technics cassette decks and turntable.  
**Mixing Consoles:** Harrison 4032 fully automated 40 input by 32 buss out  
**Monitor Amplifiers:** Bryston, Crown, Bi-Amp, Marantz.  
**Monitor Speakers:** UREI B13 Time Aligned, JBL 4313, Tannoy Super Red 12, Auratones  
**Echo, Reverb, and Delay Systems:** Lexicon 224x digital reverb, Master Room XL305, DeltaLab DL4 & DL2 digital delay, Eventide Harmonizer H910, MXR Doubler  
**Other Outboard Equipment:** UREI LA4 & 1176 comp/lms, Audioarts and Furman parametric EQ, Bi-amp graphic EQ, Symetrix & Kepex gates/processors, EXR Exciters, Eventide FL201 flanger, MXR flanger  
**Microphones:** Neumann, AKG, Sennheiser, Beyer, Crown PZM, E-V, Shure, RCA Ribbon, etc  
**Instruments Available:** Yamaha C7 7'4" conservatory grand piano, Linn Drum digital drum machine, Prophet synthesizer, Rogers drum kit, large collection of new and vintage gear including Mesa/Boogie MkII, Marshall, Musicman, Vox, Fender tweeds and blondes, Schecter and Epiphone basses, old Strats and Pauls, 30's dobro, Rick 12 string and much more  
**Video Equipment & Services:** Available on request  
**Rates:** Please call for rate schedule and off-hour specials.  
**Direction:** There's no higher quality 24 track studio in the Bay Area at anywhere near our rates

STARLIGHT SOUND STUDIOS  
Richmond, CA



◆◆◆ STARTRAX RECORDING STUDIO  
150 Main St., P.O. Box 405, Concrete, WA 98237  
(206) 853-8818; toll free, (800) 782-2700  
Owner: Larry Read  
Studio Manager: Jeannette Read  
Engineers: Larry Read and staff  
**Dimensions of Studio:** 17' x 22' main studio, 8' x 10' drum booth, 4' x 6' iso booth Total house 2,500 sq ft.  
**Dimensions of Control Rooms:** 16' x 22'  
**Tape Recorders:** Soundcraft w/auto locator SCM-762.24 16-24 track; Tascam 80-8 8 track, 35-2-B 2 track, Kenwood KX-2060 cassette; (6) TEAC V-34 & V-45 cassettes  
**Mixing Consoles:** Concept 2024 w/400 2024 24/24, Point TT Patch Bay; 8 supergroups  
**Monitor Amplifiers:** Yamaha 2050's and 2060's, Hafler D-800  
**Monitor Speakers:** JBL 4333, E-V Sentry 100, Auratone  
**Echo, Reverb, and Delay Systems:** Quad 8 systems 5 digital reverb, echoplex, MXR System II DDL system, Lexicon Prime Time II DDL  
**Other Outboard Equipment:** UREI LA-4 compressors/limiters, Orban de-esser, DX-8 8 track, dbx noise reduction, DX-2 2 track dbx, Dolby 2 track, (8) noise gates

**Microphones:** Neumann, AKG, Sennheiser, E-V, Shure, Beyer, Crown, direct boxes.

**Instruments Available:** Fender Stratocaster, Ovation Custom Legend, Ovation: classical, Cable Nelson piano, complete Tama Zickos drum set w/Zildjian cymbals, Roland jazz chorus guitar amp, Randall & Peavey bass amp

**Rates:** 8 track: \$25/hr; 16 track: \$45/hr; 24 track: \$65/hr. Block rates available

**Extras:** We are located in the foothills of the magnificent Cascade Mountain range. Fishing, boating, hunting, river raft trips, skung (water or snow), and horseback riding nearby. Airstrip, lodging, RV-camping-restaurants within walking distance. Our in-house facilities include a lounge, jacuzzi and sauna.

**Direction:** Originally located in Las Vegas, Startrax is opening a brand new facility for 1984, bringing its years of experience to the Northwest. We will make every effort to ensure your session with us will be a comfortable and creative one.

STARTRAX RECORDING STUDIO  
Concrete, WA



◆◆◆ STUDIO HAWAII  
1 North King St., Honolulu, HI 96817  
(808) 536-9311  
Owner: Al Harrington  
Studio Manager: John E. Kahale Chang

◆◆◆ SUMMIT STUDIOS  
2320 6th Ave., Seattle, WA 98121  
(206) 622-5175  
Owner: Bub Tutmarc  
Studio Manager: Bud Tutmarc



SUN VALLEY AUDIO INC.  
Sun Valley, Idaho

◆◆◆ SUN VALLEY AUDIO INC.  
Box 285, Sun Valley, Idaho 83353  
(208) 726-3476  
Owner: Joint venture between In'l Consoles Corp. & Amos Galpin  
Studio Manager: Lance Parker  
Engineers: Lance Parker, Randy Young, Steve Price  
**Dimensions of Studios:** 32 x 23, ceiling 16' high. Piano booth: 9' x 15'  
**Dimensions of Control Rooms:** 15' wide x 25' deep w/"The Wedge" patented control room  
**Tape Recorders:** Stearns 24-track w/BTX Synchronizer Controller installed, 24 tracks; Ampex ATR-104, 4-track; Ampex ATR-102, 2-track w/1/2" and 1/4" capability  
**Mixing Consoles:** ICC model 900 console with noise gates,

limiters & automation in each channel (24 in x 24 out)  
**Monitor Amplifiers:** PS Audio Crown, Hafler  
**Monitor Speakers:** JBL and TAD Custom monitors, Auratones  
**Echo, Reverb, and Delay Systems:** (4) ICC plate reverb systems with digital pre delay to each, wide assortment of delays and units  
**Other Outboard Equipment:** Eventide model 949 harmonizer, Eventide flanger, ICCV EQL-2 rack-mounted equalizer limiters, PS Audio PS4A pre-amp Technics turntable, Amber 3501 Analyzer  
**Microphones:** Neumann U 87's, Sennheiser MD-421's, assorted Shure, AKG etc  
**Instruments Available:** Yamaha CF grand piano Linn drum machine, Roland CR-68 drum machine, Prophet 5, Minimoog Synthesizer, studio custom selected drum set, Marshall and Mesa guitar amps, Hammond B-3 organ  
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**Studio Manager:** Robin Yeager  
**Engineers:** Chief Engineer Robert I. Missbach, Robin Yeager, Gordon Lyon, Independents available & welcome  
**Dimensions of Studios:** 25' x 35' irregular (including iso's), Ceiling 12' to 14', Drum booth 9' x 8' x 12'  
**Dimensions of Control Rooms:** 19' x 18' w/ceiling from 12' to 9' to 14'  
**Tape Recorders:** MCI JH-24 w/Autolocator III 16/24 track, (2) Ampex ATH-102 w/SSI transformerless I/O's, 2 track, (2) Otari MX5050B 2 track, Pioneer RT 2022 2 track, RT 1050 2 track, Aiwa JVC, Technics cassettes, most digital formats & brands available  
**Mixing Consoles:** MCI JH 528B w/Aphex VC-AS & custom mods 28 x 28 x 2  
**Monitor Amplifiers:** Control room (2) Crown DQ 2000's w/Delta Omega Modules (1300 watts each) for mains, PS-400 for Auratones, Studio Monitors, BGW 750, Headphones Crown D 150's, Crown PS 400, D-60  
**Monitor Speakers:** Control Room mains UREI 813A, Studio UREI 811, MDM4's, Auratone C5's, AKG & Koss headphones  
**Echo, Reverb, and Delay Systems:** Studio technologies Ecoplate 1, Lexicon 224X, Eventide 949 Harmonizer, Lexicon Prime Time, Marshall Time Modulator, DeltaLab DL 4 w/memory module, A/D/A STD 1, echo & outboard equipment packages available to suit your need  
**Other Outboard Equipment:** Allison Research Kepex & Gain Brains, UREI LA4's, Teletronics LA-2A, Symetrix gate, CL-100 wide-esser, Furman parametric EQ, White 1/2 octave EQ  
**Microphones:** Neumann U-87, Crown P2Ms, AKG C414EB, C452EB, D224E, D2100 E, D170, D12, D20, RCA 77DX, Sennheiser MD421, MD441, E-V RE-20, Beyer M500, M201, M260, Shure SM57, SM54, SM7, SM61, SM80, SM81, SME1, PG/S1190, STTC 4078  
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**Dimensions of Control Rooms:** 19 x 24  
**Tape Recorders:** MCI JH-24 24 track, MCI JH-110B mono, MCI JH-110B 2 track; Pioneer PT-701 1/2 track, Technics MS 85MK II cassette, TEAC C3X cassette  
**Mixing Consoles:** Neotek III modified transformerless, 28 in x 24 out  
**Monitor Amplifiers:** Hafler DH 500, (2) Hafler DH 200, Hafler DH202, Sanyo integrated  
**Monitor Speakers:** JBL 4435, 4311; Yamaha NS10M, Auratone 5C, ADS L520  
**Echo, Reverb, and Delay Systems:** Lexicon 224X, EMT 140TS, Lexicon Prime Time 93, (2) Lexicon PCM 41, (2) Eventide Harmonizer, (4) DeltaLab DL-1  
**Other Outboard Equipment:** ADR Compex limiter, dbx 160, UREI 1176, Orban 424A, Orban 622B, Sontec parametric, (2) Teletronix LA-2A, Lang EQ, Pultec EQ, (2) Symetrix S6-200, Aphex Aural Exciter, (2) API 550 EQ, (2) B&B EQ  
**Microphones:** AK6 414 EB, 451 EB, C-61 (tube), D12 E, C-12 (tube), Beyer M500, Countryman E101 & T-85, E-V RE 20; Neumann, V-47 (tube), U-48 (tube), U-67 (tube), U-47 let, U-87, KM 84, KM 88, Telefunken 241 (tube), Norelco C-60 (tube), Sen-

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**Instruments Available:** Yamaha C-7 grand piano, Fender Rhodes (Dyno-My piano), LinnDrum, Gretsch drums, Prophet 5, misc percussion instruments  
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**Dimensions of Studios:** 22' x 25' x 12'  
**Dimensions of Control Rooms:** 18' x 18'  
**Tape Recorders:** MCI JH-24 w/Autolocator III 24 track; Ampex ATR 100 2 track; Otari 5050B 2 track, (2) Hitachi cassettes.  
**Mixing Consoles:** Custom 48 x 48 w/24 subgroups, built w/Hardy 990 op-amps & Jensen transformers, 12 sends, 410 point patch bay  
**Monitor Amplifiers:** BGW, Crown  
**Monitor Speakers:** Westlake Auratone  
**Echo, Reverb, and Delay Systems:** Lexicon model 200 digital reverb, Lexicon model 95 Prime Time II digital delay, MICMIX reverb, custom plate reverb, DeltaLab DL-1 delay, Audio & Design flanger module and auto-pan module  
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**Dimensions of Studios:** 30 x 32 main studio, iso booths 12 x 12 and 13 x 12  
**Dimensions of Control Rooms:** 25 x 25  
**Tape Recorders:** Studer A 80 24 track, Studer A-80 1/2" 2 track, Ampex ATR-102 2 track, Ferrograph Studio 8 2 track  
**Mixing Consoles:** Trident, 28 in x 24 out  
**Monitor Amplifiers:** BGW, Phase Linear  
**Monitor Speakers:** UREI 813's, Tannoy Gold, JBL 4311, Auratones  
**Echo, Reverb, and Delay Systems:** AKG BX-20, Marshall Time Modulator, live chamber with 3 second decay and 5 millisecond delay  
**Other Outboard Equipment:** (2) UREI LA3A, (2) UREI 1176 LN, Kepex's, Gain Brains, dbx 160 limiters, Scamp sweep EQ, Scamp noise gates, Eventide Harmonizer with keyboard, 2 channels Trident parametric EQ, 4 channels Orban parametric EQ, White 1/2 octave EQ, 26 channels of Dolby noise reduction.  
**Microphones:** Neumann U 87, KM-84, Sennheiser 421, 441, E-V RE-20, AKG 414, 452, D200, D202, Calrec 1050, 654, Beyer M 500; Sony C-22, Shure SM 56, Countryman direct boxes.  
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**S**ound can be a problem—when it appears where we rather it wouldn't. It's easy to make noise, and tough to eliminate it.

by Ken Pohlmann

Nope, not those marvelous pieces of electronics manufactured by Dolby or dbx which reduce tape hiss, but rather the knotty question of acoustics in which designers try to lower the sound level—that is this month's application topic. Not for you, you say? Your studio is as quiet as the tomb, when you turn your monitors down there is nary a whisper from the session on the other side of the glass, no need to use shock mounts on the microphones to keep the freeway traffic from sneaking onto the tape, even with a digital recording your air conditioner produces no playback rumble? Well then, congratulations—you

your acoustical design budget is spent in trying to control it. This is one reason why studio owners generally become eccentric (pronounced *crazy*).

Fortunately, even though it might cost a million dollars to deal with the problem, at least we can understand the principles which are making us pay so dearly. Sound can be transmitted either as airborne noise or structure-borne noise, or a combination of both. In general, any sound originating and propagating in air is classified as airborne; for example, transmission along air paths such as open windows, cracks between door and jam, electrical conduits, and ventilating ducts are all airborne.

Also, diaphragmatic motion of partitions, inducing sound energy from a source room to a receiving room, is considered airborne. Noise originating directly from impact or mechanical motion such as slamming doors or a poorly isolated air conditioner can be transmitted as structure-borne noise; since more dense materials are better (and faster) acoustic conductors, noise can travel easily throughout an entire structure as structure-borne noise. In the days of the Wild West, Indians listened for approaching trains by pressing their ears to the rails—what could not be heard in open air was clearly audible through the metal. As you might expect, the two transmission mechanisms call for different solutions. Also, the two fundamental treatments, absorption and isolation, differ in their utility; for example, a porous material might be a good absorber, but a poor isolator.

A partition's ability to contain sound is expressed as its transmission loss (TL). Specifically, the TL is the throughput reduction in incident sound energy in decibels. A staggered stud wall might have a TL rating of 40 dB, thus an incident energy of 90 dB would be reduced to 50 dB on the other side. Therefore, the higher the TL, the greater the sound insulation. A partition sealed against air leaks transmits sound through diaphragmatic motion; the more massive the wall, the less

# NOISE REDUCTION

can skip this article. On the other hand, since a rock and roll drummer just moved into the downstairs part of my house, I feel compelled to write it.

Sound can be a problem—for example, when it appears where we rather it wouldn't. You know it's especially bad when we begin referring to it as "noise", and begin making calculations for "noise control" or "noise reduction". Unfortunately, as I mentioned before, it's a very knotty problem. It's easy to make noise and tough to eliminate it. In a recording studio, a place where both things have to occur in the extreme, an impossibility is quickly reached. In general, probably 99% of your hardware budget is spent in generating and manipulating sound, and 99% of

diaphragmatic motion. Specifically, the TL of a mass-controlled partition increases 4.3 dB for each doubling of weight. Obviously, the law of diminishing returns soon discourages the use of mass increase as an effective means to boost TL, otherwise you would find some very heavy walls in recording studios. Also, a phenomenon known as the coincidence effect lowers the actual TL as resonances increase the wall's diaphragmatic motion. Thus massive walls are not the answer; for example, a TL of 60 dB would require a solid concrete wall 2 feet thick, or it could be achieved with two stud walls isolated six inches from each other. In general, discontinuous construction provides the best TL for a given cost. The secret is to minimize structural links between the partitions—any rigid path serves to shortcircuit the isolation. Staggered stud walls provide surprisingly good isolation. An absorptive material such as fiberglass inside the partition contributes modestly to TL, provided it doesn't introduce a semi-rigid link, in which case it could lower the TL.

Doors and windows present serious isolation problems; they are weak links in terms of TL. As we men-

tioned, an air leak provides an easy transmission path; for example, a 1 square inch hole in a 100 square foot gypsum board partition will transmit as much sound as the rest of the partition. Thus all doors and windows must have air-tight seals. Doors should be solid. Some designers specify two doors laminated together or one door fortified with acoustic insulation. An ordinary wood door has a TL of 20 to 25 dB, while specially made doors can go to 50 dB and beyond. A seal might add 4 dB TL and a compression seal (400 lbs. against the door) might add another 4 dB. A sound lock is the classic construction, combining separate partitions, edge gaskets, and massive doors. Windows similarly must rely on multiplicity; in other words, several isolated panes are more effective than one thick pane. The individual panes should be of different thicknesses to minimize resonant transmission, set at different angles, and be mounted in felt or rubber to reduce direct transmission paths. The air space is critical; the larger the better. For example, increasing the spacing between two 1/4 inch panes from 1/4 inch to 1/2 inch will add 3 dB of isolation.

Even with carefully designed

windows and doors, it is still an uphill battle; in a composite construction the net TL is usually close to the weaker element TL. For example, a brick wall might have a TL of 50 dB at 500 Hz whereas a glass wall only 20 dB. For a composite construction in which 7/8ths of the wall is brick and 1/8th is glass, the composite TL is still only about 29 dB. The point is that noise reduction between rooms is highly dependent on the totality of the design, and a design's success is measured by its greatest failure. The front wall of a control room (or whichever wall has the glass) usually presents the greatest noise reduction challenge. When glass goes out of style and TV monitors are in, acousticians will breathe a little easier.

Although absorptive material does not exhibit sufficient insulation properties for use alone as isolators, when used in conjunction with insulation material they can contribute to isolation. One type of absorber, a porous absorber, acts as a sound trap in which energy enters the material and is dissipated as frictional heat. The simple test for a good porous absorber is this—if you can blow smoke through it, it contains the right kind of interconnecting channels necessary to



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trap sound. The TL provided by a porous absorber is proportional to the thickness of the material; it can be expressed as unit loss per thickness and thus is more efficient than the mass doubling law of solid barriers. Unfortunately, their TL is not great; a 6 inch layer of rock wool with a density of 5 lbs. per cubic foot would yield a TL of only 14 dB at 800 Hz and 19 dB at 1500 Hz. The addition of a porous blanket inside a partition serves some good, but not much—a simple air space would probably do almost as well, and cost a lot less.

The real utility of a porous absorber lies in its ability to reduce the noise level in a room; we use the

Noise Reduction Coefficient (NRC) to measure a material's ability to absorb sound. For example, suppose a 35 x 50 x 10 foot room has a ceiling with an NRC of 0.03 and with other absorbers contains a total of 210 Sabins of absorption. If a new ceiling with NRC of 0.55 is added, the number of Sabins is increased to 1100. The noise reduction would be approximately 7 dB, and the reverberation time would be reduced from 4 seconds to 0.7 seconds. The point is, that the problem is lessened at the source, thus some of the noise reduction burden is taken from the isolation's requirements. By way of another example, consider a noise source of 70 dB

in open air. If we cover it with a porous absorber the outside level decreases only to 67 dB. If we put a solid barrier around the source, the noise level might go down to 50 dB. And if we line the inside of the barrier with the same absorber, the level will go down to 43 dB. Thus an absorber is most effectively used in conjunction with a partition to decrease incident energy on the partition. However, the law of diminishing returns also applies here—the first few extra absorption units do the most good; the noise levels in an already heavily absorptive room would be barely affected by adding more absorption.

Structure-borne noise can often be dealt with in a more straightforward manner; if at all possible, the noise should be suppressed at the origin. Think again about the Indians and the train tracks—once that sound got into the rails, there would be no way to suppress it. Only at the source itself, the locomotive's wheels, can the problem be approached. The same is true with footfalls, slamming doors, and vibrating air conditioners. Impact noise must be reduced with heavy carpeting or padded linoleum to isolate the impact transmission to the floor. Floating floors must be employed to decouple the noisy floor from the structure (or the floor from the noisy structure). Isolation mountings must be provided for any kind of machinery such as blowers and air conditioners, and the units should be mounted on an independent concrete slab away from the studio. All connections must be decoupled with flexible fittings to prevent vibrations from travelling to the studio. When installing new machinery and in doubt, consult the manufacturer for recommended methods to isolate the machinery—questions such as loaded and unloaded isolators, static deflection and transmissibility require careful analysis and mean the difference between forever using the low end roll-offs on your microphones, or not. In general, source treatment in terms of padding, discontinuous construction and isolation mounting is the answer to structure-borne noise. If it's not stopped at the source, the problem is almost insoluble.

Noise reduction isn't easy and, moreover, isn't cheap. The best cure is prevention and that is becoming more and more difficult in a world of high SPL's, both in terms of street ambience and musical tastes. If it's any consolation, I suppose the busier and noisier things get, the less time we'll have for silence. Meanwhile, I have to talk with that drummer downstairs; his kick drum has just loosened one of my fillings, bottom left molar. ■

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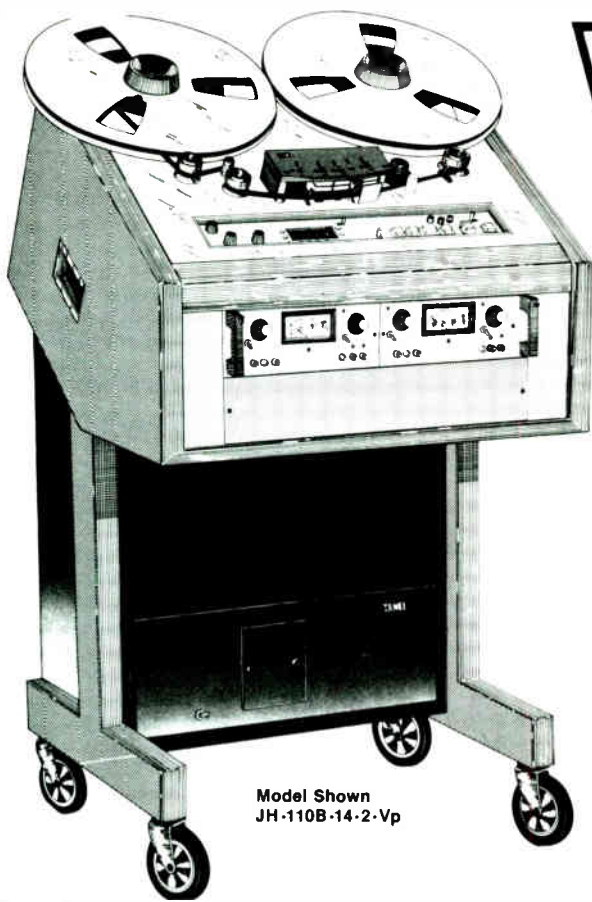
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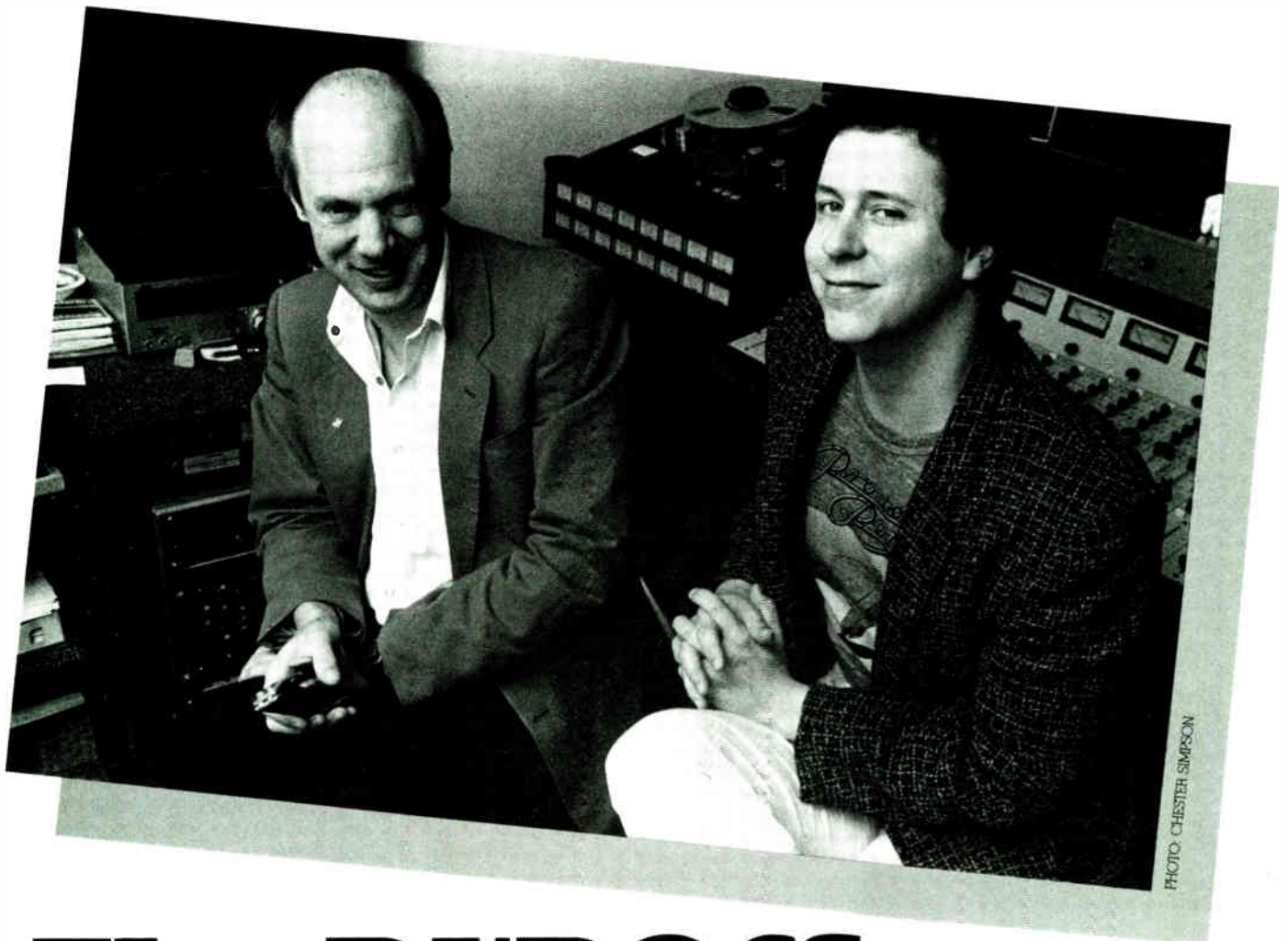
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## The DUROCS

**Ron Nagle  
and  
Scott Mathews.**

by Jack McDonough

Most people in the music business know the team of Ron Nagle and Scott Mathews either as songwriters or as The Durocs, the whimsical name under which they recorded one album for Capitol in 1979. (A duroc is a type of pig known, in part, for its large testicles.) Their best known song, and one fully representative of both their offbeat humor and Spector-ish production tastes, is "Don't Touch Me There," made famous by The Tubes, although Barbra Streisand sold more copies of "Cabin Fever" and "Don't Believe What You Read," both of which were on her *Superman* LP. Pablo Cruise, Sammy Hagar and Michele Phillips

have also recorded Nagle songs, and the duo has likewise received strong notice for their sound-effects contributions to the soundtracks of *The Exorcist*, *The Sorcerer*, *Cat People* and other films.

Now, however, with the simultaneous release of two different albums, John Hiatt's *Riding with the King* and Paul Kantner's *Planet Earth Rock and Roll Orchestra*, Nagle and Mathews are at last stepping into their own as producers. Side one of the Hiatt album—made up, in fact, of the very same six songs submitted to Geffen records as a demo of what the two could do with a talented writer—was recorded at The Pen, the Nagle/Mathews cottage studio in the Bernal Heights neighborhood of San

Francisco (side two of the Hiatt album was produced by Nick Lowe.) All of the Kantner sci-fi fantasy was produced by the team, and although most of that was done at San Francisco's Automatt, the pair worked long hours at The Pen adding a fantastic array of bizarre sounds to the LP.

Though the two albums appeared in the same week in October, there are a number of key differences between them. For one thing, they co-wrote three of the Kantner "songs" (their contributions are actually more sound collages) but none of the Hiatt tunes, and they cranked out the Hiatt material in less than two weeks, while the very ambitious Kantner project stretched over a year and a half. The Hiatt LP is more typical of the highly self-contained way the two tend to work on their own, with multi-instrumentalist Mathews serving virtually as one-man band: he backs guitarist Hiatt on drums, bass, keyboards, sax, slide guitar and vocals. The Kantner album, on the other hand, because of its futuristic concept, shows off all sorts of the sound-effects expertise of which the team is rightly proud, and while Mathews again checks in on almost a dozen instruments (with Nagle playing some piano), Kantner also called on thirteen other friends—including most of Jefferson Starship—to create the sound he wanted. Between the Duroc's own contributions and Kantner's cast of thousands, a multi-layered, highly complex work was created. This pair's tongue-in-cheek motto isn't "We Shall Overdub" for nothing!

The step to full-status independent production was inevitable for Ron and Scott, who are so enamored of studio doodling that they created a double-cassette demo set of 31 originals (dubbed "31 Flavors") in hopes of placing the songs with interested artists. In a world where even a six-song demo can test the time limit and patience of A&R people, a 31-song demo is, if nothing else, a sure monument to both confidence and *chutzpah*, especially since all the tunes get the full Nagle-Mathews production treatment.

"We were sometimes criticized for it," acknowledges Nagle. "People would say the demos were too elaborate, that we weren't just hawking our songs. They say, 'It sounds like you guys want to be producers,' because we'd do all the ideas we wanted on the songs. But at the same time, those demos were instrumental in getting our production deals. But now we are going back to making simpler demos."

"It works both ways," adds Mathews. "If we spent all of our time just producing other people's songs

and executing other people's ideas, we'd go nuts wanting to get back to our own stuff. So it goes back and forth all the time. One thing feeds the other."

"Sometimes it's more fun," says Nagle, "working with other material just because it's not as precious as your own, so you don't mind hacking away at it, making changes or being assertive about what you think will sound best."

The unusual partnership—Nagle is sixteen years older than Mathews—began in 1973 when the two were introduced by Bay Area journeyman guitarist John Blakely and discovered quickly that they had the same penchant for studio sound creation.

"I'd done recording work in Los Angeles," recalls Scott, "and I'd been in various bands, and I knew I wanted to concentrate on recording. The idea of working on something different every day was so appealing. I loved going into the basement and doing these things, and nobody my age who was in bands really cared about that end of it."

While Nagle cracks about their "father-son act," he emphasizes that "this is definitely not a senior mentor relationship. Scott is my age so far as what he knows musically. There are very few holes in his musical history and in certain areas he knows more than I do."

The Hiatt and Kantner projects come at an auspicious time for the team, since The Pen, while operative for about three years now, has just been completely finished to their satisfaction. They did most of the work on the studio—right next door to Nagle's home—themselves, with some professional advice and help from many friends. The studio is a 12x23 space, with an 8x13 control room, a 6x8 drum booth and "a 4x7 bathroom that we often use to record in." They record onto a TEAC 85-16 one-inch machine through a Quantum QM 168 console.

The Pen is, naturally enough, these good-natured iconoclast's favorite place to work—"small room, big sound" is how Scott describes it—although Nagle says they prefer to do their mixing elsewhere.

They mention Ray Charles and Jerry Lee Lewis as two artists they'd like to work with if they had a fantasy-island choice, but both likewise stress the virtues of working with an unknown.

"Name acts are good in theory," says Nagle, "but there's lots of ego and other things to go through. Creating fabricated groups in the Spector sense or breaking a new act can be every bit as exciting." Like, say, The Durocs? ■

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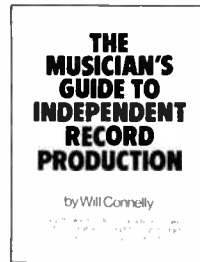
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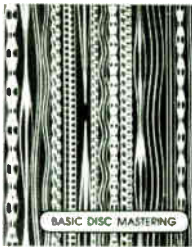
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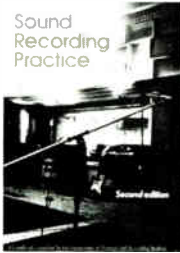
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# DIGITAL DISCUSSIONS

## Phase 2

## Digital and Analog at

# STUDER

by Dr. Roger Lagadec  
and Bruno Hochstrasser

Studer sales of high-quality A800 analog multichannel recorders in the last twelve months exceed the world-wide production and sales of multichannel digital recorders over the past five years. Studer's yearly sales of high-quality analog two-channel mastering recorders compare well with the world-wide sales of professional digital mastering units of the same five years. And so on.

Surprised? Analog serves a huge market, and—if made well, and supported professionally—analog sells well. It is no secret that digital's huge development costs cannot lead to immediate profits.

### Where are the standards?

Standards in digital audio are a hope, not a fact. There has been progress: we have one professional sampling frequency; we have an almost-standardized digital audio cable. But no recording format yet, no control interface, no way to design smart systems, as made possible by digital's huge potential. In the three-and-a-half years of its digital audio activities, Studer has given impetus to the long walk towards standards; but much remains to be done. Until there are standards, digital audio will be glamorous, it will be high technology, but it will not be professional.

### Some progress:

The real beginning of the digital audio era was marked by the introduction of a consumer product, the compact disc. It is sobering that a consumer product should set the pace for professional standardization. In

standards, one recent progress was the re-definition, based on new developments from Studer and Matsushita, of the DASH (digital audio, stationary heads) format, which now extends its strong features of error protection to the 19.05 cm/s two-channel recorder. Another is the common proposal, by Studer and the BBC, of labels, which extend the concept of user's data to both the transmission and recording of every channel of digital audio. Good news; but there still are more than a dozen formats in daily use for recording digital audio.

### Studer's entry in digital audio:

Studer has entered digital audio rather recently, and much money and effort has been invested in learning the state-of-the-art and defining what must be improved. The prototype A808 PCM recorders (which will not be marketed) are examples of this learning phase.

It is significant that Studer's first digital audio products on the market were not recorders, but units for signal processing (the sampling-frequency converter SFC-16, the preview unit DAD-16). In our experience, every major technology used in a professional digital recorder has proved to be inadequate and to require development efforts:

- Higher precision mechanics are necessary in handling and winding the very thin tapes of digital audio.
- The electronics, both analog and digital, used in today's digital recorders can and must be improved. The circuits can be made smaller, less

power-hungry, more reliable, and cheaper.

- The ergonomics of digital differs partly from that of analog, and must be carefully re-assessed.
- The economics of today's digital recorders just do not add up to a profit. The quantities are too small, the circuits often crude and always expensive, the cost of repair, maintenance and product support too high. A look at today's market, alas, confirms all of the above.

At present, Studer works towards a generation of stationary-head recorders which will be profitable, reliable, reasonably priced, and will receive the same market support as Studer's other professional products. This involves a new concept for both electronics and transport.

Along with the development of digital audio recorders, new areas in digital signal processing, control, and systems design are being studied.

### Studer's attitude in analog:

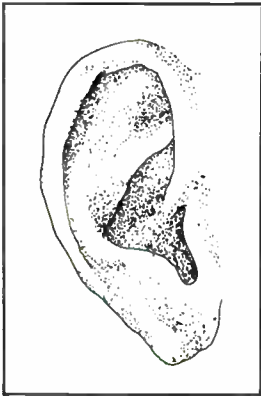
Due to the technical requirements and financial constraints of today's vast majority of users, the dominating technology will remain analog for many years. Not to concentrate a major part of its development effort on further improving analog technology would mean deserting a large and vital market, as well as thousands of professional users. This has never been Studer's policy.

Analog recorders will profit from steady improvements in sound quality and operational comfort. Analog recording and mixing will remain for a long time the basis for healthy sales in the professional area. The profit will help finance developments for both digital and analog technologies.

### Studer's attitude in digital:

The development of a family of digital audio recorders is a high-priority task at Studer. The Studer range of professional analog recorders will be supplemented by a range of digital recorders based on the same concepts. The transports will be of high quality, with a new design tailored to the requirement of digital. The electronics will bear the mark of Studer's efforts in digital audio development. The digital products will be, in today's state-of-the-art, invariably priced higher than the analog counterparts: better signal quality has its price. As to which products, analog or digital, have the better sound, the users will decide.

This article has been reprinted from the September, 1983 issue of *Swiss Sound*, a Studer Revox publication.



## WHEN IS A ROSE A ROSE?

by David Wilson

**Editor's note:** This month we kick off a new column intended for the audio purist. Anchored by David Wilson (whom you may remember from last month's feature, 'Understanding the Audiophile'), this department will deal with the considerations of those consumers who take great care in extracting the ultimate from their recorded source material.

One of the great debates in audio today is whether two different audio devices, particularly amplifiers, with identical measured specifications can sound different when tested under controlled conditions. Those who hear no differences assert that, of all the components of the audio chain, the amplifier is the most perfect, being obviously more linear in frequency response and lower in THD and IM distortion than any of the system's transducers or purely mechanical elements. Supported by graphs with all kinds of straight lines, this certainly is a comfortable stance for anyone who is inclined to believe that a rose is a rose is a rose.

I am reminded of a similar debate, this time in medical and consumerist circles, which occurred in the early '70s over the issue of generic vs. branded pharmaceuticals. It seemed obvious to any consumer that 250 mg of generic tetracycline antibiotic which satisfied United States Pharmacopeia (USP) specifications was identical to a "brand name" tetracycline such as Achromycin. It seemed almost immoral to some that an ailing consumer should get ripped-off by having to pay 50% to 100% more for the brand name stuff. Establishment big-business, capitalist pigs!

Really? Well, what the average consumerist didn't seem to know was that when bioavailability studies were performed, which measure the amount of drug that actually makes it into your bloodstream after taking one of those 250 mg capsules, the generics were almost always measurably, and sometimes grossly inferior to the branded tetracycline. Folks paid less, and unwittingly got less. Tetracycline was only one example—others included chloramphenicol, digitalis, and erythromycin all with similar test results. Why? The USP tests only establish the chemical integrity of the drug chemical itself. USP says nothing about the tableting excipients (waxes, talcs, etc.) or compression-forming pressures, or any other of a vast number of (often proprietary) factors which make the drug work better in the patient's body...in other words, system interface factors.

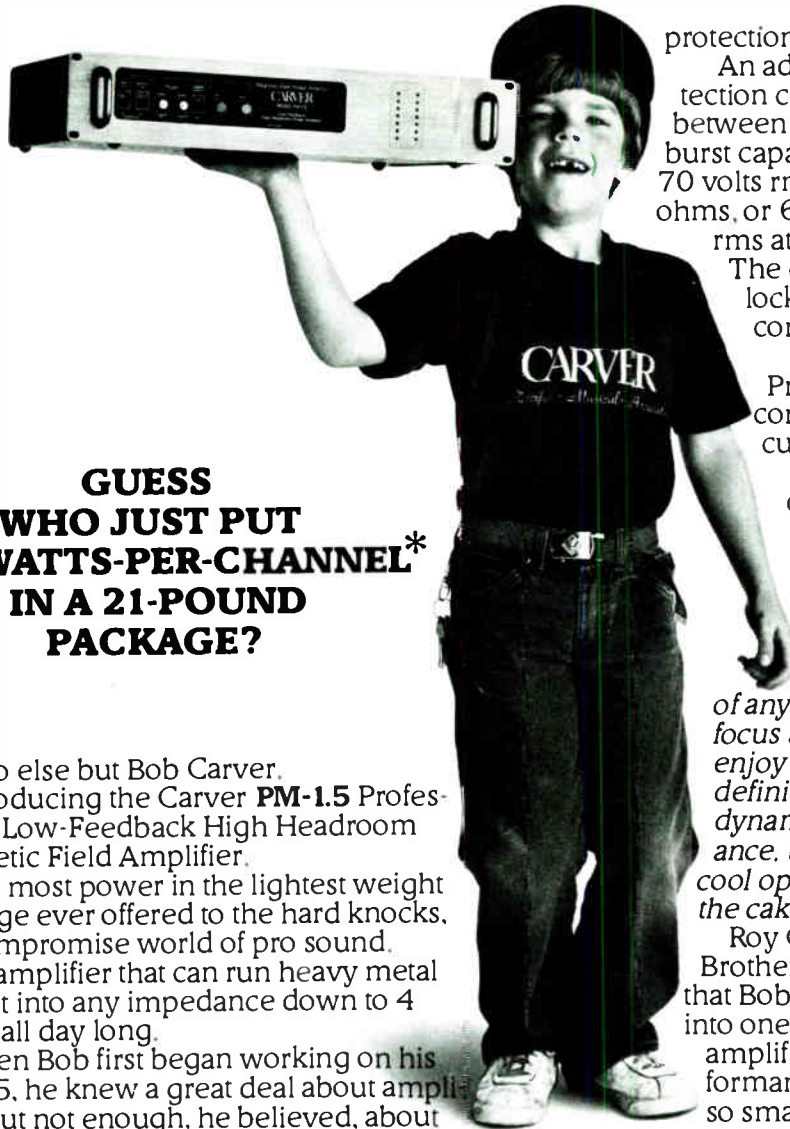
A similar problem occurs when steady state test measurements such as one watt frequency response, full power intermodulation and total harmonic distortion, channel separation and damping factor are accepted as a complete and perfect descriptor of a power amplifier's performance. These measurements do tell us some important things about an amplifier's electrical performance into a non-inductive load, but do they adequately predict how the unit will perform with a given loudspeaker load under the dynamic signal conditions of music? Instead of being a purely resistive load, what if it is a highly reactive loudspeaker, playing music at high levels, and pumping EMF voltages right back into the amplifier's outputs...its "back doors," so to speak? Might amplifiers differ in their ability to handle this back EMF? What of the reactive frequencies? Can the

amplifier supply enough current at those "near-short circuit" frequencies? Are the amplifier's input, driver, and output stages fast enough to track high frequency transient information at high levels? Is the amplifier stable in the ultrasonic range into a given loudspeaker load...or, indeed, a given speaker *cable* load?

These are *all* important "real world" considerations pertaining to the sonic performance of an amplifier. How can steady-state measurements into simple resistive loads establish an amplifier's performance under *any* of the dynamic, reactive load challenges mentioned above? "Perhaps", one may say, "new tests are needed." To this, one must certainly concur.

Regarding the alleged "lack of sound" of amplifiers, remember that there is a difference between something which "cannot be measured" and something which simply hasn't been measured yet. This author will, in the meantime, steadfastly maintain that, under proper listening test conditions, audible differences between so-called "equivalent" amplifiers can at times be not only audible, but extraordinarily obvious and significant.

Those who claim to hear no differences in amplifiers usually also deny the audibility of many other audio design variables such as capacitors, cables and turntable mats (to name just three of many). Even some engineers maintain that, for example, any 10 mfd, 100 WVDC non-polar capacitor will sound like any other, regardless of dielectric or lead material. A capacitor is a capacitor, right? In fact, no! Audiophiles years ago began actively experimenting with capacitor upgrades in their equipment. The general trend was that in series, fairly constant impedance applications such as interstage coupling caps and input DC blocking caps,



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When Bob first began working on his PM-1.5, he knew a great deal about amplifiers but not enough, he believed, about the night-in night-out requirements (and wish dreams) of the pro sound world. And so he spent much time consulting with a large number of sound reinforcement professionals, including the "pros' pro," Clair Brothers.

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Others wanted rear rack-mounts, adjustable protection circuit thresholds, front panel selectable clipping eliminator, and even a sequential soft-start power-up mode.

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Roy Clair and Ron Borthwick of Clair Brothers said it this way, "We are amazed that Bob was able to put the same wattage into one-fourth the volume of conventional amplifiers without sacrificing audio performance. It's hard to believe that an amp so small and lightweight can put out so much clean power. But it does!"

Whether you run a megawatt sound company, a struggling bar band, or a recording studio gearing up for digital, the PM-1.5 will pay you. In increased portability and reduced freight costs. In freedom from expensive blown drivers. In sheer sonic excellence.

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\*Power: 8 ohms, 450 watts/chan. 20 Hz-20 kHz both channels driven with less than 0.1% THD. 4 ohms, 600 watts/chan rms 20 Hz-20 kHz both channels driven with less than 0.1% THD. 16 ohms, 300 watts/chan. 20 Hz-20 kHz both channels driven with less than 0.1% THD. 2 ohms, 525 watts/chan. at clipping, 1kHz, with less than 0.2% THD. Note: 2-ohm specification for information purposes only. Operation at 2 ohms is permissible but not recommended. **IM Distortion:** Less than 0.1% SMPTE. **Frequency Response:** -3 dB at 3 Hz, -3 dB at 80 kHz. **Damping:** 200 at 1 kHz. **Gain:** 26 dB. **Noise:** Better than 115 dB below 450W A-weighted. **Input:** Balanced to ground, XLR or phone. **Impedance:** 15k-ohm each leg, balanced to ground. **Bridging:** 1200W into 8 ohms, 1000W into 16 ohms, accessed through rear-panel recessed switch. **Dimensions:** 19 in wide, 3 1/2 in high, 10 1/4 in deep. Weight: 21 lbs.



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beaded tantalums and sum electrolytics sounded the worst. The sound got a little better with mylar film types, and better yet with polypropylene, polystyrene, and teflon dielectric units. Sometimes the improvements were subtle, but some substitution resulted in improvements which, over a high resolution playback system, were dramatic.

Were audiophiles just "hearing things"? Sometimes, yes. Sometimes, due to lack of technical expertise, the substitutions actually degraded the performance of the unit by making it unstable. The altered sound, because it was different, was sometimes enthusiastically proclaimed as "better". But progress was made by perceptive professionals and audio amateurs alike, and today we have a good handle on "capacitor sound". Dielectric absorption (DA) seems to be a major factor in the sound of caps. Capacitors such as the tantalums or electrolytics exhibit the highest levels of DA at around 4% to 5%, polypropylene and teflon have DA levels of less than 0.25%. It is interesting to note that beaded tantalum caps actually behave as semiconductors. Who would really expect perfect asymmetrical signal transfer function from a diode? John Curl has recently been testing capacitors using a test that feeds an asymmetrical pulse into the cap, then measures the cap's spurious output after it has supposedly passed the test waveform. It is as though the cap is "ringing". Some of the caps continued to spit out "junk" for three times the duration of the test pulse at a level of 3% of the test signal. Other caps were virtually perfect in "shutting-off" after the test pulse. Do you suppose that this type of behavior has a sonic consequence? Can it be that, if differences are audible between one capacitor and another, that differences between electronic components, each containing dozens of capacitors, might be at least as audible? Think about this the next time you look into the chassis of some slick, compact, feature-laden electronic signal processor, equalizer, mixer or amplifier, and see a forest of tantalums and cheap electrolytics.

Are any two similar items in audio truly identical? Logically, and absolutely, it is impossible to ever establish that they are—although it is often convenient to assume it. At some point, as we look deeper and deeper into how two things compare, differences are inevitably discovered. When this is accomplished, we have gained a new level of understanding and a better grasp on reality. Reality may be measured first and perceived later or perceived first and measured later. ■

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# S STEVE SMITH

by Larry Thomas

Before drummer Steve Smith joined the platinum-selling group Journey, he had already spent several years becoming established in the world of jazz-fusion. A graduate of Boston's Berklee College of Music, Smith played with the groups of Jean-Luc Ponty and others prior to soaring into the rock stratosphere with Journey in 1978. It was the jazz side of Smith's musical personality that was reflected this year in the release of his first solo album, *Vital Information*, and on a 50-city tour with his group of the same name. This musical direction also had a lot to do with Smith's decision to build his own studio, beneath the garage of his home in Novato, California, 40 miles north of San Francisco.

"For the type of music I've been involved with a lot lately, which is jazz, you can make records in a pretty basic studio," Smith explains. "At first I thought of getting an 8-track, but I decided if I was going to go through the hassle of having a nice room built, why not spend the money and have a 24-track studio where I can actually

make records?"

"It's a lot of money, but on the other hand, I see so many of my peers who are in successful bands and make a lot of money who spend just about that much on a couple of fancy sports cars. So I decided instead of buying a Lamborghini, I'd build a studio."

Having made his decision, Smith enlisted the services of George Augspurger, one of this country's leading studio designers and a highly regarded acoustical consultant. (Augspurger has designed, among numerous other facilities, one of the studios at Fantasy Records in Berkeley, California, where Journey recorded their multi-million-seller, *Escape*.)

"George was really great in coming up with the plans," Smith says, "in how to approach it, to determine if it was a practical thing for me to do. I didn't know if the space I had was big enough to put a studio in."

The "space" was an area underneath Smith's three-car garage, which had to be excavated an additional three feet to provide sufficient height for the studio. The completed room is 50'x25' with an 11-foot ceil-

ing. The compact control room (10'x12') was added onto the house. As an extra benefit, the garage above is wired for recording, thus providing Smith with an isolated space for recording drums or other instruments.

As for acoustical treatment, George Augspurger designed the studio so that it can be tuned as needed for the requirements of each session. Mirrors, which provide a reflective surface, can be removed to reveal a sound-absorbent padding. Finish work on the studio had not been completed at press time, but Smith says the room will be finished in wood, probably a combination of paneling and slats.

When it came time to choose the equipment for his studio, Smith decided on MCI/Sony gear for his console and main recorder. The board he settled on is an MCI JH-636, with automation and 24 channels of Vari-Q parametric equalization. The recorder is an MCI JH-24 with Autolocator. All the gear was supplied by Leo's Pro Audio of Oakland, California.

"I recorded *Vital Information* [at Normandy Sound, in Warren,

—page 144, SMITH

# Touring Sound Systems

## COMMON PROBLEMS WITH SIMPLE SOLUTIONS

by Chris Michie

In 1895 when Wallace Sabine began his scientific investigation of acoustics, he immediately found himself on the frontiers of knowledge. There had been much speculation by many notable scientists of previous eras, but few of their theories stood up to serious examination.

As Sabine wrote in "Reverberation":

"No one can appreciate the condition of architectural acoustics—the science of sound as applied to buildings—who has not with pressing case in hand sought through the scattered literature for some safe guidance. Responsibility in a large and irretrievable expenditure of money compels a careful consideration, and emphasizes the meagerness and inconsistency of the current suggestions."

Eighty years after Sabine's successful modification of excessive reverberation in a Harvard lecture-hall, the library of reference material available to the sound contractor is far from meager. But there is a large body of

professional sound engineers who have neither the time and materials to modify the acoustics of their work environments, nor the inclination to plough through the highly technical literature. I am talking about the thousands of men and women who earn a living as concert sound engineers. For most of these hard-working folk it is enough to select, test, load, deliver, install, test, operate, strike and reload their equipment without attempting to improve the acoustics of the cavernous barn that the local promoter has selected.

In the world of the touring soundman "the show must go on", and theory is no substitute for duct tape. There are, however, a number of problems which occur again and again in sound system applications that have simple causes and simple solutions. As I hope to illustrate, these cases of ignorance or misunderstanding of basic acoustic principles can cause drastic degradation of the sound quality at a live show, and certainly contribute to the growing dissatisfaction among concert-goers.

### Path-Length Differences and Acoustic Cancellation

If two loudspeakers are reproducing the same single frequency and the listener is equidistant from both, then he will hear the tone. If he moves half a wavelength closer to one speaker, then the two sounds will arrive 180° out of phase and (theoretically) cancel. In a reverberant environment this may not be noticeable because of the random cancellation and reinforcement at all frequencies due to reverberation. In a free field, however, the effect can be devastating. Two or three years ago I attended a Jeff Beck concert at the Berkeley Greek Theater, a large outdoor amphitheatre on the classical model. The sound company had set up four stacks of full frequency bins on each side of the stage with three of them facing straight out and the outer stack on each side angled towards the seating at the sides of the auditorium. I chose a seat on the grass behind the 'bowl' proper and positioned myself deadcenter. From where I sat the show sounded



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The low frequency section of the SH15-2 features a 15-inch speaker mounted in a vented horn enclosure. This offers the double advantage of wide frequency response and low distortion, plus the "blow-them-away" sound pressure levels that make your audience want to stay for all your music, for all your action.

And if the excitement and the action get tough, the EV SH15-2 is built to take it. Like all EV speaker systems, the SH15-2 comes packaged in a rugged ¾-inch cabinet, covered in spill-proof, scratch-proof, stain-proof black vinyl trimmed with an edge-protecting aluminum frame.

Whatever your sound, whatever your music, whatever your action, catch the EV SH15-2 in action at your nearest Electro-Voice dealer. Hear for yourself how it outperforms the Yamaha 4115 and the rest of the competition as

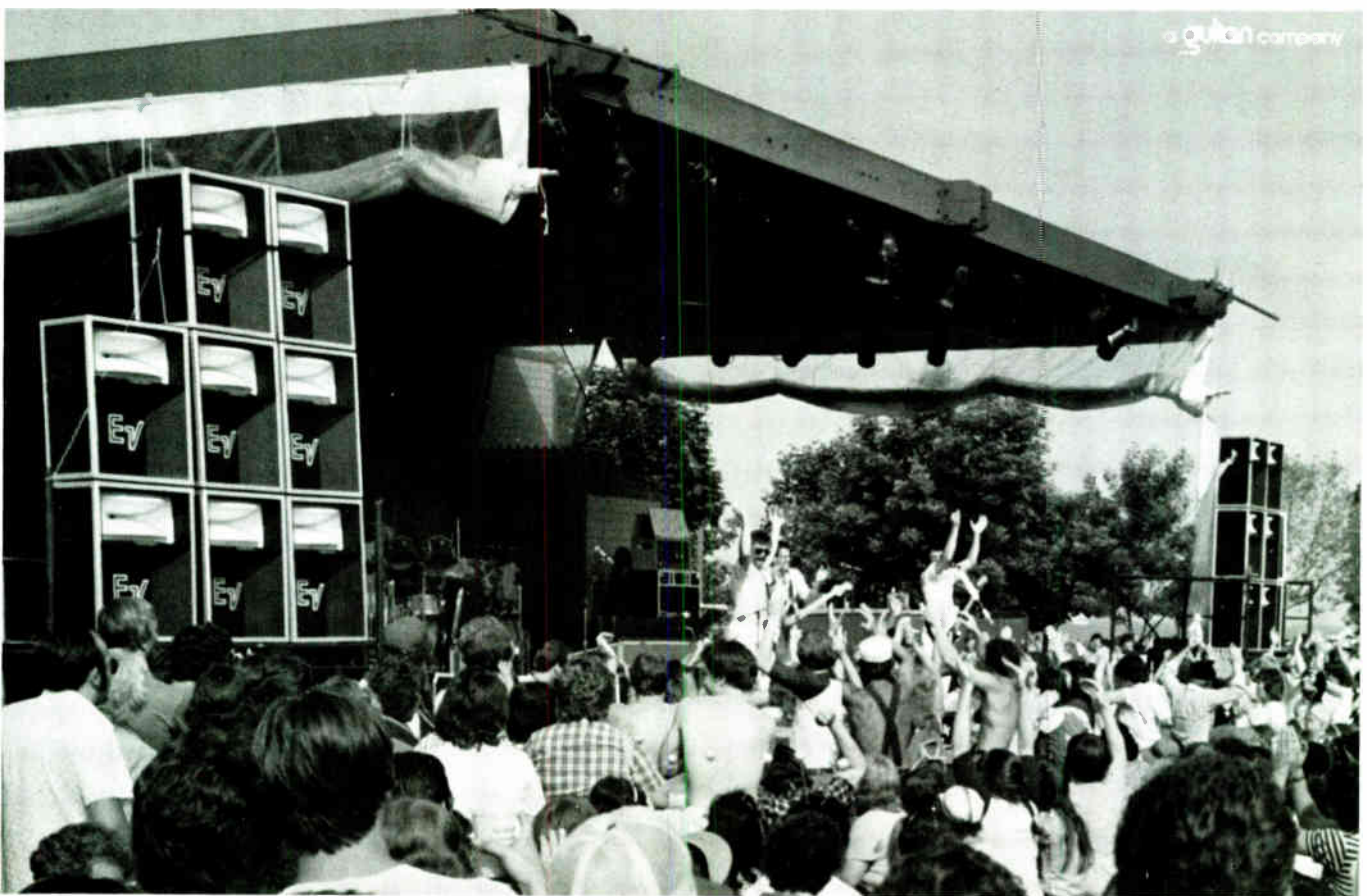
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well. And while you're there, be sure to check out EV's full family of "Sound in Action" systems and equipment, from mikes to monitors and every-

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well-balanced, though there was some extremely low bass which seemed unnecessary. During the drum solo I took a walk around the perimeter of the 'bowl' and noticed immediately that as I changed position a comb-filter effect swept through the system, wreaking havoc with the drum sound. All of the audience not sitting on the center line of the auditorium or on axis with one of the stacks were in the coverage pattern of at least three stacks, all at different distances but close enough together to be equally loud. Therefore a large majority of the audience were hearing the entire show through an acoustically produced comb-filter, and whilst not in open revolt about the fact, were certainly not enjoying the full frequency sound that I experienced.

The solution to this problem is to arrange the speaker stacks in an arc so as to simulate a point or column source behind the stacks. The radius of the arc will depend on the physical size and horizontal coverage angles of the speaker cabinets, and ideally the coverage patterns of adjacent cabinets will cross at their respective 3dB down points, giving uniform coverage over the desired total angle of coverage.

One designer, John Meyer, has cabinets with a trapezoid cross-section so the installer has merely to place them side by side to achieve the recommended array.

## Path-Length Differences and the Haas Effect

The so-called Haas Effect is in fact two effects, both examples of the brain's ability to edit and re-interpret complex sounds. If the ear is presented with a signal followed immediately by a repetition of the same signal within 35 milliseconds, the two sounds are perceived as one, adding to the loudness and intelligibility of the sound. This is called the fusion effect. If the second signal arrives later, however, it is perceived as noise and is discriminated against by the brain and effectively attenuated by as much as 10dB. This causes our attention to focus on the first arriving signal and is called the precedence effect. The most common use of the fusion effect is in the use of delayed loudspeaker systems to reinforce the main sound source at outdoor concerts, but this often gives disappointing results for a number of reasons.

Firstly, the speed of sound in

air changes with temperature and humidity, which effectively control density. (The Watkins Glen festival was one of the first to employ delay towers and apparently sounded fine until the early afternoon, when the local weather conditions rendered all the previous day's delay settings invalid.) Secondly, the amount by which the delay speaker's output may exceed the original source volume is generally limited to 10dB maximum before the image shifts to the delayed source, and even less for some types of sound, such as anechoic speech. Another point to consider is that only a proportion of the audience will be at the correct respective distances from the two (or more) sound sources, and anyone who attended the Rolling Stones concerts at Earl's Court in 1976 can vouch for the unintelligibility of multiple high SPL sources on difference delays. That concert series alone cured the British industry of its flirtation with delay towers for several years.

There is another phenomenon which applies to delayed signals arriving after 95 ms called Auditory Backward Inhibition. As the name implies, reflections or delays that arrive



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\*U.S. Patent No. 4293955. Other patents applied for.



outside the fusion/precedence window can actually inhibit the brain's perception of the early arrivals. The difficulty can be overcome by the listener, but it requires a sustained effort of concentration and is cited as a prime cause of dozing congregations in churches with poor acoustics. It can also be experienced in circular or elliptical concert venues.

In 1978 a New Year's Eve concert featuring Journey, Blondie and Stoneground was staged at the Oakland Coliseum Arena, a large elliptical multi-purpose hall. The sound crew set up the mix position at a point on the main floor symmetrically opposite one of the PA stacks at the other end of the floor. Apart from siting themselves far into the reverberant field, they had inadvertently placed themselves at a focal point for reflections from the curved rear wall. The direct sound was followed by a single loud reflection and then the usual arena-style reverberation, none of which eased the job of the mixers, and in fact the only way to accurately monitor the mix was to get within critical distance of the speaker stacks and signal suggestions to the mix position by semaphore and mime!

A related problem affects the mix position at the Greek Theater, Berkeley. The wash basin shape of the auditorium causes a regular pattern of reflection which results in pronounced standing waves and nodes of cancellation and reinforcement. As it happens the usual mix position is in one of the more dramatic null points, so engineers who fail to 'walk the house' find themselves adding bass EQ at precisely that frequency which is being cancelled at the mix position, which of course only aggravates the problem at those points where that frequency is being reinforced.

## Real Time Analysis and System Equalization

Many if not all high-power sound systems are active crossover designs with three or more separate frequency bands. In those systems which consist of separate bins, horns, tweeter-boxes etc., the sound of the system can be changed by the addition or subtraction of different components, and by the aiming of the higher Q devices. Not surprisingly, it is common to reset the crossover outputs for each hall and system configuration. To accurately set a five-way stereo crossover by ear can be a laborious process, so the appearance of affordable Real Time Analysis equipment in the mid-'70s was greeted with enthusiasm.

The most usual setup of the apparatus consisted of a Pink noise

generator feeding the loudspeaker system through a graphic equalizer. A quality microphone, situated in a representative part of the auditorium, feeds a spectrum analyzer, preferably one third octave resolution, and its columns of LEDs give a graphic read-out of the system's acoustic output. Any irregularities are corrected using the equalizer and, presto!, the system is now flat.

Well, not quite. If the microphone is situated in a null point, which is almost inevitable in a closed space, then the RTA equipment will give a low reading at that frequency. Move the microphone a few feet and the same thing will happen at another frequency.

A partial solution is to use many microphones in many positions and average the results, but this means more equipment and more set-up time. Another point to remember is that unless the microphone is within critical distance the readings will all show the influence of the room's acoustics on the system's output. To equalize the system to compensate for the poor acoustics of the room may seem a good idea, and will usually improve intelligibility of the spoken word and will increase gain before feedback, but it rarely seems to improve the musicality of the system.

There is scientific evidence (and a growing body of opinion) that

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the best antidote to a highly reverberant environment is to give the listener the highest quality direct sound possible, leaving the listener's brain to compensate for the poor acoustics. This is not to say that RTA has no place in the concert system, but incorrect use of the equipment can lead to expensive mistakes. At a Pink Floyd show in Paris during their 'Animals' tour of 1977 I was able to see and hear most of the show from the mix position, centrally located for accurate monitoring of their quad system. However, the sound, while pleasing at the mix position, was excruciatingly bright at the front of the audience. The system had evidently

been 'pink-noised' without regard for the fact that high frequencies are severely attenuated over distance. The system was no doubt capable of putting out 20 Hz to 20kHz, but to expect flat response over a hundred feet from the stage was more than a little optimistic.

In fact, the system re-equalized itself during the show due to a large number of tweeters burning themselves out!

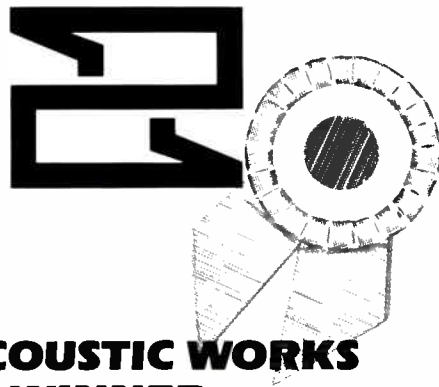
## Sound System Equalization and Hearing Damage

Perhaps the most drastic degradation of the sound quality of

high SPL concert systems is caused by the mixers themselves. The concept of Temporary Threshold Shift is not unknown to the mixing fraternity, but there is a lot of evidence to suggest it is poorly understood. According to Fletcher and Munson, the ear's response is neither flat nor uniform with respect to volume. The higher the SPL the closer to flat the ear's response becomes, but a temporary threshold shift of 10dB at all frequencies will give the listener (or patient) the impression of less bass and treble than formerly. Those who expose themselves to loud noises on a regular basis can expect a further deterioration in the 4kHz region, and alcohol in even modest amounts impairs the ear's ability to protect itself against transients. Add all this to the constant travel (sometimes in unpressurized aircraft), poor eating habits and notorious leisure activities of the touring soundman and perhaps it is not surprising that the common response to a question about a mixer's hearing ability is "What?"

Unfortunately the more the mixer boosts the frequencies he is not hearing, the worse his hearing gets, and since the band members and road crew are likely to be similarly afflicted he may not be aware of the problem. This seems to be the only explanation for the appalling sound at a recent Mary Wilson show at Wolfgang's in San Francisco. The show, featuring costumes, choreography and a highly entertaining eleven-piece band, was marred by piercing highs and mids, persistent feedback and a wholly inappropriate high SPL. This was in stark contrast to the sound of the evening's headliners, Jack Mack and the Heartattack, which was well balanced at a reasonable level and showed off the merits of the recently installed sound system, which obviously includes a high resistance to abuse.

Despite the horror stories related above, most would agree that the quality of concert sound has improved over the last decade and a half. But there is also the fact that access to bigger and better sound systems allows incompetent soundmen to torment larger audiences at higher sound levels than ever before. Presumably as audiences become more discriminating and concert tickets more expensive the number of truly bad sounding shows will decrease. But as in any business where the main concern is to stay in business, "he who pays the piper calls the tune." If the piper's employer is Ted Nugent, a man whose hearing can hardly be improved by his infatuation with guns, then the tune may well be "If it's too loud, you're too old." ■



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# WELCOME TO 1984

## AN OPEN LETTER TO GEORGE ORWELL

1 January, 1984  
Good Morning, Mr. Orwell,

No doubt by now you know about Nam Jun Paik's inspired welcome to the New Year . . . 1984, your year. He has arranged a satellite celebration of the Global Village nature of communications and the arts. Paik, the first independent owner of a Sony  $\frac{3}{4}$ " videotape machine, is credited with being the first video artist. His idea of an international live satellite cultural event that is in itself a work of art is a fitting homage to you as the author of 1984.

Something else you should know is that, almost as if on cue for 1984, scientists have announced the theoretical development of the "biochip". That's right, genetically engineered versions of the proteins and enzymes that make up the chemistry of living cells, in arrays of molecular biochips with 10 million times more power than any computer now in use. The National Science Foundation is coordinating the research in this new field and recently held an international conference on chemically-based computing in Santa Monica, California.

I know this sounds like double-speak, but scientists believe that they can transform the signal-processing ability of individual organic molecules, a thousand times smaller than the smallest silicon chip, creating three-dimensional multi-molecule biochip lattices containing as many as 20 trillion switching devices.

The most sophisticated chips hold about half a million signal-switching devices—transistors and diodes etched onto the silicon by beams of light. Even the most advanced silicon-based computers have their limits; because their switches operate by electricity which involves the flow of electrons at the speed of light, they can operate at incredible speed, but they also emit great heat energy and demand large-scale cooling systems. Space limitations create problems like tunneling of electrons across switch gaps, distorting the signal traffic, preventing the stacking of silicon chips in three-dimensional arrays.

According to researchers at the University of California at Los Angeles and Wayne State University in Detroit, none of these problems would affect chips made of biological compounds. They would transmit their signals with almost no heat output, and the signals would be transmitted by the flow of sodium and calcium ions just as similar signals move along brain cells.

The part that reminds me the most of what you predicted is that, instead of binary switches that can calculate only by being on or off, i.e., answering "Yes" or "No", we would have switches operating much like the human brain and answering "Yes", "No" or "Maybe". Molecular computers would come close to resembling the thinking and emotional processes of humans. The scientists say that these new computers would be endowed with the equivalent of human emotions. This sounds more and more like Big Brother, doesn't it?

They say a true artificial eye could be designed, so that photons of light striking input devices made of proteins would trigger enzymes to regulate chemical reactions that could signal nerve cells in the brain's visual cortex and thereby enable the blind to see. Biochips could replace damaged sensory and motor nerves in paralyzed patients to restore full use of disabled arms and legs.

As you probably know, Mr. Orwell, many people in the record business feel that what they call digital audio will help get a sluggish music industry moving again. Won't biochips make digital obsolete? Isn't it everybody's dream to go direct? Imagine every record ever recorded, implanted behind one ear and a multi-track audio/video recorder behind the other. Can you see it: Sony replaces "Walkman" with the new "Thinkperson" biochip recorders.

Once the proper proteins are developed, the scientists believe, it will be possible to develop synthetic genes, then clone bacteria carrying those genes so that the proteins would be mass-produced in bacterial biochip factories. It reminds me of your test tube baby factories, but this time for molecular computers.

They say the first artificial proteins that might act as switching devices could be possible within a couple of years. Full-scale, high-speed, super dense molecular computers are maybe 50 years in the future. Perhaps students from the Class of '84 will go on to engineer this new, ultimate technology. Even though it probably seems like old news to you, we thought you might appreciate the update. Happy 1984—you deserve it!

Sincerely,  
Lou CasaBianca  
Contributing Editor, *Mix Magazine*

# PREVIEW



## SANKEN CU-41 MICROPHONE

Sanken Microphone Co. Ltd., in collaboration with NHK Technical Research Laboratories (a research arm of Japan Broadcasting Corporation) has introduced the model CU-41 microphone designed for digital audio systems. The CU-41 consists of one small diameter condenser capsule and one large diameter condenser capsule vertically mounted beneath a protective grill. The small one picks up the upper range of audio frequencies and the large one, the lower range. The diameters of the two capsules are designed to provide an optimum balance between overall sensitivity and self-noise level. An electrical circuit combines the two outputs from the condenser capsules to produce its frequency response which is claimed to be a flat 20 Hz to 20 kHz,  $\pm 1$  dB. The unit's self noise is said to be below 15 dB and its dynamic range, 119 dB.

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## DYNAFEX INTEGRATED CIRCUIT

MICMIX Audio Products, Inc., in conjunction with Solid State Micro Technology For Music, Inc., recently announced the development of a new integrated circuit utilizing the proprietary Dynafex noise reduction technology. This new IC is said to provide 30 dB of noise reduction without the encode/decode process on virtually any audio signal.

The proprietary circuitry (patents pending) developed by MICMIX incorporates dynamically variable bandwidth limiting, along with the sophisticated type of automatic gain reduction called "downward expansion". The bandwidth limiting circuitry continuously analyzes and responds to frequency content of the input signal, while the expander section analyzes and responds to signal amplitude. Since these two types of noise reduction occur simultaneously, the designer claims a greater amount of noise reduc-

tion can be realized than in typical dynamic filtering schemes. According to MICMIX, the Dynafex circuitry provides a wider range of audio applications than a companding (encode/decode) system.

According to SSMT, production qualities will be available in the first quarter of 1984. SSMT will be selling the chips to qualified OEM's through a sub-licensing agreement.

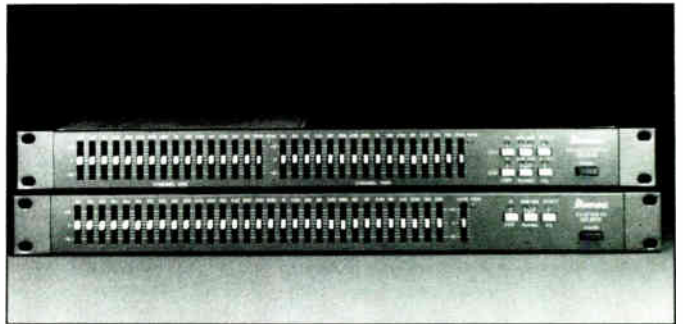
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## DIGITAL SIGNAL ROUTER/DSR

This device was designed and built by Rick Davis for Digital Services' (Houston, TX) Sony PCM 3324 and PCM 1610 digital tape machines and is a signal routing system for audio in digital form. The unit precludes unnecessary A-D/D-A conversions, to select tracks and transfer them from multitrack to multitrack, multitrack to 2 track, 2 track to multitrack, 2 track to 2 track and combinations of the above, simultaneously.

The use can send any of the 24 tracks to two separate busses which are then routed to the 2 track output as well as the multitrack output. Each buss on the output side can send to any of the 24 tracks on the same machine or a different one. This DSR utilizes Schmidt trigger tri-stateable receivers, buffers and drivers for the Audio and Word Sync while the logic for track decoding is accomplished with LS-TTL in BCD fashion. The appropriate Word Sync is selected and routed along with the audio. Although built for Sony machines, it can be adapted to work with other brands as well.

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## IBANEZ SINGLE RACK SPACE EQUALIZERS

The Ibanez GE 1502 Dual 2/3 Octave and the GE 3101 1/3 Octave Graphic EQ's are professional quality, single rack space, graphic equalizers. Both units feature EQ In/Out and a switchable high-pass three pole rumble filter for PA applications. The range of boost and cut is selectable between  $\pm 6$  dB for subtle EQ curves, and  $\pm 12$  dB for more extreme control. LED's indicate all switched functions and channel overload. The GE 1502 and the GE 3101 carry a suggested retail price of \$325.00 and come with the Ibanez one year warranty.

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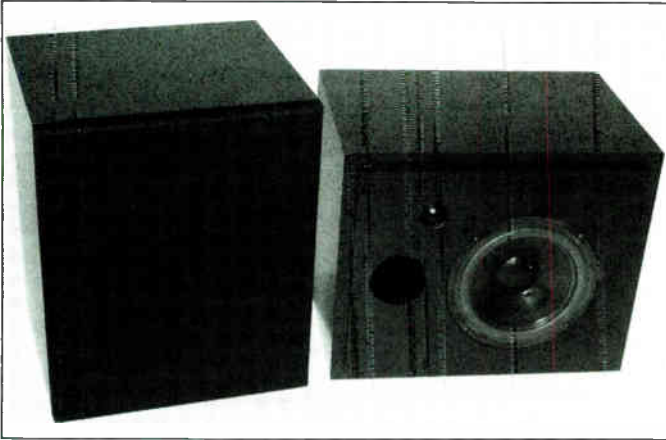
## SOUND CODE SYSTEMS 2350 POWER AMPLIFIER

The Sound Code Systems 2350 power amplifier incorporates a complementary MOS-FET output stage and a true differential front end for excellent sonic performance. With the complete elimination of integrated op-amps, the signal to noise ratio and slew rate have been optimized. MOS-FETs were chosen for their positive temperature coeffi-

cient which provide for excellent longevity.

The 2350 delivers a full 260 watts per channel into an 8 ohm load and 350 watts per channel into a 4 ohm load. Clipping indicators which sense clipping in either the positive or negative stages are included for both channels. The 2350 carries a list price of \$595.00.

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### EAW MS-30 REFERENCE MONITOR

A new, two-way nearfield studio reference monitor featuring low distortion, quick transient response and true flat power response, is available from Eastern Acoustic Works, Inc., a Boston-based professional loudspeaker manufacturer.

According to EAW Vice President of Engineering Kenton Forsythe, "The MS-30 is the first and only nearfield monitor to offer true flat response both on and off axis and with fast enough transient capabilities to meet the need of digital audio quality assurance."

To ensure proper driver interface at crossover, a third order amplitude-compensated network is used. This ensures minimum phase and absolute response linearity throughout the crossover region. Effective acoustic slopes of 24 dB per octave are achieved by integrating driver acoustic response and electrical filter characteristics.

The MS-30's power handling is conservatively rated at 70 watts continuous sine wave for 100 hours and 150 watts continuous IEC noise. Its efficiency of 90 dB SPL 1w@1m allow a practical maximum output of 110 dB SPL at 1 meter without over-stressing the drivers. Usable frequency response is 43 to 22,500 Hz -10 dB. The EAW MS-30 reference studio monitor carries a professional use net price of \$200.00 each.

Circle #072 on Reader Service Card

### RODCAR ELECTRONIC KITS

RODCAR Electronic Sales, a Dallas-based company, recently introduced a new line of electronic kits intended to provide the builder-designer-enthusiast with a reasonably priced alternative to expensive consumer and professional audio equipment. RODCAR claims to have achieved exceptional performance levels by incorporating only high quality parts, innovative design technology and thorough testing. Every kit comes with detailed instructions, data sheets, and theoretical discussions in an effort to make

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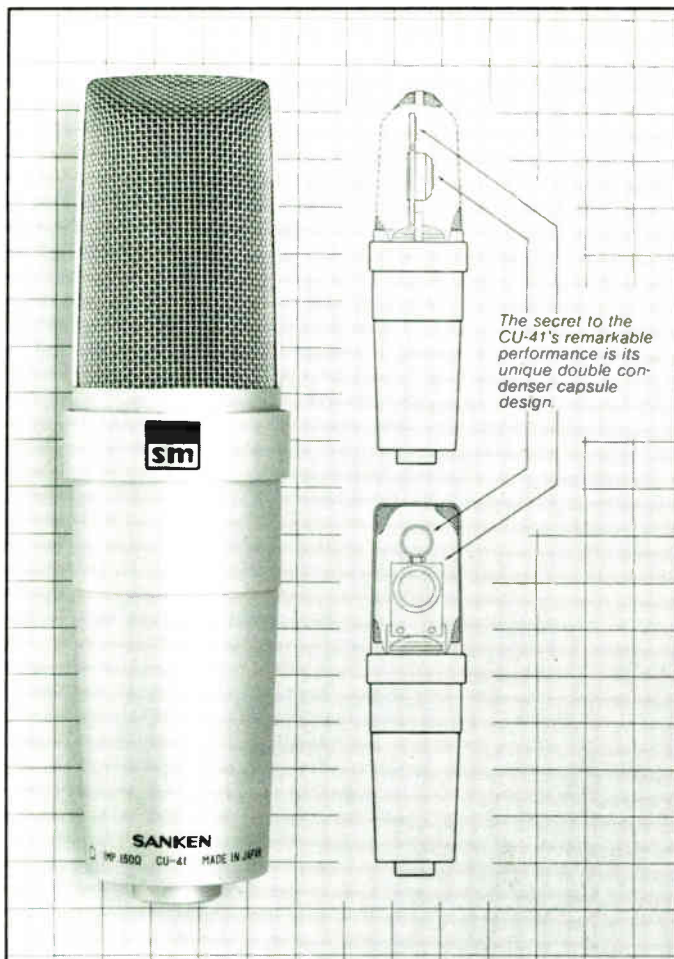
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assembly a simple, rewarding and educational experience.

One of the highlights of the product line is a modular building block system utilizing a central motherboard and plug-in modules which may be arranged to provide equalizers, limiters, preamps, VCA's, amplifiers, image enhancers and others in any desired combination. The manufacturer is also offering a number of stand-alone kits, including a versatile stereo synthesizer and the "G-Man" headphone monitoring system.

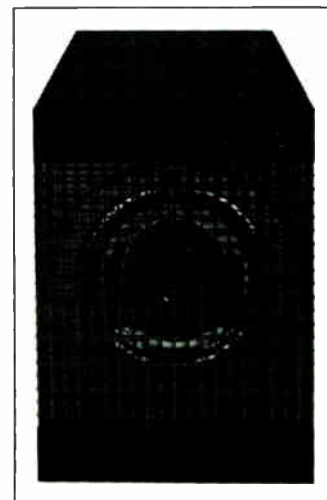
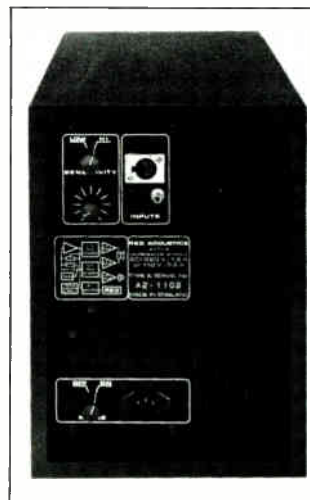
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## BRICK AUDIO PLATES

Brick Audio of Elgin, IL, has introduced a line of mono send, stereo receive, plate reverberation systems. Designed for fixed or remote installations, these plates are available in four sizes ranging from 1' x 3' to 3' x 7'. The chamber is shock isolated for use in high SPL environments and the drive and return systems require zero set-up time.

On board controls are provided for input pad, input brilliance, and separate output gains for right and left channels. Specifications include a rated frequency response of 100 to 200k Hz ( $\pm 4$  dB), an 80 dB signal to noise ratio, and a delay time of 2 ms per foot. Decay time (max. 500 Hz) varies with plate size, and ranges from 2.5 to 7 seconds. Adjustable damping is also available, depending on model selected.

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## RED ACOUSTICS' POWERED SPEAKER SYSTEM

Red Acoustics, of London, England, produce a line of self-powered speakers and monitors with integral active crossovers which, according to the manufacturer, are designed to reproduce the extreme dynamic range of sound available from digital recorders. The units in the line include the A-2, a 150 watt system with an 8" woofer and co-axial dome tweeter; the A-3, which has a 150 watt amp, 8" woofer and two off-axis HF drivers and the A-4, with 250 watts of power driving twin 8" woofers and two tweeters. A subwoofer system (with four 8" woofers and 100 watt amplifier) is available, and can be used to form a complete large studio monitoring system.

The speakers' modular interconnecting system allows custom applications in a variety of areas—small and large PA setups, foldback monitoring and film/video location monitoring. U.S. prices for the Red Acoustics active loudspeaker line range from \$800 to \$1350.

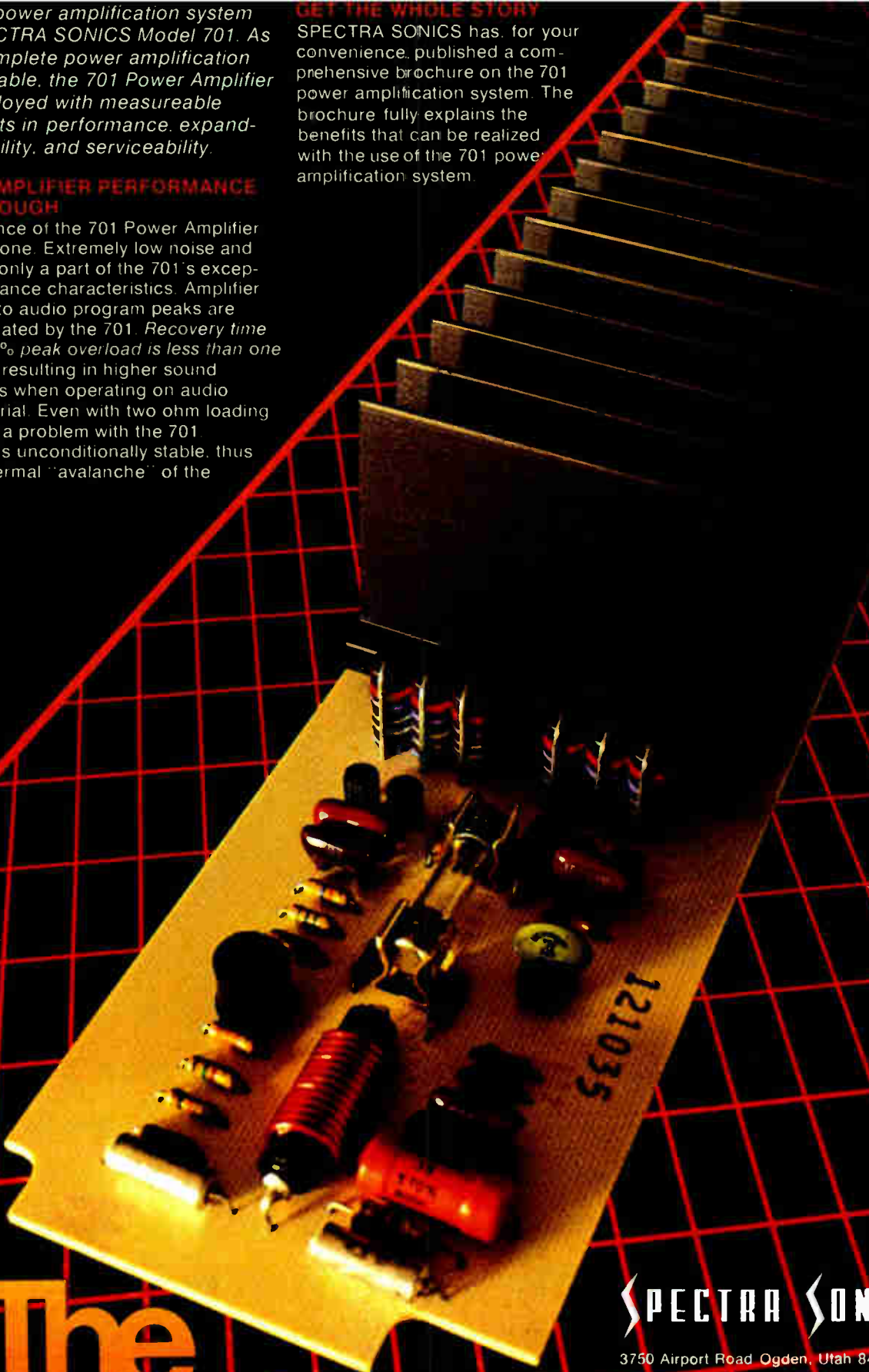
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There is no power amplification system like the SPECTRA SONICS Model 701. As the most complete power amplification system available, the 701 Power Amplifier may be employed with measureable improvements in performance, expandability, reliability, and serviceability.

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The performance of the 701 Power Amplifier is second to none. Extremely low noise and distortion are only a part of the 701's exceptional performance characteristics. Amplifier overload due to audio program peaks are virtually eliminated by the 701. Recovery time for up to 1000% peak overload is less than one microsecond, resulting in higher sound pressure levels when operating on audio program material. Even with two ohm loading stability is not a problem with the 701. The amplifier is unconditionally stable, thus preventing thermal "avalanche" of the amplifier.

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PHOTO: MR. BONZAI

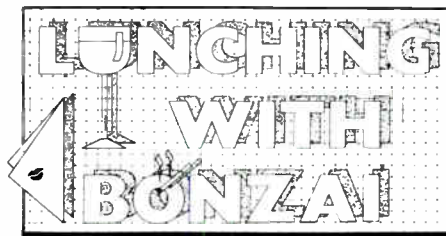
By now we all know of Michael Sembello because of the sensual and sweaty *Flashdance* number "Maniac." How can you think of Michael Sembello without conjuring up the image of that girl's leotard creeping up? Since one of Michael's driving goals is to bring visual associations to music, his first hit was a fitting leap onto the charts.

We met as strangers at this lunching. All I knew about him was "Maniac" and the fact that he had worked with such superstars as Donna Summer, Diana Ross, The Jacksons, and had played guitar with Stevie Wonder for eight years. His debut album, *Bossa Nova Hotel* was produced by Phil Ramone and the immediate appeal to me was the wealth of unusual and fresh musical sound effects on the record.

**Sembello:** I'm constantly looking for new sounds and new stimulation. I take art very seriously. I'm in it to make a living but I couldn't just write pop songs for the rest of my life. I plan to move on to the things I've trained for. Unfortunately, record companies aren't very sympathetic with that viewpoint. When you start getting the Frank Zappa disease and get too creative they want to hold you down.

**Bonzai:** Would you consider Zappa a success?

**Sembello:** I've admired him for years and years. He could be the Pope of the music industry if he wanted to. He could turn around and become totally commercial and blow the record com-



by Mr. Bonzai

panies away. One of my big dreams when I was young was to get into Frank Zappa's band.

**Bonzai:** Do you feel restricted by the music industry?

**Sembello:** George Martin has spoken about the pop field as being the last frontier for musical creativity. You can combine country & western with reggae and people won't get upset. Actually, the Japanese are more advanced in that area than we are. Their popular TV shows will have traditional koto music followed by a punk act and then they'll bring me on.

**Bonzai:** Were you interested in music as a child?

**Sembello:** Yes, I knew my calling at a very early age.

**Bonzai:** Did you study classical music?

**Sembello:** I studied classical and jazz. I was an apprentice to a master, Dennis Sandole, who taught people like John Coltrane and Pat Martino. Before you could study with the great Sandole you had to first study with one of his disciples.

**Bonzai:** What is the most important thing that he taught you?

**Sembello:** More than the musical end, he would talk to you and say "try to be tasteful." He showed me technical things and it became a very Kung Fu experience for me. He would have me play scales on each of the strings starting with different fingers. If I am playing in a certain area and I need to get to a C scale and I end up on my third finger, which is my weakest, I can play a scale from that finger and end up someplace else on the guitar. He prepared you for life and brought the technique to the point that it was an extension of yourself. It was a technical extravaganza. He also taught me a special technique where you minimize movement to maximize speed. I: has stayed with me and has given me the discipline to study other things.

**Bonzai:** When was your first professional job?

**Sembello:** When I was 13 I landed a gig with a tuxedo band playing the social circuit in Philadelphia and doing everything from Top 40 to the music of the '40s. There I was in my little tuxedo playing with guys three times my age.

**Bonzai:** You worked with Stevie Wonder. Was that a chance thing? Was it a big break for you?

**Sembello:** It was a big break and it was definitely a chance thing. I never would have been at the audition if my friends didn't wake me up that day and drag me down.

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—from page 107, *BONZAI*

**Bonzai:** Was it an open audition?

**Sembello:** Yes, they announced it on the radio. My friends gave me the impression it was just a jam session. I didn't know much about Stevie Wonder and when I realized it was serious I said, 'Let's get out of here. This is nuts.' Anyway, I stayed and it got down to five or six guitar players. We plugged into the designated amplifiers and then he would run us through different things and test us. It was like a game show. "What do you know and how many keys can you play in?" He would try to trick us and modulate to different places.

**Bonzai:** How old were you?

**Sembello:** I was about 17. He just started eliminating people and after the third hour I was still there so I figured I must be hanging in. I had never even listened to his songs before. This is where the technical training paid off. He couldn't lose me.

**Bonzai:** Did he know that you weren't familiar with his music?

**Sembello:** I don't think he did until we started playing stuff from *Innervisions*, which hadn't been released. He stopped and leaned over to someone and asked if the album was out yet. In the years to come he taught me about "feel." I had all this technique but I don't think my feel was developed. He taught me how to feel the music and how to do it from the heart—to make the connection between the hand and the heart. If it wasn't for him I don't think I would have realized a lot of things about being a musician. We don't see each other very much anymore but I'd do anything for the guy if he called me up.

**Bonzai:** Was the song for *Flashdance* another great leap for you?

**Sembello:** Yes, and I'm glad that it was such a big leap. I'm glad that people don't know me from my other work. People tend to like to hear you play your old stuff.

**Bonzai:** How did the *Flashdance* connection happen?

**Sembello:** I was assigned to the project as a Warner Bros. writer and Phil Ramone was the music supervisor.

**Bonzai:** Working with Phil—was he a big daddy, a godfather, a pal, a drill sergeant, or an absent-minded professor?

**Sembello:** I'd call him a godfather. I have called him the "Pope of Pop." He's also a pal, but I do look at him as the Don Corleone type of guy. He is one of the most unassuming guys, and one of the most honest, fun-loving creative

producers I've ever met. Being a producer as well, I couldn't believe a guy with his reputation was just a regular guy. His body should be bronzed by now.

**Bonzai:** So there was good chemistry?

**Sembello:** It was great. We will go on to make other albums together if I can get him. He does nine projects at once, but he has an organization of discipline amidst the chaos. I've watched him produce other people where he had to be a drill sergeant and get on their case, and I've watched him produce people where he is more of a guiding light. He can adapt.

**Bonzai:** It sounds like you picked up a few pointers.

**Sembello:** I picked up a lot of attitude things. It's not the end of the world when you're producing a record. Nothing is that serious to get completely burnt out about.

**Bonzai:** There is a pictorial quality to your new album—sound effects, new sounds—how does that fit into your composition and your musical ideas?

**Sembello:** I've been writing songs for a long time and I hit a wall a few years ago. I found that I was writing in the same kinds of concepts all the time. For my first album, I wanted to bring something more visual to my music. I wrote stories into my songs. I drew from metaphysical concepts and movie concepts and that's how *Bossa Nova Hotel* came about. It's like a *Twilight Zone* look into characters and stories. "Automatic Man" is about love in the future. What would happen if a mad scientist was rejected by a girl? He might build a perfect robot that the girl would fall in love with and then he would turn the robot on her. But then the robot becomes human, like in *Blade Runner*.

From watching movies I realized that there is not enough musical and lyrical sensory input to hold your attention with records these days. That's how I got into mixing different sounds and rhythms and counter rhythms. I used mesmerizing subliminal things like a clave playing a certain part off-time—but it happens consistently and you hear it after the tenth time. On "Cowboy" you hear a banjo come in and then gunshots. Images that can take your imagination different places. "Godzilla" starts out with huge footsteps.

**Bonzai:** Having your own studio must help with the experimentation.

**Sembello:** Yes, definitely, and I'm very scientific during my input stage of gathering information. When I did "Automatic Man" I researched

cybernetics for months. I actually write my best songs about four in the morning when I wake up from a dead sleep. I go with my instincts. I want to be able to tap into the real source—that cosmic river that you stick your guitar chord into and you get information from.

**Bonzai:** To be a channel?

**Sembello:** Exactly. I think that whatever they call a genius is somebody who has managed to find the channel. Everyone is a genius and there are no special people. You have to find what you are a genius at.

**Bonzai:** Have you come across any new devices, instruments, synthesizers, or processors that are allowing you to fulfill this urge to create new sounds?

**Sembello:** I just got a Yamaha DX-7 from Japan. The Japanese are refining once again. It's like having a GS-1 without spending \$15,000. I look at the inventions as creative modules that I can plug into and create new songs. A sound can inspire me. Synclavier has a new interface for the guitar. Unfortunately, the guitar is 20 years behind the times. They're still using strings on the neck. We should be into fiberoptics and buttons by now. Guitar players are the most ignorant animals on the face of the earth. They have to have that Les Paul neck or it doesn't feel right. The demand is not there for new instruments so it's taken us a long time to translate into the synthesizer world. You can have the old stuff—it makes noises and buzzes.

**Bonzai:** God bless Les Paul and let's move on. . . .

**Sembello:** He was the guy. He made the guitar a new instrument but we haven't advanced from that point. The first thing to come along is the stereo guitar by Steve Ripley. I just had one made. It's a completely stereo guitar, which is something we should have had years ago. It's got six strings with six pan pots so you can pan the strings in a stereo spectrum. It also has six outputs so you can go into six different amplifiers or six recording channels. Plus it's got auxiliary sends and receives for each string so you can put digital effects or phasers or whatever on each string.

**Bonzai:** If you weren't in show business—let's say you were living in a small town in the 1800s, what role would you have chosen?

**Sembello:** I would have liked to have been a healer, a social worker type of person—a spiritual role. Although I could have gotten away with playing an instrument, too, because it's always been an accepted spiritual thing to be a musician. ■

by Carol Kaye

What's a nice guy like Clare Fischer doing in a place like this? With all the talk about egos, cocaine, blurry-eyed workaholics and the like, one often forgets that most of the major figures in this business are quite different than the stereotypes. Take Clare Fischer for example—he is a master's degree holder, a famous jazz musician, composer, arranger, orchestrator, studio keyboardist and clinician; an accomplished, dedicated and astute man who indulges himself in the pleasures that music gives him rather than more glamorous vices.

Fischer's credits are impressive indeed. He composed the song "Morning," as well as a host of other pop/jazz standards. He's arranged a huge range of records, including such critically acclaimed LPs as Dizzy Gillespie's *Portrait of Duke Ellington*, George Shearing's *Bossa Nova* record, and discs by such popular artists as the Hi-Los, Rufus, Earl Klugh, the Jackson 5, Stephanie Mills, the De Barge Family, Switch and others. He was even nominated for a Grammy for his work on Earl Klugh's "Balladina," which features a unique new wave jazz fade-in intro. In addition, he wrote, arranged and played on recent records by the late Cal Tjader, Donald Byrd, and Bud Shank, as well as his own releases such as *Salsa Picante* and the exciting follow-up *Salsa Picante 2 + 2*.

Clare has been part of the studio musicians' "in-crowd" since the '60s and his importance lies not just in the excellence of his work, but in the fact that he is an outstanding role model for the straight, highly motivated, serious musicians who will follow in his footsteps.

I first worked with Clare in various L.A. recording studios in the



**Clare Fischer**

early '60s. (He had moved there from the midwest in 1958.) In fact, the first time I truly liked the sound of a Fender Rhodes electric piano for jazz was when I caught his group at one of North Hollywood's best jazz clubs, Donte's. The sounds I heard that night were simply gorgeous. As we worked together during that period, he always struck me as a perceptive, warm, educated gentleman with an even disposition. Still, his patience was occasionally tried, as on one occasion when a rock guitarist on a recording date didn't bother to tune up. Midway through the session, Clare stopped the band, stood up and said, "This is 440!" in that no-nonsense voice, as his finger emphatically played "A" to tune to. Those of us who had been suffering in silence laughed gratefully. Clare had saved us all again!

He is as active today as he was then. I still hear his music constantly, in funk-pop hits, jazz records, film and TV scores, and on Muzak. His work is also featured in the recent book from Gwyn Publishing, *Harmonic Exercises for Piano*. He is, as he has always been, outspoken without stepping on toes, and always fair and non-

judgmental. He is to the point about things he doesn't like, but he is also quick to lavish praise on engineers and others he does like working with.

Our conversation ranged far and wide. He said he appreciates the technology of today's studio but acknowledges that a somewhat worrisome aspect of the hi-tech boom has been a virtual take-over of record dates by engineers. Because of the increasing responsibility on engineers in creating today's isolated-sound recordings, for example, the studio musician's ability to play with feeling has been hindered, he feels. "When we recorded with Cal Tjader," Clare told me, "we were isolated in booths and instruments like the conga had to be heard through the headphones rather than 'felt' in the room." Clare believes this sort of practice often interferes with the delicate communication process between musicians, and as a result can affect the groove or sound of a record.

The groove is particularly critical on jazz and funk recordings, and on that score Clare feels that different attitudes among current players are also affecting the sound of records. "I was from the streets," he said, "and I feel that a lot of jazz players today are too much into academics and not enough 'streets.' Older players played not from modes but instead elaborated on melodies—melodic fragments."

We then got into talking about studio miking. On his recent LP (featuring Clare on Yamaha organ, Gary Foster on reeds, Andy Simpkins' bass and drummer Larry Bunker) he managed to get great sounds using two overhead mikes at least ten feet away from the whole band, only one mike on the drums ("It was the best drum sound I've ever heard") and a single mike on the acoustic bass. This was a case of the engineer asking the musician-arranger what to do for his miking specifications. The LP has done well in Europe but isn't out in the U.S. yet. It was recorded at TTAG Hollywood with Angel Balestier engineering.

On another date with Tjader, for the album *Here*, recorded at San Francisco's Great American Music Hall, a contemporary mix was utilized—that is drums and bass in front, melody and harmony (Cal, the leader, Clare on piano) relegated to a secondary role. A gross imbalance was caused by the "fixed" orientation of a rock-thinking engineer who lacked flexibility. It did not come off very well, either.

Other people Clare has worked with in recent years that he credits highly are John Lemay of Capitol Records who worked on the *Salsa Picante* LP, and engineer Danny Wallin, who has a very good background working with large orchestras. (Danny also helped build the Warner Bros. scoring soundstage where we played many movie and TV dates such as *I Love You*, *Alice B. Toklas*, *Wonder Woman*, and the Quincy Jones theme and score for *The Bill Cosby Show*. On that one, Danny deftly covered up the distorted electric bass sound I got while I was temporarily trying out Ray Brown's amplifier.)

Clare feels that it's important for engineers to have an orchestral background before getting into rock sounds. So much rock today is loaded with string sounds that are miked way too close. You get the true string sound with fewer mikes placed at a distance. (The same is true of the piano.) Clare thinks engineers for the most part place too much emphasis on recording technology, and not enough on the *music*. In a sense, this is natural, because of the rapid developments made since the '60s, but Clare complains that at the same time some engineers are obsessed with technology, "They are still mixing for small radio car radio speakers rather than for stereo sets."

We also spoke of the many times that a producer will abandon an arrangement because, as the old studio joke goes, "I don't know anything about music, but I know what I like." This kind of attitude is frustrating to arrangers like Clare, who does *not* write frivolously. But in the end, works of lasting value continue to be heard, and Clare is constantly impressed by the number of records he arranged 20 years ago—ones that weren't particularly aimed at the hit parade—that are still played often on the radio. This, then, is at least some kind of reward for jobs well done, and is testimony to the quality of his work in a business where success is frequently fleeting. But then Clare Fischer was and is one of the best. ■



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PHOTO DAVID GANS

## An Interview with **HUEY LEWIS**

by David Gans

The inner sleeve on Huey Lewis & the News' third album, *Sports*, shows the six band members in the center of a basketball court, singing into a pair of microphones. "That's us doing the national anthem at a [Golden State] Warriors game," Lewis explains. "We've done it for the 49ers and the A's, too."

When the News sang the anthem at Boston legend Carl Yastrzemski's last game in Oakland this past summer, a Boston sportswriter mentioned the band and honored them with "National Anthem of the Month." That appearance also gave Lewis an opportunity to meet one of the season's hitting stars—who, it turned out, was just as excited to meet the singer.

"We were standing near the hitting cage," Lewis recalls. "Wade Boggs leans over to Jerry Remy, looks over at me and says, 'You know who that is? That's Huey Lewis.' My mouth fell open—I couldn't believe it. Then he sort of summoned up his courage and came over and said, 'Hi, I'm Wade Boggs. I really like your music.'"

"I said, 'I know who you are!' The guy's hitting .372, you know, leading the league..." Lewis emits a hoarse laugh at the recollection, pleased at this surprising incidence of mutual admiration. But the new News album isn't called *Sports* simply because the band members are jocks—nor because, as the singer jokingly claims, "we couldn't spell 'weather.'" It's because the six musicians regard themselves as a team, and music as "a team sport."

Lewis and the News produced their second album, *Picture This*, which yielded their breakthrough single, "Do You Believe in Love?", and its followup, "Workin' for a Livin'" (their eponymous debut was produced and recorded by Bill Schnee, and featured "Some of My Lies are True (Sooner or Later)"). As Lewis told *Mix* in a feature on self-produced artists in the October 1982 issue, "Nobody knows better than the rest of us when a band member is doing his best."

Work was nearly completed on *Sports* (again produced by the band) early in 1983 when the News' label, Chrysalis, was subsumed by the gigantic CBS organization. Fearful over the possibility they'd be lost in the vastness of CBS, the Newsmen held on to their masters and explored the possibilities of bolting the label. They continued to tour—and even rerecorded a couple of songs for *Sports* after hearing how they worked live—and eventually came to satisfactory terms with Chrysalis. The fall release of *Sports* was followed immediately by enthusiastic chart and airplay response to "Heart and Soul," the first single and video, vindicating both Chrysalis and the band's philosophy of teamwork and self-production.

**Mix:** What do you want to say about the Chrysalis holdout? It must have killed you to sit on this record for so long.

**Lewis:** The reason we held out was because Chrysalis went through a reorganization. My manager, Bob Brown, didn't feel they were in a position to

promote our record, so we held on to the tapes.

We flirted with other record companies, but when it was all said and done, Chrysalis got themselves back together and made us an offer we couldn't refuse. We wanted to put the record out anyway—

**Mix:** You didn't really want to get into lawsuits—

**Lewis:** Absolutely not. It would have been a long, drawn-out thing. In actual fact, Chrysalis has taken quite a few chances on new bands. It's funny, 'cause I have this thing about how hard American bands find it to get a record deal—and we're signed by an English company. We're a *very* American band, I'd say.

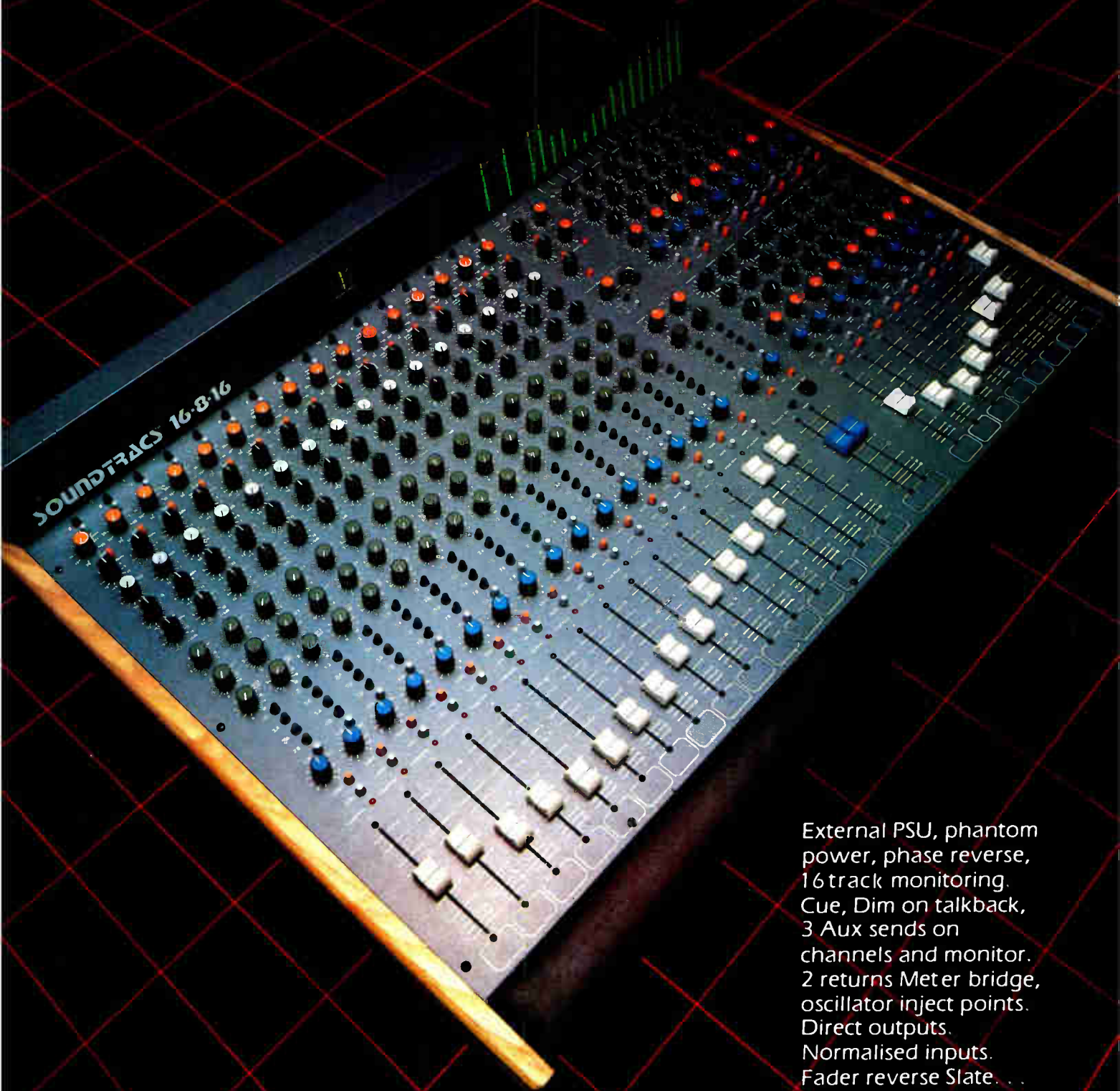
**Mix:** Let's talk about the production of *Sports*.

**Lewis:** Jim Gaines is a great engineer—but he never gets mentioned, because he's so soft-spoken. And he's such a big part of our records. We produce them ourselves, which means we all sort of yell and scream at each other and hopefully end up with the right answer. He lets us go through our movie, and on issues where we're really split he can add that touch of objectivity that we don't have. He's really a big part of it, and because he's so soft-spoken I never mention him; he never gets any credit.

**Mix:** So when he decides to open his mouth, you listen.

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**Lewis:** That's right. And he's from the old school. Somebody said, "Jimmy has an attitude problem: he doesn't have one." [laughter]

We did produce this record a little bit more; it's a little less live-ish than our last outing. We're first and foremost a live band, but we're starting to become more familiar with the studio and we're having more fun. We did try some different things: the odd backwards echo and stuff; up until this record we'd said, "Ah, we're not gonna use any of those gimmicks." That's a backwards piano at the beginning of "Heart of Rock'n'Roll."

We cut a couple of tunes to click tracks, which was really taboo for us. We cut a couple of synthesizer pulses, and even had a good time. It's tough because synthesizers don't like human beings. It's hard to match acoustic and otherwise organic tones with synthesizers.

**Mix:** "Bad is Bad"—*quelle* atmosphere!

**Lewis:** The blues, man . . . I wrote it about five years ago, when I was with Clover, and Dave Edmunds recorded it—I think on *Repeat When Necessary*. It was a fast shuffle, but Johnny [Colla] had a great idea for an arrangement of it, took it home and did the vocal arrangement that you hear—all on his own—and brought in the tape. We said, "Yeah, that's great, we've got to do that." Johnny does most of the arranging, and he never gets the credit he deserves.

**Mix:** Why do "Honky Tonk Blues?"

**Lewis:** This is Road Story 1A: We stopped at a truck stop on the road, got an old Hank Williams Greatest Hits tape, and we were listening to it on the bus. It occurred to me what a great song it is: First the guy wants to get the Honky Tonk Blues, second he *gets* them, then he wants to lose them—which is what going on the road is all about. I think it's as apropos today as it was when he wrote it.

**Mix:** Pick a song you cut to a click track and explain it.

**Lewis:** "Walkin' on a Thin Line" was cut with a JP-8 that we ran with a Roland Drum machine to go bum-bum-bum-bum [describes 16th notes]. We just let the machine do that, and cut drums, bass and guitar. Then we redid the keyboards and built it from there. That one was really the most produced in a way. Some things we started to cut with a click and ended up *not* cutting that way. But by starting with the click, we learned where we were speeding up and slowing down. Just playing to the click tells you a lot about the song.

Oftentimes we'd play to a click a few times and then get rid of it.

We worked very quickly. All the guys in the band are good players and good singers, so what we do is put as much on it at once as possible. Then we redo it if we don't like it, rather than spending eight hours trying to get the perfect guitar part and working it out in the studio. We'd rather put a guitar part on in, say, two hours, and live with it and go on to something else—then two days later we'll say, "That guitar can be better" and put another one on. We like to work fast that way.

**Mix:** Is all the equipment set up in the studio anyway?

**Lewis:** Yeah. When we recut tracks, that's a hassle. We pretty much cut all the tracks at Fantasy, then we did overdubs and vocals at the Plant. Then we recut a track or two and did a couple of guitar solos at the Automatt, and we got a nice big sound there. But generally we like to cut tracks and be done with that, and redo the overdubs and stuff. It's a drag, because oftentimes you'll live with a track and say, "We've got to recut it," and then you have to set up all over again.

But even when we're doing tracks, we try and go for a few takes of a song. You take the best one and go on to another tune, and live with it. Then if it isn't good enough in a couple days, you redo it. We much prefer doing that to working on the same song until we get it.

We do try and leave a mistake here and there, which is a harder thing to do than to make a record perfect. It's harder to say, "I'm a little out of tune there, but that's okay—it doesn't bother me," because it's so much easier to go back in and just punch that one a little bit. But I think it's important that you keep the performance intact. So what we did, pretty much, was let somebody fix a little clam here and there—but if it was more, we'd usually do the whole thing over again just to cop a *performance*.

**Mix:** So there's not that much punching in.

**Lewis:** We try not to punch that much. With a vocal, same thing: if there's more than three or four punches, we sing the whole vocal again—until you get a good one. Unfortunately we do end up punching more than we probably should.

**Mix:** Are any of the lead vocals on the new record keepers from the first time through?

**Lewis:** No. I'd like to say they were, but they aren't.

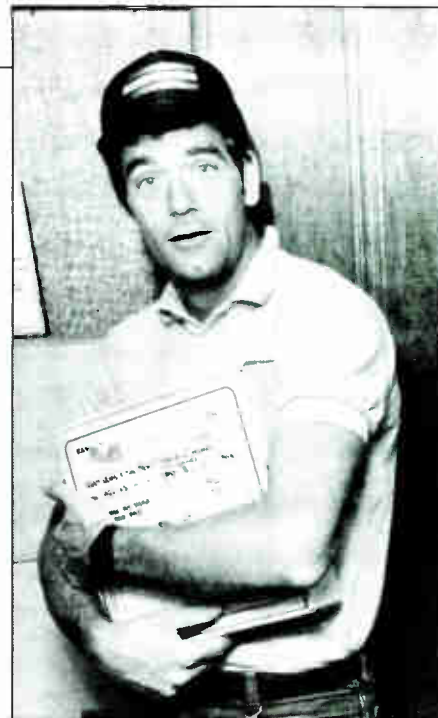


PHOTO: DAVID GANS

*Huey guards his tapes.*

**Mix:** Do you sing with the tracks?

**Lewis:** I don't, really. We know the tune pretty well by the time we get into the studio. So it doesn't really help—all it does is sort of blow out my voice. The band doesn't need to hear me sing. I do sing as it goes along, so we know what the arrangement is, but I don't really go for a performance. I'm in the control room with just a [Shure] SM58 and I'll say, "Here comes the bridge!" and that sort of stuff.

**Mix:** And how do you keep your voice just on that edge?

**Lewis:** Just my lifestyle, I guess. I've always sounded like this. My father sounds like this. I was born with this voice [laughs]!

No, I don't know. It's a lack of vocal training [laughs]. It really isn't abuse; it isn't smoking cigarettes—I don't smoke, or drinking—I don't drink all that much; or staying up late. It's just the vocal quality I was born with.

**Mix:** How much of your success do you think is owed to MTV?

**Lewis:** MTV is very important now, and that's good and bad. It's good because it breaks new acts. Up until MTV, music was going nowhere, so it's good that it breaks new bands. The bad side of it is that I'm afraid you'll have to be good-looking to be a musician in the future. The emphasis is on pretty boys and pretty girls.

Sometimes I think videos are best made to songs that don't mean anything, because they can give meaning to an otherwise meaningless tune. But if



you have a nice song that's lyrically sort of visual—means more than one thing—a video just makes that three-dimensional song two-dimensional.

**Mix:** Have you run into that with any of your songs?

**Lewis:** We're running into it now. We have to do a video to "I Want a New Drug," and in many ways it's a better poem than it will be a video. Unfortunately, when a certain visual image comes across during a line, that line means *that* from then on to everybody—whereas it's meant to mean maybe several different things at once.

But M-T-Bee been berry, berry good to me.

**Mix:** Do you think "Do You Believe In Love" would have happened without it?

**Lewis:** Yes, I do. I don't know if it would have broken as big...

**Mix:** A little good-natured sexism there—whose idea was it?

**Lewis:** That's it—[laughs]. Good-natured sexism. The idea was that she's asleep, and we try to wake her up. I had a different idea... To be honest with you, I have mixed feelings about it.

Videos are like records: it takes a while to learn how to make them. We didn't know how to make records, and we're learning; the same's true with videos, but we insist on doing them ourselves after the essentially Hollywood experience of "Do You Believe in Love?"

**Mix:** Do you think "Heart of Rock'n'Roll" is going to be a single?

**Lewis:** I don't know. I don't choose the singles, because number one, I'm way too close to them, and number two, if they don't happen, I can blame the record company [laugh].

An album is a tough thing to do, with ten songs. It's tough to make a concise statement, and plus they're getting more expensive. Somebody said the idea would be to do two five-song mini-albums a year instead of one ten-song album. Creatively, artistically, that makes better sense. Four or five tunes kind of come together at once, stylistically, and you can make a statement. But if you have to do ten songs, it's very hard to write an album in one creative burst that doesn't have any filler and is ten songs deep.

Writing the songs is really the hard-

est thing. You *must* have a good song; that is the secret to good production, or hit records, or anything. It really is—you don't even have to have a great vocal any more.

**Mix:** How does that make you feel as a singer?

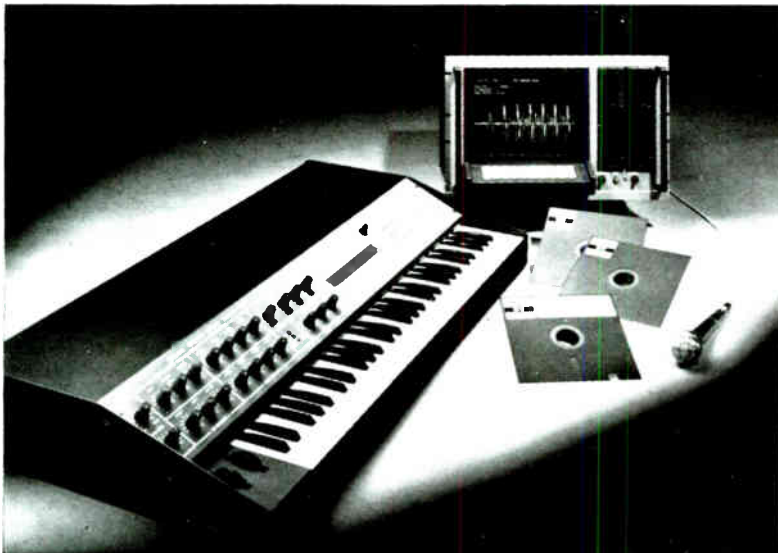
**Lewis:** Fortunate! [laughs] I'm *not* a great singer.

**Mix:** Let's put it this way: do you think you're being appreciated in the marketplace for the reasons you'd like to be?

**Lewis:** Partly, but partly not. I don't pretend to know why we're being appreciated. And to be dead honest with you, I don't really care that much. What I like to do is sing, and I hope that I'm getting to be a better singer. I think I am, and that's fun and encouraging—but there's no way I'm a great singer. You have to have great songs, and hopefully we've written a few. That's hard! They come when they come. You can't sit down and say, "I'm going to write a great song." You just gotta get lucky. When the muse comes, she comes—and you have to be ready for her. You can't be washing your car. ■

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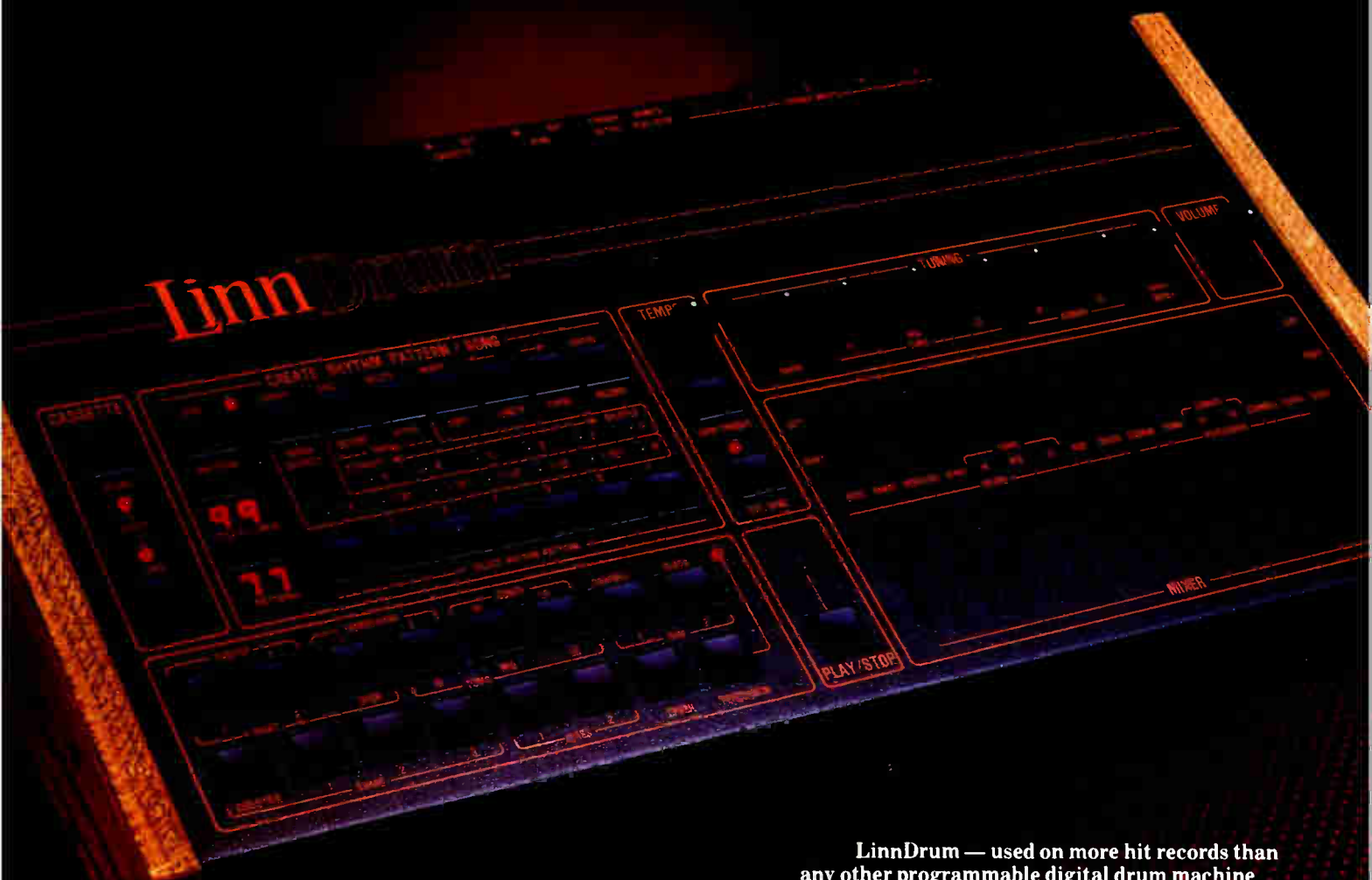
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World Radio History

## The Alarm: A New Kind of "Folk" Music

"Both sides of the Atlantic are waking up to the fact that people *can* accomplish things, that they can achieve exactly what they want," declares Alarm guitarist Dave Sharp, standing in the shadows of a Midwestern club before sound check. Looking at Sharp's steady gaze, and feeling the wave of optimism that deposited four friends this far from a small town in South Wales, is enough to convince anyone that his theory is more than just a rhetorical tape loop.

"There aren't many jobs for musicians in Rhyl, South Wales, just no money for bands," relates Sharp. "We were, like many people, stuck on the dole. One day we decided that we were four pretty creative people, and that we would find a way out." Sharp, lead singer Mike Peters, bassist Eddie MacDonald, and drummer Nigel Twist started a clothing shop, then moved on to open a small club which featured alternative music.

"It was a place to exchange ideas," Peters recalls. "We encouraged people to start their own fanzines and things like that." When an ill-booked punk band trashed the place, the boys were inadvertently set free to develop the seeds of their own musical ideas, which blossomed into The Alarm by the summer of 1981.

By saving the proceeds from local gigs and working diligently at odd



The Alarm from (L to R):  
Dave Sharp, Eddie MacDonald, Nigel Twist,  
and Mike Peters.

jobs, the band scraped up enough money to go into the studio that September to record a single, "Unsafe Building" b/w "Up For Murder", and released it on their own label, White Cross. All two thousand copies pressed sold quickly, and the boundaries of Rhyl suddenly seemed quite small. Naturally drawn to London, the group left town armed with meager gear, voluminous hopes and a concrete image for the band, characterized by fringed leather jackets, neckerchiefs and other accoutrements of trailblazing frontiersmen.

"By the time we left Rhyl, the whole town had changed around," Peters notes. "People were a lot more upbeat, more positive."

With a fiery, energetic reputation somewhat preceding them, The Alarm had little trouble finding work in London. "We took our record around to differen: venues, popped it on turntables and said 'Give us a gig,'" says Sharp. By winter, the band was opening for groups like The Jam, The Beat, Boomtown Rats, Stiff Little Fingers and U2. They continued with major support bookings for the first six months of 1982, building up a large contingent of local followers which included many of England's record company scouts. The band signed with I.R.S. in September of 1983, and soon released a second single, "Marching On" b/w "Lie Of The Land".

"We were approached by other labels, but most of them seemed to want to change our sound," states Peters. "I.R.S. was willing to present us the way we are." With their critical social commentary and reliance on acoustic in-

struments, it would be fitting to call The Alarm folk musicians, but there is little other resemblance to the generally gentle music of the '60s. Fast-paced, rous-  
—page 137

## Guilt-Free Pleasures

JULUKA  
The Palace, Los Angeles  
November 4

There are bands that are significant, whom you endure like spinach because you know they're good for you. And there are bands that are sinfully entertaining, whom you guiltily consume like cotton candy. And sometimes you get very lucky and find a band which has both meat and flavor.

—page 118

### THE FAR SIDE

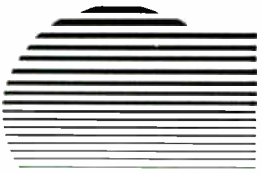
By GARY LARSON



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## MUSIC NOTES

### Satire à la Carte

David Thomas  
McCabe's, Santa Monica  
October 9, 1983

He came from Ohio, a portly and entirely self-styled musician. Anyone who straggled into this guitar-shop-by-day, hot-spot-by-night in hopes of catching the former lead singer of Blood, Sweat & Tears was quickly aware of their error: David Thomas occupies an alternate musical universe from David Clayton Thomas.

David C.-T. puts out flat, white masculine R&B with little funny business in his delivery; the David T. in question is captivating by dint of his funny business and his delivery. There is no one in music quite like this whimsical mischiefmaker, who doesn't so much sing his fractured folk-rock tunes as emote them. Wheezing, bleating, abruptly shifting vocal register and tone, half-narrating, Thomas comes across like a schizophrenic young Jackie Gleason doing simultaneous im-

—page 121



—from page 117, *Juluka*

*Juluka* is a chateaubriand of a band, a feast of music and merit.

The bi-racial South African sextet has created a storm of controversy both in its homeland (where they refuse to play for segregated audiences) and abroad (where Britain, for instance, demanded they give up their South African citizenship). When they arrived in Hollywood, curiosity was rife. Was this to be a musical diatribe, a political lecture, a lesson in anger?

No, it was an hour and ten minutes of joyous, exuberant song and dance. *Juluka's* material draws from both the folk music of the Zulu tribes and the underpinnings of Western rock to create an amalgam both exciting and accessible. Combine that with colorful African dancing, and the show is fodder for both the eyes and ears.

Guitarists Johnny Clegg and Siphon Mchunu anchor the band with complex and exotic six-string mastery. Weaving within their melodies are solid bass (Gary Van Zyl), double-kick percussion (Derek DeBeer), swirling keyboards (Cyril Mculwane) and outstanding flute and saxophone lines (Scorpion Madondo). Dancer Dudu Zulu joins in, dressed in fringed moccasins, loincloth and feathers, to flash his legs above his head in traditional tribal style.

Clegg sings strong and clear

lead on songs like "Kwela Man," "Gijimbeke," "Umbaganga Music," "Simple Things," and "Bullets for Bafazane." He explains the cultural background of pieces like "Thandiwe," which is about the conflict between tribal dwellers and citified blacks. Songs like "Two Humans On The Run" (with the lyric "living through the war in peacetime") need no explanation. Clegg is a dynamic performer, even holding his pasty-skinned own dancing alongside Zulu and Mchunu.

When the group closed its set with the single "Scatterlings," a full house was rapturously clapping time as DeBeer launched into a rock and roll drum solo the likes of which hasn't been heard since Iron Butterfly's heyday. They were called back to perform "Impi" ("war"), the song that first made them celebrities—and political targets—in South Africa.

*Juluka* made one hell of an impression in its Los Angeles debut. Their name translates as "sweat," and they certainly worked one up—both onstage and out on the dance floor. And then they left the crowd with something to think about after the dancing was over: why should these musicians, with such obvious love and respect for one another, not be allowed to so much as walk down the street together in their hometown?

—Ethlie Ann Vare

# DOCTOR CLICK

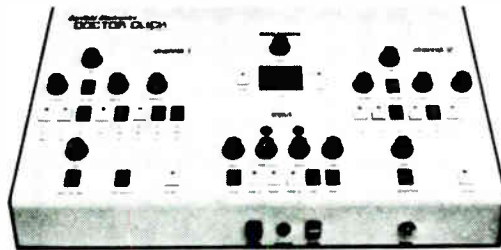
The Doctor Click Rhythm Controller makes it possible for the first time to synchronize the world of sequencer, drum machine, synthesizer composition with any one of the systems on the market or combinations of the systems on the market. Furthermore, the Doctor Click will cause sequencers, drum machines and synthesizers to play in time with a human drummer. It will also read click tracks and sync codes. The internal metronome provides both beats per minute and frames per beat calibrations.

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| 2 Metronomes  | Pulse Shaper       | External Clock Input         |
| 2 FSK Sync Code Decoders<br>(Covers Linn, Oberheim, Roland) | Gate Output        | Footswitch Controls          |

The brand to brand problems of timebase, voltage level and polarity are solved by the Doctor Click's diverse output capability.

The ability of the Doctor Click to connect to many units at once coupled with its footswitch control capability makes it ideal for multiple sequencer, drum machine, synthesizer live applications.

Since the Doctor Click metronome produces beats per minute and frames per beat calibrations it is always convenient to get just the tempo you need. It is even possible to get fractional tempos such as 118½ beats per minute.

The Doctor Click's two independent rhythm actuated envelopes allow VCF, VCA and VCO parameters of synthesizers to be modulated in 32 rhythm values ranging from four measure cycle to 64th note triplet with variable attack, decay, sustain and amount. This eliminates the problem of rhythmic drift when using a conventional LFO.

The ability of the Doctor Click to transform metronome click tracks into timebase clocks allows frames per beat music film work to be

done with virtually any sequencer, drum machine or synthesizer.

The ability of the Doctor Click to read live tracks allows sequencers, drum machines and synthesizers to play in sync with the varying tempos of a human drummer or a built click track.

The ability of the Doctor Click to accept external clocking or either of the types of FSK sync to tape codes allows sequencers, drum machines and synthesizers to be synced to any existing track.

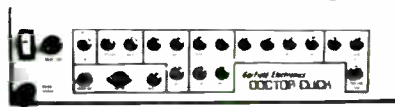
The pulse shaper circuit turns a pulse from an instrument into a trigger waveform allowing synthesizers to sync to a drum fill.

The headphone output allows click tracks in multiples of the tempo to be generated and is capable of driving a speaker.

The pulse counter can be used to program sequencers in higher timebases, quickly combining greater rhythmic resolution with step programming accuracy.

The step programming switch can be used to step program sequencers that normally do not have this capability.

Used on tracks by Brian Banks, Tony Basil, John Berkman, Michael Boddicker, Kim Carnes, Suzanne Ciani, Joe Conlan, Chris Cross, Bill Cuomo, Jim Cypher, Paul Delph, Barry DeVorzon, Don Felder, Paul Fox, Dominic Frontier, Terry Fryer, Alby Galuten, Lou Garisto, Herbie Hancock, Johnny Harris, Hawk, James Horner, Thelma Houston, Michael Jackson, Quincy Jones, Jeffrey Kawalek, Gordon Lightfoot, Jerry Lilledahl, Johnny Mandel, Manhattan Transfer, Paul Marcus, Jason Miles, NBC Movie of the Week, Randy Newman, Keith Olsen, Paramount, Joel Peskin, Oscar Peterson, Greg Phillingaines, Jean-Luc Ponte, Steve Porcaro, Phil Ramone, Lee Ritenour, Steve Schaeffer, Mike Sembello, Mark Shifman, John Steinhoff, Sound Arts, Ian Underwood, Universal, Donna Washington, Stevie Winwood, Pia Zadora.



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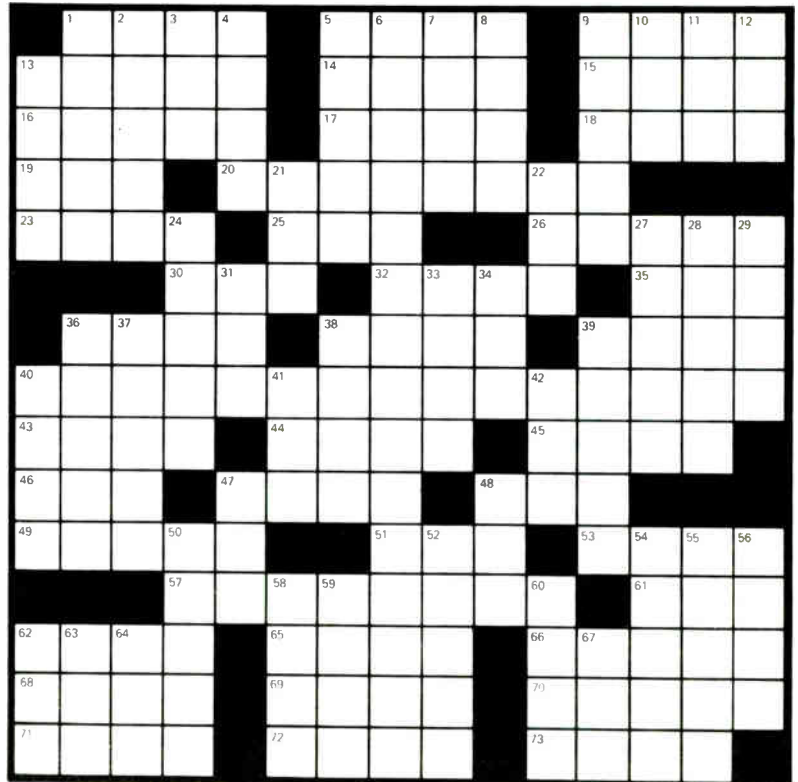
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# MUSIC NOTES

## MIX WORDS



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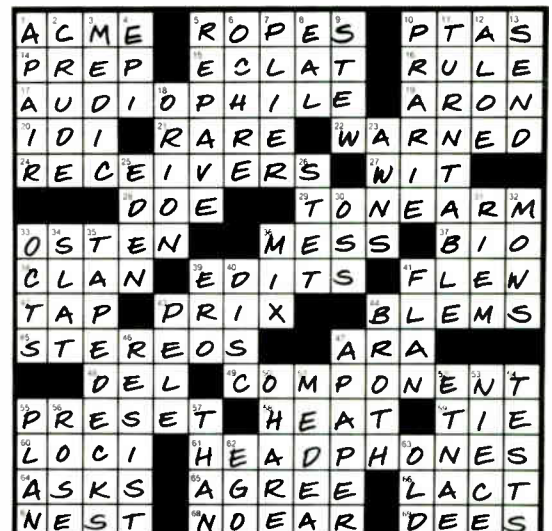
ACROSS

1. Chortle like Ella
5. Russ. sea
9. Prepare for an oral
13. Orchestrate
14. Measure
15. Moons, in the day of SPQR
16. Gay
17. Reputation
18. Black stone
19. High note
20. A necessity in control rooms
23. Vale
25. Young lady coming out
26. Tries
30. Foreign
32. Word with in or out
35. Ms. Piggy in Maui?
36. Officer's
38. Flighty prefix
39. Viet
40. Members of 60
43. Aware of
44. Ready
45. Works of art
46. Symbol of unity
47. Cloth or Atropos
48. Cobbler's punch
49. Billiard shot
51. Greek letter
53. Common
57. Certain speakers
61. In favor of
62. Withered
65. Israeli town
66. Popular
68. Medicinal cactus
69. The creeping
70. "Smile for me, my
71. Woofer wiring
72. Unwanted sounds in the system
73. Perry Mason maker

7. Vegas device
8. But, to Pablo
9. Near
10. Turn on
11. Few or many
12. Place to certainly make repairs
13. Hastened
21. Different
22. Hwy.
24. Riata
27. "Spare the rod, ....."
28. Grasping nippers
29. Let out a
31. Organ appendage
33. Dies
34. Sine qua
36. Divine food
37. Park, Colo.
38. Mine aperture

39. Ice
40. Type of mike
41. A Gershwin
42. Agent Orange manufacturer
47. Handful
48. Gaseous mixture
50. Type of drum or guitar
52. Listens
54. Shock
55. "Goodnight, ....."
56. Another woofer part
58. Apiece
59. Beige
60. Marquis de
62. B-52's management Co.?
63. Pop orchestra (abbr.)
64. Marie Antoinette's head, of state, that is
67. "To With Love"

**Solution to December Mix Words**



DOWN

1. Union wages
2. Deep pink
3. Exist
4. Abound
5. Pal
6. Relevant atmospheric

—from page 118, *Satire*

personations of Marlin Perkins, Al Jolson, Luciano Pavarotti, David Byrne—and maybe even a dash of David C.T. for popular good measure.

Let's face it, though: Thomas will never bathe in the spoils of mass popularity, although his late-'70s band, Pere Ubu, was an underground wonder. Could the hit parade or MTV be likely stomping grounds for a large and convulsive singer who extols the quiet virtues of walking, dogs and dinosaurs? No, Thomas seems destined to occupy his own cultist niche, a small but growing following of people refreshed by his disjointed melodies and bizarre brand of naivete.

The McCabe's crowd howled approval at Thomas' satires of today's hits: "Sweet dreams are made of cheese . . . Some of them like Roquefort, some of them like Camembert . . ." Thomas uses his poetic saber to slice away at the pop status quo; he is a heavy threat to the detached, synthesized ironists who currently dominate the music scene, and his very appearance assaults the cocky, pretty-boy WASP mold perpetrated by most pop stars. Thomas thereby avoids their attendant narcissism.

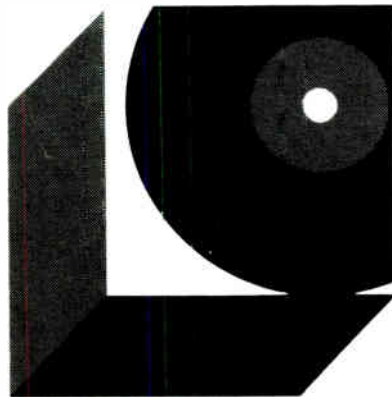
Musically, Thomas likes to surround his vocal quirks with lean, earthy guitar and such innocent instruments as clarinet. *Variations on a Theme* is his latest album with the Pedestrians (on Sixth International, distributed by rough Trade), featuring sympathetic guitar support by English critical fave Richard Thompson. But this Sunday night in Santa Monica was a leg in his West Coast "Mr. Thomas' Lecture Series," in which the protagonist faces the audience *à la carte*, occasionally using taped accompaniment and such props as a balsa wood dinosaur. The gyrations of his unusual voice, coupled with his marionette-like body movements, made Thomas' performance a memorable, albeit madcap, event.

Thomas has stated in interviews that his greatest vocal asset is his lack of singing ability. Come to think of it, there was no grace or soul—in the traditional connotation—in Thomas' frenzied renditions of "Is Hyperbole a Man's Best Friend?" or the "sad-but-true" tale in which he pictures himself as "a big pink ball on the bottom of the ocean" who becomes the laughing stock of a school of fish, whose laughter bubbles to the surface and is heard by a passing boat. This is no formula pop artist.

Thomas—dressed in black and held together with red suspenders—  
—page 124

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## John Gilston: Programming the Pulse

John Gilston enters, a tall, balanced expatriated Englishman in his early 30s. In the sped-up world of the Hollywood studio scene, John appears to be an oasis of calm. That is, as calm as anyone who makes his living creating percussion tracks can really be. (Drummer/percussionists always seem to have a perceptible pulse, giving them that "always on" air. It's probably what drives them to their profession in the first place.)

John's work in the last year alone has included an all-star cast of top artists and platinum records, ranging from the most recent Earth, Wind and Fire album, Donna Summer's "She Works Hard For the Money", the soundtrack for *Flashdance* and the latest Kenny Loggins release. These credits go to adding credence to the rise of the programmer specialist as an essential part of the recording process.

"Around 1976 Michael Shrieve (formerly with Santana, Automatic Man, Go) got me turned on to electronic percussion. It was immediately appealing for several reasons. In the first place, the idea of becoming the world's best parradiddler had never really interested me. That whole school of technique seems a waste in today's music scene, anyway. All that rigid attention to minute, almost arcane drumming methods just wasn't interesting to me. I was looking for something to really fire my imagination. Different types of percussion sounds seemed to be the direction and these electronic boxes looked to provide the means.

"These days I mostly use an extensive Simmons drum set. Session calls have propelled me into getting a Linn-Drum which I've been working with a lot recently, too. I also have a regular

—from page 121, *Satire*

won the crowd over with his own form of charisma, partly vaudevillian and partly maniacal. By the show's close, he had the crowd singing along with him such lyrics as, "Who would question the worth of a dog/Who would query the use of a dog?" as if it were an anthem for modern living. If you're given to his brand of absurdity, Thomas can make you believe there's a modest genius at work here. Or is he a quack? The verdict is in the ear of the beholder.

—Josef Woodard



PHOTO: BILL WOLF

acoustic drum kit and a battery of effects and processors: Lexicon Super Prime Time, a bunch of Boss pedals, an old Maestro Ring Modulator and something else they used to market called the Universal Synthesizer System."

John works with producers many times in a "pre-production" capacity. "If it's a 'programming' date, I recommend pre-programming to the producer," he says. "This tends to save a lot of time and money by allowing me to work out the majority of the part here at home. I can then roll up to the session just about completely ready to put it on tape. A lot of what I end up doing in the studio is just twiddling knobs, not officially playing on the session. It's kind of a quasi-engineer position. A strange new niche—sort of a 'sound tailor.'"

"As well as having numerous electronic percussion machines, the need of getting a proper signal to the Simmons to avoid mis-firing of the modules arises. Going directly into the Simmons you can sometimes run into the problem of double triggering. This is also true if you're using a machine like the Linn or taking a feed to the Simmons from a tapped track (something we use a lot when fixing drum tracks). The Trigger gets around these problems by giving you discreetly separate channels to send the original signal to. This, in turn, allows you to 'massage' the signal eliminating bleeding problems, that you would have normally, by just

taking a signal off the drum mike. It also lets you set the amount of signal individually being sent to the various modules, which is important with the Linn-type machines because they tend to overload the Simmons' triggering inputs.

"A technique that had been a little trickier before I got the Trigger was the mixing of the Simmons snare sound and an acoustic snare drum. The Simmons don't really give you that extra percussive sound you get from the smack of a real drum head—that initial harmonic of attack. I don't personally like electronic drums sounding noticeably electronic, and by mixing the electronic and acoustic sounds you can give it that big modern, but still quite 'human' sound. We'll usually use about 20% of the acoustic drum for the original hit and then fill it out with the Simmons. This is particularly effective live. People like Chicago and Stewart Copeland of The Police are doing this on the road, although I believe that Stewart's using the Trigger mostly to control the Oberheim DMX digital drum."

For the future, John has definite ideas of what new equipment he wants. "I'm going to get an Emulator or some sort of sampling machine with a keyboard. I'm also getting a bank of analog synthesizer modules, probably Roland, which I'll envelope follow off

the Simmons set. This will allow me to create my own sounds completely from scratch then take those patches and sample and store them on the Emulator. After that, I'll use the Simmons to trigger the sounds out of the Emulator, which adds the capability of being able to tune these sounds and control the pitch more precisely. You could look at this as a kind of advanced method of tuning your drums. I've found that the more imaginative drummers that I've worked with (if they have developed a melodic sense) are finding that there is much, much more room for this type of expression from percussionists these days."

—Roger Clay

PHOTO: RICK LAIRD



## A School for Professional Musicians

Jamie Faunt is a veteran professional musician who has created a special approach to training for the realities of the music business. Classically instructed in piano and bass, he has performed with symphony orchestras as well as such artists as Don Ellis, Charles Lloyd, Tim Weisberg, and John Klemmer. His more notable recordings include his bassmanship on Chick Corea's *Mad Hatter* and *Tap Step* albums.

When asked if he wished there'd been a music school like this when he was starting in the business, Jamie replied, "It certainly would have made a big difference. I got my best instruction from a teacher who was also a working pro. I had many questions about how things worked, and why. It wasn't an intellectual curiosity—it was a burning desire to create with the things that I could *hear* but didn't know how to play."

—page 126



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## Spinal Tap: Myth or Legend?

The first indications that Spinal Tap were about to be among us again came in the spring of 1983, when the audience at Heavy Metal Sunday, the middle of three rock days at the Us Festival, saw a plane fly over trailing a banner that read, "SPINAL TAP KICKS ASSES."

It's been quite a while since America's eardrums have felt the shock waves from guitarists David St. Hubbins and Nigel Tufnel, bassist Derek Smalls, keyboard madman Viv Savage and drummer Mick Shrimpton. Since catching wind of this long-lived ensemble (they've literally outlived several of their own drummers), I've searched used record stores and the pages of traders' magazines in vain. To hear the classics I only dimly remember from my childhood—"Gimme Some Money" (when they were still The Thamesmen), "Listen to the Flower People" and "Again with the Flower People," and the concept album *The Incredible Flight of Icarus P. Anybody*—I sought and searched in vain.

Now comes the good news that Spinal Tap is back, at least on film and vinyl. Next month will see the release of *Heavy Metal Memories*, a compilation of the best from their 15 group and solo releases. It will of necessity include only excerpts for *The Incredible Flight*, but the other key tracks (from *Silent but Deadly*, *Intravenous DeMilo*, and others) will be included. And Martin DeBergi's critically-acclaimed "Rockumentary," *This Is Spinal Tap*, is due for release in February as well.

—D.G.

*Spinal Tap (left to right): lead vocalist David St. Hubbins, drummer Mick Shrimpton (center), co-lead guitarist Nigel Tufnel, keyboardist Viv Savage, and bassist Derek Smalls.*



PHOTO: VANN GRIFFITH

## Barry Reynolds

In his film *Zelig*, Woody Allen portrays a character who comes to be called "the Human Chameleon" because he takes on the characteristics of the people he's with. The story is a comedy, and despite the problems Zelig encounters due to his condition, it's an hysterical idea.

But back here in real life, there really are a few genuine human chameleons. Take Barry Reynolds, for instance. To Island Records head Chris Blackwell, he is the "European influence" in Blackwell's studio band, the

Compass Point All-Stars. To Marianne Faithfull, the once fragile flower of the '60s, he is the man who forms her jagged ideas into songs. To Grace Jones, he is "the man with the attitude." And to Carly Simon, Bette Midler, and a bevy of other female artists, he is the writer who might bring new life and new direction to their music.

Reynolds had just about given up on his career as a session musician in London when Blackwell called and asked him to put together a band for Faithfull, who was preparing for her 1980 comeback tour of Europe. Reynolds had never met Faithfull, but before a week passed, the two col-

—from page 125, *School*

The bassist founded Jamie Faunt's Creative Music Courses in 1975. Hundreds of students have gone on to careers as professional musicians and many seasoned pros have come to Jamie for his specialty courses. Bill Payne, keyboardist with Little Feat, Jackson Browne, and Linda Ronstadt took Jamie's rhythm course. Bobby Bruce, a session violin player, came to learn more about harmony and how to play through chord changes. Larry McNeely, bluegrass banjo player, wanted to learn how to improvise and, in Jamie's words, "get along in the studio without stumbling over music symbols he didn't understand."

Administrative offices are in Hollywood, but the teaching is done at the homes of the instructors, all of whom are working professionals. A typical course consists of from ten to eighteen hour-long sessions, with extended practice required between meetings. There are six basic courses dealing with the fundamentals of playing professionally. Twenty-four specialty courses cover various aspects of

rhythm, tonal facility, harmonic progression, and melodic technique. The courses have an organized format, but all of the students get the benefit of private instruction and each course is tailored to individual needs. Students write a short written report following each lesson, instructors meet with Jamie on a weekly basis, and each student is checked out personally by Jamie at the completion of the course.

"We teach our students to play from a broad base of understanding that applies to all styles," he explains. "They learn to play what they conceive, rather than learning rote patterns on their instrument. We teach reading as a supplementary skill and integrate theory into a creative approach so the instruments truly become their own tools."

Jamie's plans include expanding the central office and facilities, adding more instructors, and publishing his music books on a broad scale. He is currently writing a text on rhythm, and all course materials are available to the public. For more information, phone (213) 468-8800. —David Goggin

laborated to produce the song everyone would soon be talking about, a little ditty called "Why'd Ya Do It," with extremely vitriolic (some would say obscene) lyrics by poet Heathcoat Williams, and the angriest, most mocking guitar this side of Keith Richards.

Next, Reynolds deciphered Faithfull's notes for a song that became "Broken English," the title track of her first album in a decade. By that time, Blackwell was looking to put together a studio band for his new Nassau studio, Compass Point.

"Sly [Dunbar] and Robbie [Shakespeare], Mikey [Chung] and Sticky [Thompson] were already here when I arrived," Reynolds recounted recently from his digs at Compass Point. Wally Badarou, who'd done M's "Pop Muzik" single, was coming in, and I was to be the European influence—the guitarist from England."

His fair skin hadn't even adjusted to the strong Bahamian sun when the second project walked through the door in the person of disco queen Grace Jones. "I'd never even heard of her before," says Reynolds. "All Chris had given us was an old disco LP, and I thought it was awful. But when the band started playing, there was an immediate fusion, a very collective spirit between Grace and the band. We just went straight into it, cutting ten tracks in three days. At one point, we had to stop because we'd run out of material." These were the sessions that became *Warm Leatherette*, Jones' breakthrough album.

"I'll do anything," says Reynolds. "I do enjoy producing. I've just finished producing an artist named Valerie LeGrange; she was my first production. And I love writing with Marianne, because she's an incredible lyricist. She's more of a challenge; she comes in with reams of stuff, and it's all good. It's very hard to edit."

"With Grace it's pure fun, because you're writing for an attitude. And I enjoy writing by myself as well."

Reynolds' own debut LP, *I Scare Myself*, contained a lot of his writing—including a reworked version of "Broken English"—and Reynolds' substantial reworking of Dan Hicks' title track. His second album, now being recorded, will feature even more originals, he says, but it may have to wait until he completes an Australian tour with Faithfull. And the session work, both in Nassau and in London, just keeps piling up.

"I was in New York recently, and met Carly Simon through the photographer Lynn Goldsmith. We decided to write together, but I was still totally drained from Marianne. I also

met Bette Midler around the same time, and she wants to do some writing, so we've kept in touch. I'm hoping that'll turn out at a later date," he says.

Why all this attention for a relative unknown? And why from all the ladies? "Well, I doubt I would work well with the macho types," he observes. "No, I don't think that would be worth trying. But Robert Palmer is fun—I have no problems working with him. And working with Joe Cocker was wonderfully relaxed and easy. All Joe needs is a few good musicians."

But there must be more to it than that. "Basically, the difference bet-

ween Compass Point and the studios in New York or LA is that the musicians in those places tend to be incredibly safe these days. It's always something I've heard before; it's much harder to *create*—to say, 'Let's just *play*.' But if the music behind a vocalist is very good and very interesting on its own, it certainly helps.

"The main thing is that no matter whose album it is, you have to be sensitive to what that artist sounds like, and what you can add to that sound. I've never yet been in a situation where someone's turned around and told me what to play."  
—Laurice Niemtus



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## THE DOORS: ALIVE AGAIN



### THE DOORS *Alive She Cried* Elektra 9 60269-1

Produced by Paul Rothchild; recorded 1968-69-70 in New York, Los Angeles, Detroit, Boston, and Copenhagen; live recording engineer: Bruce Botnick; mix engineers: Bill Gazecki and Rick Hart; assistant to the producer: Kris Farris; associate producer: Benjamin Edmonds; mixed at Ocean Way Recording, Los Angeles; pre-production and editing at Alpha Studios, North Hollywood; mastering by Bernie Grundman.

Not counting the Jim Morrison poetry album, *An American Prayer*, it's been twelve years since a record of unreleased Doors performances has been issued. There's been plenty of interest in The Doors during the years since Morrison's death; indeed catalog sales of vintage Doors LPs has been very brisk, particularly since the advent of the new wave, many of whose proponents embraced the uncompromising artistry and wild abandon of The Doors' early albums. A greatest hits package released two years ago sold more than most current bands would *dream* of selling, and Doorsmania has spawned two generally fascinating books that made their authors and

publishers a lot of money: *No One Here Gets Out Alive* and *The Doors: The Illustrated History*. So it should not seem terribly surprising to learn that a new live Doors LP has been put out—except for the fact that just two or three years ago, even those closest to The Doors' camp believed that enough material for a good album simply did not exist.

*Alive She Cried* (the title is derived from "When the Music's Over") is much more than just an attempt to cash-in one more time on The Doors' mystique. Rather, it is a beautifully assembled and cohesive work that shows The Doors at the peak of their form. In many ways it is more satisfying than the group's erratic live album of many years ago, *Absolutely Live*. That album captured the frenzy of a Doors concert well, with long passages of hysterical crowd reactions and Morrison's constant teasing and taunting, but the performances were uneven at best, mediocre-to-bad at worst. The album almost has a documentary feel at times, whereas *Alive She Cried* showcases the music above all, as it probably should.

The record is a wonderful blend of the familiar and the unexpected, just as a good Doors concert was. For instance, the nearly ten-minute "Light My Fire" burns for a while in a version fairly similar to the one on the first Doors album, then falls into an exciting poetic interlude by Morrison before exploding at the song's climax. "Moonlight Drive," the moody, darkly sensual song which closed side one of *Strange Days*, is featured in a hot, slide-guitar driven take that includes Morrison's overtly sexual "Horse Latitudes" poem intoned over the "Moonlight" coda. "Texas Radio & the Big Beat," from the final Doors album, *L.A. Woman*, is presented here in a strikingly different version, recorded three years earlier. This reading, deliberate and steeped in swells of music and noises that surround Morrison's lyrics like some sort of hallucinatory swamp gas, is considerably more effective than *L.A. Woman's*, which suffers from an awkward, obviously forced rhythmic arrangement. Doors poetry-music at its best crawls out of the speakers like a slithering python with its eye on dinner. And that's just what we have here—until "Texas Radio" stops abruptly and charges into "Love Me Two Times."

Two of the LP's seven songs do not appear on previous Doors albums: Van Morrison's "Gloria," sung with lascivious delight by Morrison ("wrap your legs around my neck!" he shouts, "Wrap your arms around my feet! Wrap your hair around my *skin!*") as the band goes through its primal-rock paces; and Willie Dixon's "Little Red Rooster," a steamy blast of Chicago blues that is augmented by John Sebastian on harmonica. Both tunes show how Morrison could transform relatively straightforward material into something truly magical.

Putting *Alive She Cried* together was no easy task. It took well over a year to assemble, because the material came from such disparate sources. "I checked out every tape in storage in Elektra's vaults, and there was miles of it," comments Paul Rothchild, who produced this album, as well as every Doors LP except *L.A. Woman*.

"It was really mainly the dregs that were left behind after we made *Absolutely Live*, but we went hunting for pearls and we found them."

And why didn't those pearls appear on the previous live LP? "The criterion changed between that album and this," he says. "Back in those days it was very important that we got whole performances that were perfect. Since we had a wealth of material, that wasn't too difficult. But that process left several tunes that we couldn't

PHOTO: DAVID SYGAL



put on the album because there were flaws in the instrumental performances, although Jim really got it on good. What we have here [on *Alive She Cried*] are, in part, things that were excluded because we wanted the first album to be, literally, absolutely live. On this one there are places where we touched up the instrumentals to match some *great* Jim Morrison performances.

"The focus was on Jim," he continues, "but we had the added advantage of working with three musicians [original Doors keyboardist Ray Manzarek, guitarist Robby Krieger and drummer John Densmore] who have kept their chops up spectacularly. Robby, for example, is five times better now than he was then." To Rothchild's and the musicians' credit, it is next to impossible to tell where new parts have been added in. It all just sounds like The Doors at their best.

Considering the album was culled from a number of different sources, and tapes spanning three years, the sound on the record is remarkably cohesive. "Gloria," for instance, was recorded at a sound check at the Aquarius Theatre

in L.A., so there is no audience. "Texas Radio" and "Love Me Two Times" were discovered by one-time Doors associate Rich Linnell on a two-inch mono Danish TV broadcast made in 1968. Others were 8-track recordings made on the road by engineer Bruce Botnick. "Making them all sound similar was difficult," acknowledges Rothchild. "But the tapes were recorded essentially flat, with very little EQ being used on the live date, and much of it was close-miked or direct during the show, so there was a great consistency of sound from one town to the next. So at this point, I could go in with a sound in mind for all the performances and mix in that direction." Working with Rothchild on the time-consuming task were engineers Bill Gazecki and Rick Hart, who worked at L.A.'s Ocean Way Recording.

The Danish TV tapes presented a differ-

ent set of problems, beginning with a complicated legal tangle because of the strong unions in Denmark. Linnell went to Denmark and negotiated for their release, and then the sound wizards went to work on the mono tape, described by Linnell as having "phenomenal sound quality for a mono broadcast." According to Rothchild, "it's taken pretty much straight across, with some equalization improvement and some delay to give it a stereo feel." The video rights were negotiated, as well, and MTV has included "Love Me Two Times" in its rotation.

A version of Morrison's great anti-war anthem, "Unknown Soldier," from the Danish TV special was originally slated for the album, but eventually axed. "There's one more album out there," Rothchild says, "Beyond that—forget it."

And how was it working in the studio

again with the band that had been the source of so much joy and so much heartbreak for Rothchild over the years? "It was great. There was no gloom at all. It was very upbeat. You know, I also produced *Pearl*, which Janis Joplin died in the middle of making. I learned a lot from that experience that I used on this one. Every single move I made on both records was made with the dead singer in mind. Every single thing was done as if Jim was sitting next to me as usual. I kept asking myself, 'Would Jim do it this way? Would Jim like that?' And if I thought he wouldn't, I'd work on it more. This probably will sound silly," he adds, a smile obviously in his voice, "but I think Jim likes it just fine."

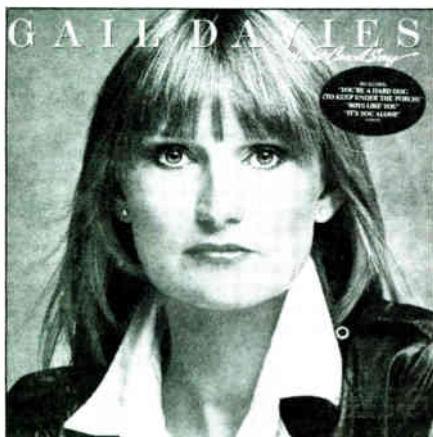
And well he should. *Alive She Cried* ranks with the Doors' finest.

—Blair Jackson

## GAIL DAVIES MAKES ALL THE RIGHT MOVES



(L-R) Mike Baird, Conway Twitty (who was recording next door), Bill Payne, Gail Davies, Leleand Sklar, Billy Walker (kneeling), Reggie Young.



### GAIL DAVIES What Can I Say Warner Brothers 23972-1

Produced by Gail Davies; engineered by Rick McCollister; recorded at Groundstar Laboratory and Woodland Sound Studios (Nashville); mastered by Ken Perry at Masterfonics (Nashville).

"I love to wallpaper," confides artist/producer Gail Davies, "and I tend to correlate record producing with wallpaper hanging. Any good paper hanger will tell you that you've got to be very careful not to overwork the paper. You can get so hung up trying to get every little thing perfect that you can scrape the face off the wallpaper. The same attitude applies toward anything you do. You've got to be sure you're getting what you want, but without running it into the ground."

If this album were a room papered by Ms. Davies, I could live in it forever. On *What Can I Say*, her fourth self-produced LP for Warners, she makes all the right moves. Although her previous efforts received well-deserved critical nods and sold respectably, this time out she ups all her standards by at least one notch. Her song selections are better, her singing is better, her production judgements are honed to near perfection, and it's all etched in crystalline sound

thanks to her sidekick's extraordinary engineering. Without question, as an artist and producer, Gail Davies has finally hit her stride.

Although she's one of the most talented and versatile women in pop music today, Davies' steadfast insistence on maintaining artistic control has probably hindered her rise to stardom as a "country girl singer." Just as well. Though she clings proudly to her Oklahoma country roots, she also ventures boldly into gutsy R&B, vintage jazz inflections, and hard knockin' country rock.

The label gives a good clue to the musical potpourri nestled in the grooves. There's a spirited remake of Ray Charles' "Hallelujah I Love (Him) So," a hard-nosed rendition of Mark Knopfler's "Setting Me Up," and a sensitive interpretation of Rodney Crowell's "On a Real Good Night," all blended with superb self-penned tunes and contributions from brother Ron Davies and Gail's former road keyboardist, Walker Igleheart.



Davies independence and eclecticism is also reflected in her choice of musicians. For this LP, she imports a rock bottom from Los Angeles: bassist Leland Sklar, drummer Mike Baird, and pianist Billy Payne. On this foundation she tastefully adds layers of Nashville's premier pickers, including (this list will be hard to edit) Reggie Young and Bill Walker on guitars, Lloyd Green on steel, Buddy Spicher and Ricky Skaggs on fiddle, Jerry Douglas on dobro, and one-take wizard Terry McMillan on harmonica. For sweetness, she tops some tunes with the A Strings as arranged by Bergen White, while the saucy numbers get a dash of the Muscle Shoals Horns.

Wait a minute! An L.A. rhythm section and Muscle Shoals Horns? Are you sure this is a country album? Responding to that question, Davies replies: "I don't know! Is Linda Ronstadt country? Were the Eagles country? Or Buffalo Springfield?"

Categories and radio formats aside, Davies aimed for an energetic, spontaneous, "live-in-the-studio" feel on *What Can I Say*. "I wanted this one to be a little more contemporary country," she says. "I enjoy singing a lot of high energy songs in our show. Somebody once told me they'd love to see me do an album that was indicative of our live show. So there are a lot of energetic, fun, show-type tunes on here."

*What Can I Say* owes most of its impact to an open, natural, and full-bodied sound, the work of a perceptive, up-and-coming engineer named Rick McCollister. A dedicated practitioner of the "purist" (or "minimalist") recording art, McCollister believes that an instrument or a voice sounds more like itself the less you futz around with it. Therefore, he goes to unusual lengths to keep his signal path clean.

"When cutting tracks I try not to use the console any more than is absolutely necessary," he says. "I'll use the preamp and the equalizers, but if I can avoid going through the fader and that whole section of the console, I will. I'll go straight to the multi-track recorder. Neve consoles have a 5 dB increment mike sensitivity adjustment, and this is usually adequate for setting the level for tracking. What you gain by not going through all that extra stuff is usually worth the trouble. I find that you can go through one little circuit sometimes and it will change the whole sound, so you have to be careful about what you do and don't do."

McCollister took extra pains in recording Davies' vocals, in this case bypassing the console altogether. He used a Neumann 249, ran it into the Sontec all-discrete pre-amp that he carries with him, passed the signal to a Massenburg or ITI graphic equalizer, then to a dbx 165

limiter, and finally into the Studer multi-track. Lead vocals went through a fader (hard wire, not VCA) only on the final mix.

This "natural and live" approach was also applied to other aspects of the recording. Drums were recorded in the main studio room (which has a very high ceiling) using only six mikes: kick, snare, hi-hat, two tom mikes (pulled back over 12" for a natural spread), and one overhead for cymbals and to "pull the center up a bit." Most basic instruments (fiddle, steel, etc.) were recorded live with the rhythm tracks, as were many lead vocals. Overdubs were usually limited to instrumental solos, background vocals, horns, and strings—the latter *not* stacked, for a change. McCollister does not like the way string stacking blurs the natural imaging.

The album hopped on a digital merry-go-round on its way to disc mastering. After mixing to a Sony PCM F-1, it was transferred digitally to a PCM 1610 for editing, then back to the F-1, and finally digitally transferred to the JVC system for disc cutting.

"It was a long, hard project," says McCollister, "but it was worth it." A statement which summarizes this writer's sentiments precisely—on the first listening and on the tenth. *What Can I Say* wears that well.


—Sam Borgerson



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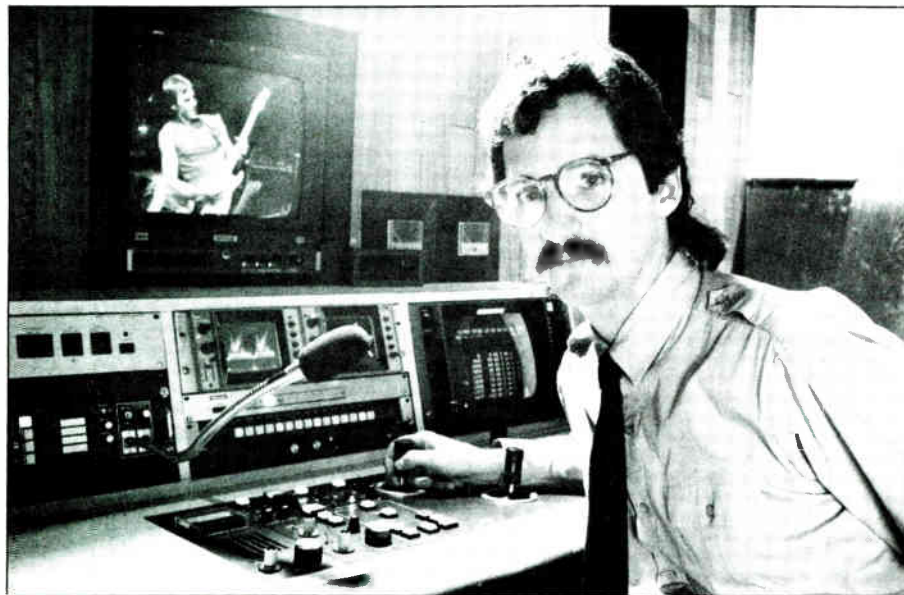


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*Joe Murray of One Pass Video at the Rank Cintel spot scanner used for film to videotape transfer.*

## S.F. Bay Area Video Production

by Lou Casabianca

**T**he two key elements in music video production have been permanently influenced by the artists and scientists of the San Francisco Bay Area: the music and the visuals.

### Overview

Santana, Sly Stone, the Jefferson Starship and the Grateful Dead . . . the Fillmore, Winterland and laser light shows . . . Progressive FM, *Rolling Stone* and the *Gavin Report* . . . Skywalker . . . a living legacy from the land of redwoods and the Golden Gate.

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cisco in Silicon Valley, the center of the world of high tech, computers and telecommunications. The academic communities, including many Nobel prize laureates in residence, at The University of California at Berkeley, and Stanford University, at Palo Alto, have established the Ivy League of the West. (Harvard and MIT form the hub of Silicon Valley East, the Boston/Cambridge area of Massachusetts.) Ampex Corp., Apple Computer, Control Video Corp., Hewlett-Packard, Intel Corp., Orrox, and Otari Corp. are some of the major S.F. Bay Area high tech companies involved in the audio/video/computer fields.

### The New Production Technology

On the leading edge of the new entertainment technology is Lucasfilm Ltd., in San Rafael, the creators of *American Graffiti*, the *Star Wars* trilogy and *Raiders of the Lost Ark*. No filmmaker or production company has ever integrated creativity and technology so successfully, while rewriting box office history in the process. The company is structured as six integrated divisions: Lucasfilm, motion picture production; Industrial Light & Magic, the special effects division; Sprocket Systems, the postproduction operation; the Computer Group, R&D and manufacturing; the Ancillary division, merchandising; and Skywalker Construction, which is an in-house general contracting firm, set up to handle the design and construction of Skywalker Ranch. The ranch will be a combination high tech creative think tank and self-contained new age cultural environment, designed to be a refuge and a community dedicated to advancing the art and science of filmmaking.

### Advanced Computer: Tape/Disk Editing System

Nineteen eighty-four will mark the entry of the company's computer division into the video postproduction hardware wars. [With writer/producer George Lucas on a two-year sabbatical and *Star Wars* on an indefinite hiatus, the only current Lucasfilm project in production is the sequel to

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*Raiders, Indiana Jones & the Temple of Doom.*] The first product the division will release will be EdDroid, an advanced video editing system co-developed by and to be jointly marketed with Convergence Corp. of Irvine, CA.

EdDroid will be released in April at the National Association of Broadcasters convention in Las Vegas. It uses videotape and laser videodisks as editing media, permitting the user immediate call-up of an edit and real-time previewing of edited sequences. The computer in EdDroid will have ten times the power of any existing editing equipment. According to Lucasfilm computer division manager Robert Doris, the system will bring film and video editors together and contribute to a vastly speeded-up postproduction process. After three years of co-development with Convergence, representing a multi-million dollar commitment on the part of Lucasfilm, it is expected that EdDroid will cost about \$75,000. The system is targeted to high-end video postproduction facilities, with film editors constituting the biggest expansion market.

#### Lucasfilm: Digital Audio

Other projects in development at Lucasfilm involve digital audio, computer graphics and video games. The company is at work on a fully digital mixing/editing system for film sound editing, television post production, and music recording which will also be capable of music synthesis. The system, currently used by Sprocket Systems for Lucasfilm audio postproduction, will eventually be available to outside production companies, putting the company in the professional audio recording studio business. The unique hardware/software systems coming from Lucasfilm will be the first round of filmmaking tools created by filmmakers for film people, and should have a dramatic impact on the use of animation and digital audio in music video production.

#### One Pass, Inc.

One inch EFP—electronic field production—a major step in the development of the type C high band format, was field-tested for Sony Corp. and first used commercially by One Pass Video.

The company, located in San Francisco's China Basin area, has been on the leading edge of 1" type C production and postproduction technology from its very inception over seven years ago. In addition to CMX 340, One Pass also has one of the few CMX 600s ever built, a flop-

py disk video editing system that functions like a real-time videodisk, allowing the user to edit by light pen command. In May of '83 the company added Ampex ADO to its editing special effects capabilities.

#### Electronic Cinemaphotography

While they are pioneers in the use of high band video, the founders and principals of One Pass are also filmmakers and equally involved in film production and editing. A key element in the chain of technology used in film production today is the Rank Cintel Flying Spot Scanner. Originally designed for film-to-videotape transfer, the Rank or Bosch equivalent system is now used for scene-by-scene color correction, special effects and frame-by-frame image repositioning. One Pass's customized Dubner computer animation system will allow colors to be corrected without affecting the color quality of the other components. FTF, or film-to-tape-to-film, is a valuable new technique in the never ending quest to control budgets and expand the creative options. This spring, One Pass will be taking delivery on a new 45-foot remote video truck. The truck will be a completely self-contained video production center, with at least six 1" video tape machines, expandable to ten, top-of-the-line Grass Valley switcher, digital video effects, and Ikegami HK 357 and HL 79E cameras.

One Pass vice-president of operations, and producer/director Scott Ross has handled most of the music video and film work done by the company, including concerts and clips for Elton John, Neil Young, Marshall Crenshaw and Eddie Money.

#### Positive Video Postproduction

Located in the hills of Orinda in the East Bay, Positive Video is an example of the state-of-the-art in video postproduction facilities. Founded by Jim and Lindsey Lautz, the online editing suite is designed around the CMX 340x computer editor, which is interfaced to as many as five Sony BVH-1100a 1" video machines, MCI 4- and 8-track audio tape recorders, Grass Valley 1600-7k switcher, NEC E Flex and Ampex ADO digital video effects. Through enhanced electronics, the CMX editor is capable of controlling all audio and video tape machines in sync, and can be programmed to execute frame-accurate edits with or without special effects. Positive Video is involved strictly in postproduction. This month the company is slated to expand its facilities with the addition



*San Francisco Production Group*

of a second larger video postproduction suite and with the addition of a Bosch film-to-video transfer system. Recent MTV music videos postproduced at Positive Video include clips for Journey and the 415 Records label.

### **Colossal SFX: The Right Stuff**

If you've seen *The Black Stallion* or any of a number of Levi's commercials or watched MTV, you've seen images from the minds of the animators and special effects people of Colossal Pictures. Founded by Gary Gutierrez and Drew Takahashi, Colossal, and a sister company, USFX, created the animated and special effects sequences for *The Right Stuff*. Directed by Phil Kaufman, the film is a tour de force of Colossal's wide ranging capabilities, including: computer controlled cell animation, motion controlled (robotic arm) camera movement, and model design, construction and photography. Many of the major elements of the camera control systems used by the company were developed in-house by technical director, Zak Bogart.

Colossal Pictures created the MTV ID package, the MTV spots or self-promos that run between the videos and at the top of the hour. They are currently producing six more MTV logo promotionals, a 90-second video game spot for Atari, and a follow-up animated spot for Levi's Youthware Division. Colossal sales director Vicki Vandamme reports that Colossal will be producing several major budget live action music videos in the next few months.

### **San Francisco Production Group**

San Francisco Production Group is the most recent 1" production/postproduction facility to come online in the Bay Area. Founded by principals who are musicians interested in music video production, SFPG also has a 30' by 40' hard cyc stage which is being converted to a sound stage that will allow for multi-camera shoots, switched from the main postproduction suite, and live multi-track recording for video. The company recently added NEC E Flex digital video effects.

Joel Skidmore is the general manager, with Jeff Cretcher and Peter Takeuchi handling production and facilities management. SFPG has provided production and postproduction services for several recent MTV music video productions.

### **Video Goes to the Bank**

Eureka Telecommunications Center, in San Carlos, California, is a unique example of a bank, in this case Eureka Federal Savings, not only using video, but actually getting into the business. Managed by Ken Cox, ETC is set up for both audio (24 track MCI/Harrison board) and video production and postproduction. In addition to state of the art Sony machines and computer editing, ETC has a full-sized sound stage and cyclorama with an extensive computer remote-controlled lighting grid.

Versatile Video, in Sunnyvale, is another major facility, handling both remote and postproduction duties on live concert and network sports coverage.

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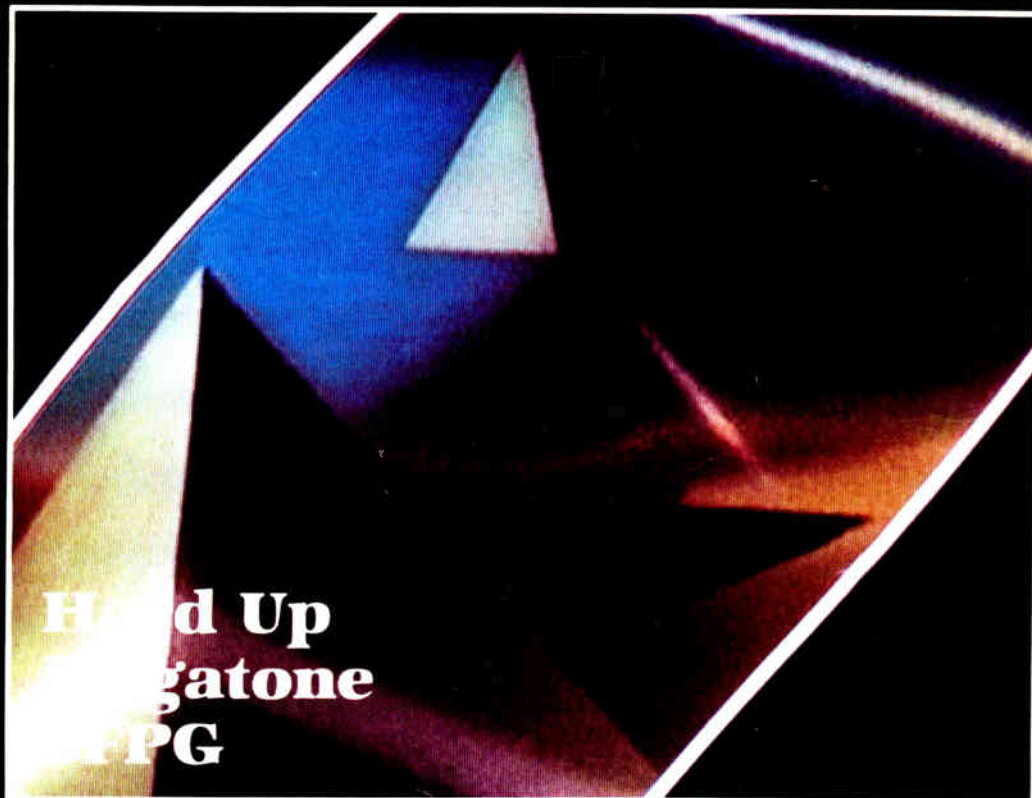
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World Radio History

—from page 117, *Alarm*

ing and deliberate, the band takes the chords from a pop framework and injects them with the accelerated pulse rate of hearts beating quickly for a cause. They set their sights on issues like racial inequality and the ineffectiveness of violence as a social cure, but the band advocates channeling frustration into rational, organized modes of effecting change. "It's the same stuff that's been said for twenty years," says Peters. "I guess it needs to be said some more."

The songs are driven by Twist's intense, at times military drumming, and embellished with Macdonald's bluesy harmonica. The acoustic guitars, with layers of accentuated overtones that ring out like bagpipes, clothe without muffling the lyrics, which are definitely sung, not shouted.

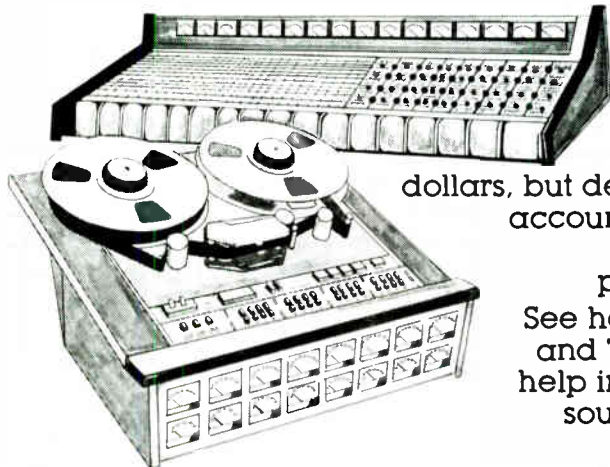
By helping to re-shape the boundaries of contemporary folk music, The Alarm fall into place alongside artists like the Fripp-produced Roches and Bruce Springsteen-with-a-four-track. Their reliance on acoustic guitars rose from the necessities of the band's formative stages. "When we first started out," recalls Dave Sharp, "we practiced in our flat with electric guitars, and the old lady upstairs just kept screaming for us to stop. So we had to compose and rehearse the songs on acoustic guitars, with the intention of transferring them to electric for performance. We discovered that there was a real intimate feeling in doing the song acoustically, and at some point we decided to stick with the instruments we started out with."

With their straightforward melodies, power-chord approach, and wide interval vocal harmonies, it's hard to avoid comparing The Alarm to the early Clash. "It's natural for people to see similarities and then classify a group," says Peters. "Early in their careers, Bob Dylan was compared to Woody Guthrie, the Stones were compared to Muddy Waters, and The Clash were compared to the Stones. When people come to our shows, they have a chance to make up their own minds about us."

Although they were influenced by the British punk explosion in the '70s, The Alarm chose to stake out different stylistic territory. "Punk doesn't mean much any more," Peters declares. "At the time that all happened, people were very frustrated, so they launched into that thing with an over-the-top fervor. After that phase, the record companies turned to synthesizer disco to

—page 144


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*"Most of the audio companies at the show seemed busier, and more successful, than the run-of-the-mill video or film equipment supplier. The TV people are impressed with the novelty of good sound, and they are buying it."*

## SMPTE

# LOOKS AT VIDEO'S FUTURE

by Neil Weinstock

There are two forums every year for the introduction of new video products by production equipment manufacturers: NAB (the National Association of Broadcasters' show) and SMPTE (Society of Motion Picture and Television Engineers.) The November SMPTE Convention has just rolled by with a few very innovative gadgets, a lot of refinements on equipment first shown at last spring's NAB or 1982's SMPTE, and the usual exhausting convention week of drunken revelry, hand-buzzers and whoopee cushions.

For many, if not most, participants at SMPTE (like at AES) the equipment displays have become the "show," while technical seminars are caught only as an opportunity to rest one's weary feet. In sooth, the techie talks this November represented only slight evolutionary change from last year. A couple of general discussion trends were:

1) More talk about analog component and digital component video, but all fairly inconclusive. The engineers mostly agree that they want it, but are no closer to agreement on standards than ever. One contingent is led by CBS and Sony, championing the NHK Japanese broadcasting system of 1125 lines and a 5:3 aspect ratio. But the bandwidth necessary to transmit this form of HDTV precludes digital encoding in the near future. Most conferees therefore preferred a system with a more standard aspect ratio (currently it is 4:3), and a signal broken up into R-G-B components (as opposed to the current composite signal) that can be processed either digitally or as usual. But the conferences confirmed that all

of the above—as well as other technical improvements in the televised image—are quite possible. The decisions to do so are out of the engineers' hands, and in the lap of management—who must decide if somehow improved TV technology can make them money.

2) There was a general agreement that raising the technical quality of TV *is* a necessary first step towards raising *program* quality. TV with a picture as good as the movies will beget real movies made for TV, instead of made-for-TV-movies. You can't have high quality concerts on TV till you have high quality audio.

3) There was little emphasis this year on special effects designers presenting papers describing their most recent ground-breaking computerized work. Last time, over half of the papers fit into this genre. Now there were just a few. The "Wow" had sunk back into a subtle spot in the average attendee's vocabulary. If engineers are getting bored with their wow sfx, can the general public be far behind? The SMPTE barometer tends to foretell trends a year or two ahead; this observer bets the gizmo craze in movies will shrink noticeably in '84 and '85.

There were a lot of papers and products from the audio side. Equipment companies such as Tascam, Studer-Revox, Sound Technology, Otari, Rupert Neve and others were out in force, making a first major effort to sell audio mixers and decks to interface with TV stations' and post-production houses' video systems. Since this represents a video interface flow from us to them, we'll expend little effort covering these products that *Mix*

readers mostly already know about. Suffice to say that they run SMPTE time code and, in a few cases, display a list of coded edit decisions on a CRT screen.

Suffice, too, to relate that most of the audio companies at the show seemed busier, and more successful, than the run-of-the-mill video or film equipment supplier. The TV people are impressed with the novelty of good audio, and they are buying it.

In the papers, audio was a tiger. (Sorry about that.) No less than 22 audio papers were presented, about half dealing with better multi-channel theater sound, and half with more efficient audio post-production. There was really very little talk of stereo TV—for in a way, this seems to be a technology whose time is both past and future. Past because the details have all been ironed out at prior engineering conferences; future because now all the engineers can do is wait for somebody who thinks they can make money in stereo. The analogy with digital TV is clear.

Certainly a spur towards stereo television will be improved theater sound and the routine use of multi-channel sound for all theatrical features. Currently, about a quarter of the movies made in the U.S. have multi-channel audio; and most movie theaters have lousy audio systems. There is a fair amount of inertia and lack of dollars for upgrading, but there is also a general consensus among theater owners as well as filmmakers that upgrading is necessary. For all you sound-reinforcement guys, opportunity lurks. You may be interested in cassettes of papers #4 through #10, available from SMPTE in Scarsdale, NY.



The entire art of the audio studio roughly corresponds to the video and film post-production stage, so audio people and their technologies have a head start in talking to post-production videoheads. At the same time that audio has recognized the wonders of SMPTE's standard time code, so has film. Kodak's Datacode system, first announced at the last SMPTE show, has just now become a production reality. The entire base area of the film is coated with a thin layer of magnetic oxide—thin enough so that it is transparent, with a very slight and constant neutral density factor, and thick enough to record time code for each frame of film. This show saw the first time code interlock of the Datacode system, video and audiotape, all using production-line—not just prototype—equipment.

On the whole, SMPTE's convention has evolved more and more towards a show for video producers. Film equipment booths were noticeably down from last year, with the only film camera makers in evidence Aaton, Mitchell, and Panavision (the last displaying only their Panaflex video camera.) Most conspicuous by its absence was Arriflex, leaving the Aaton people to tell their side of the two companies' legal battles uncontested.

Among the more interesting new products demonstrated were:

A prototype editor from Asaca/Shibasoku that can display 32 frames of video from four sources at once, all on one monitor. This is a good step towards making video editing more like film editing, and seems like it could be a relatively inexpensive add-on to video editing systems in the near future.

Several lovely new computer-controlled dollies and booms and tripods and gimbal-mounted heads. The general idea of these is usually to replace manual pullies with precise electrical ones, to keep the feel and ease of control of the old controls, and to provide automatic repeat and store memories for duplicating camera moves. The most interesting of these were a dolly from Panavision and Interactive Motion Control's model 3565 controller for the Kaleidoscope Hot Head.

"Sitcode," a neat little gadget by the fine German filmmaker Peter Krieg, which runs a paper-tape time code for shooting and editing with an Arri. For a mere \$3,000, the user can get most of the benefit of SMPTE time code editing. (It also works with Eclairs, Cinema Products cameras, or any other bloop-synced film devices.)

Word processing programs for IBM and Apple PCs, from Comprehensive Video Supply, that set up production budgets, script in two-column A-V

format, and list edit decisions.

New one inch Type C cartridge systems, from Lake and Panasonic. Lake's looks the most interesting: for just \$70,000, a dozen machines are linked up to a computer that plays any recordings in any order. Record capability is also possible, for a price. TV station automation moves a giant step forward with this one.

Speaking of the automated television station, several companies were also showing videotex and teletext devices—which seems like a dangerous thing to do at a convention of production people. Still, there must be some genuine production use for these things. It's just hard to figure out what it might be.

Finally, the ubiquitous video effects category didn't really see very much news, except for Rank Cintel's addition of properly timed simulated panning to its system's capabilities. To explain, a good looking pan should start slowly, speed up, then slow down again. Electronic pans have, so far, all moved at constant speeds that look unrealistic. Now, the Rank people have moved another step towards the imitation of the old comfortable film style by electronic means. And, if there is any most important, single discernable trend in video production hardware today, this is it. The Asaca film-editor's simulation, the Rank pan simulation, the motion-controlled dollies: video strives to achieve the grace of film. ■

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# VIDEO NEWS

by Mia Amato

## Peter Schilling's TV Tour

Elektra/Asylum has chosen video exposure over touring to "break" West German artist *Peter Schilling* in the United States. Schilling arrived here for a short stay, to talk and not to play, while label management marked the release of his album with a video clip, TV commercial and interviews on MTV and *American Bandstand*.

"MTV is great—I know it's helping me a lot," Schilling said. "The clip is incredible exposure, because I don't see myself doing a U.S. tour until late 1984. I don't want to tour with just one album; I need to have at least two, and some single hits, to have enough music to make it worthwhile."

The LP is *Error in the System*, an English-language translation of a 1982 LP release which enjoyed chart success in Germany, Austria, Switzerland, Holland and Belgium. (The cassette version of the LP also includes four songs in the original German.) The video for the single, "Major Tom," was produced by *Limelight* director *Peter Sinclair*. It mixes NASA footage with views of Schilling perched atop a pyramid of junked autos—not an easy role for the singer, who admits a fear of heights.

"Peter's crew built a set of steps for me behind the cars," Schilling explained. "They went to a lot of trouble to make things very secure for me!"

Schilling said his "Major Tom" is in no way related to *David Bowie's* persona in "Space Oddity," despite a remarkably similar storyline. "The song is based on a movie I saw in 1968, *Marooned*, which starred Gregory Peck, he said. "At one point one of the astronauts in the movie makes a human decision to drift away from his spacecraft. The song is about Major Tom's decision to disengage himself from the computer; it's seen as an error, but he is in control, not the computer."

Schilling said clips are appearing more and more on European television. German Television's clip-based



PHOTO: GESINE FETTEL

Peter Schilling

show is called *Tommy's Pop Show* and is very popular. Videos are also seen in clubs, he added, "but the club scene is not as important."

## In The Studios: Commercial Business

Re-editing video clips for a 30- or 60-second commercial for an album is one way a video facility can edge into the music-video business. At *Today Video* (NY) editor/director *David Seeger* used just that tack to woo music clients into Today's lavishly-equipped production center. So far, he's created TV spots of clips for *Pat Benatar's* "Love is a Battlefield" and *Diana Ross's* "Pieces of Ice."

Today president *Beverly Seeger* feels that the firm "has a lot to offer video music producers—like Ultimatte, ADO, DVE, CMX editing, Rank Cintel telecine, and mastering on one-inch or quad."

The company can also do animation effects. One example is the tumbling block "tag" the ABC network uses to distinguish its closed captioned programming. Today has also supplied production facilities for videotapes done for *Grace Jones* and *Chuck Mangione*.

*National Video Center* is home base for the series of TV spots created for promoter *John Scher's* current concert series. The spots are "flexible" and may advertise as many as three upcoming concerts in one 30-second spot. New dates and concert footage are edited in weekly. According to *Pat Weatherford*, video director for Monarch Entertainment, "the format was so effective for a recent *David Bowie* spot, which used concert footage of his European tour, that his promoters are using it nationwide." Also in NY: *VCA Teletronics* has expanded its Center Stage facilities, upgrading makeup, wardrobe, and lounge areas to further accommodate client MTV. All studio wraparounds and VJ footage is done at Center Stage. *San Francisco Production Group* has added A-B roll capability to its CMX editing suite with the addition of a third Sony BVH-2000 Type C recorder.

## Video Clips Expand to New Genres

*Windham Hill Records/A&M* is circulating a "video press kit"—a 22-minute cassette of interviews with label artists, pianists *George Winston* and *Liz Story* and guitarists *William Ackerman* and *Alex de Grassi*. "Breaking New Artists By Breaking the Mold" was produced and directed by *Erik Nelson*, Videowest Productions (SF). Lush country scenes work well with the genteel label reper-

—page 149, VIDEO NEWS

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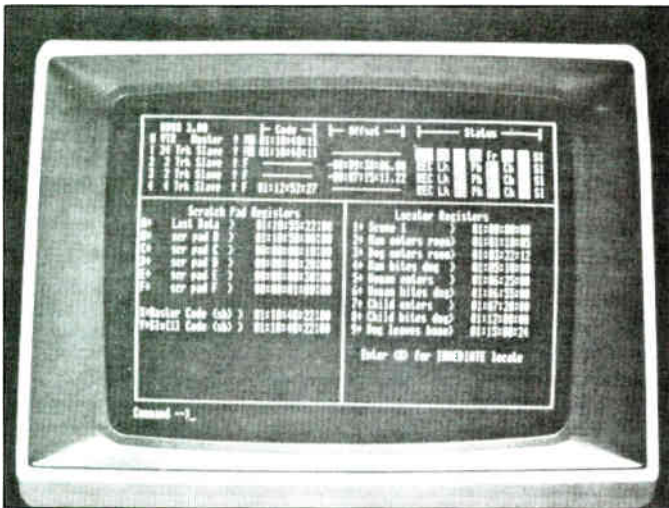
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## KODAK INTRODUCES DATAKODE

The Eastman Kodak Company has introduced an innovation in motion picture film technology that could have a significant effect on the future of producing motion pictures. The Datacode Magnetic Control Surface is a thin layer of magnetic oxide coated across the entire back surface of motion picture film. It provides the ability to record digital data without adversely affecting the normal photographic use of the film. Datacode is especially suitable for recording SMPTE time and control codes on motion picture film.

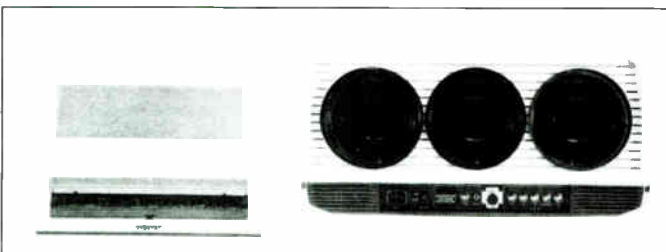
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## THE BOSS™ CONTROLLER

The Boss,™ from Alpha Automation, is a multi-transport controller combined with a visual display of location notes, allowing for instant visual status and time code of the master transport and up to four slaves of any format that uses the BTX Shadow™ as well as location registers. All current information can be saved to a disk file at any time for future reprogramming of the synchronizers and transports.

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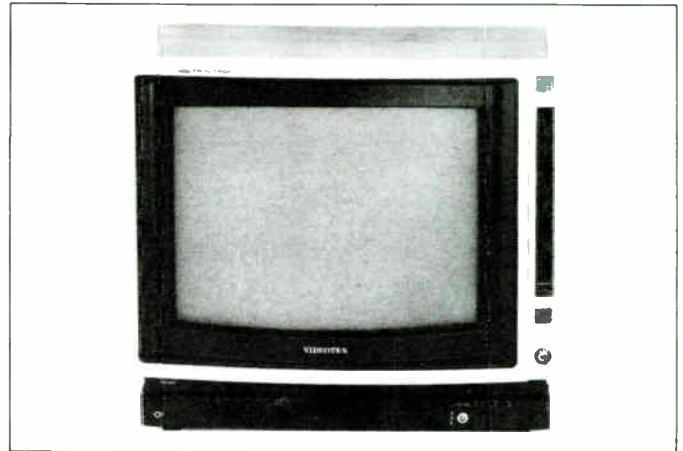


## SONY'S NEW UNIVERSAL PROJECTOR

Creates large, clear images on flat screens, high gain curved screens and even flat white walls. The UPH-722Q and VPH-1020Q are available in sizes of 72 and 100 inches, respectively. The universal projector accepts both video and RGB input signals. It automatically senses and is compatible with world TV standard signals, PAL, SECAM, NTSC and NTSC 4.43, and is compatible with many

microcomputers. The universal projector is available for immediate delivery with a suggested manufacturer's price of \$5850.

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## VIDEOTEK COLOR MONITORS

Four new thirteen-inch color monitors have been introduced by Videotek, replacing their line of twelve-inch models. Two new color monitors are the VM-13T and the VM-13TR, which is a rackmount model. The RM-13T color receiver/monitor and RM-13TR rackmount color receiver/monitor are the other new models.

The receiver/monitors have TV/VTR/Line selection and have demodulated outputs. Looping BNC video inputs, looping audio inputs, and 8 Pin VTR connector are standard on all four models. Prices run from \$715 to \$875.

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## IKEGAMI TO MARKET BOSCH VIDEO RECORDING SYSTEM

Ikegami has announced that it has reached an agreement to market the Bosch Quartercam 1/4-inch video recording system.

The video recording system will be sold with a new Ikegami ENG/EPF camera which was introduced at the Conference of the Society of Motion Picture & Television Engineers in Los Angeles.

The Quartercom video recording system will be marketed in parallel with the Matsushita 1/2-inch M-format system currently sold by Ikegami.

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## MAGNETIC MEDIA PRO VIDEO LINE

Magnetic Media Corporation, manufacturer of audio and video tape products, who for the past 17 years has been supplying duplicators, blank loaders and record manufacturers with CO's and blank audio cassette tape, has introduced a new video line.

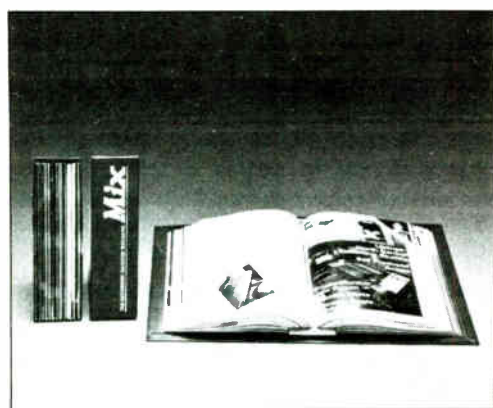
The VX cassette is manufactured by means of a cobalt formulation and has been designed for duplication of video cassettes and use in the studio. Available in 30-60-90-120 lengths, it can also be supplied in custom lengths by special order.

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- 1982 November — SOLD OUT.
- 1982 December, Tape to Disk. Record Restoration Starting Out in Video Digital Discussions IV
- 1983 January, Northwest Listings. Multi-track Analog Tape Recorders Record Restoration Michael Palin
- 1983 February — SOLD OUT.
- 1983 March, Southeast Studios. Echo Reverb & Delay I Buddy Buie Electronic Religion Phil Dunne
- 1983 April, Music Video. Video Production Post Production Listings Missing Persons Echo Reverb & Delay II
- 1983 May, Northeast Listings. Donald Fagen: Mixing Console Forum Echo Reverb & Delay III
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—from page 137, *Alarm*

balance things out. Although some of those songs have a great dance beat, I think at this point music hit a biorhythmic downpoint."

Peters is optimistic about the next phase of musical evolution. "The next ten years are going to be the most exciting ever for music. I can't wait to hear what all these young bands are going to come out with. Commercial radio must eventually realize there's a big audience for new music, and they'll take the lead from college stations, which have been very instrumental in bringing new music to people."

"The doors to the record companies are wide open," claims Dave Sharp. "The time is always right if a band has got something to offer."

Thirty minutes before show time *The Alarm* rest backstage, indifferently viewing the in-house videos. With nightly shows widely spaced across the country, they seem tired, and look more inclined to creep back into the tour bus to sleep their way to Toronto than to climb onstage. Ten minutes before show time, the tour manager, with a gentle but firm hand, throws everyone but the band out. A

few people take a place up front, where a crowd has gathered and is impatiently tugging at the curtain that obscures the stage.

Suddenly the lights blink off, the curtain is unceremoniously yanked away, and *The Alarm* leap out from the shadows with a barrage of sound that hits the audience like machine-gun fire. No trace of weariness shows; Sharp and Peters mercilessly strum their guitars as if they're scratching never-diminishing itches. Twist thrashes the drum set militantly, with some life-and-drum-corps chops dredged up from his Welsh genes. Mike Peters strides across the stage like a young William Blake, eyes flashing, and the audience rallies around him as he leans out over the stage shaking his fist to punctuate some salient point.

After a set capped by three encores, the band is still super-charged as they guzzle orange juice in the dressing room. "We pause before we go out there, every single time, and remember what it was like when we were on the other side of things," says Peters, his eyes still blazing. "We want every show to be like the very first time we played."

—Susan Borey

—from page 95, *SMITH*

Rhode Island] on an identical setup," Smith says, "with the automated MCI board and 24-track, and for the money it seemed to be the best equipment for my purposes."

The studio's complement of monitors consists of UREI 813Bs, JBL 4411s, and Auratones. Out-board gear selected to date includes a Lexicon 224X digital reverb with LARC alphanumeric controller, an Eventide 949 Harmonizer, Ursa Major Space Station, and Korg SDE-2000 digital delay. Smith plans to be purchasing additional equipment with the assistance of Journey producer/soundmixer Kevin Elson, who also will be doing at least some of the engineering when the studio swings into operation around the beginning of 1984.

As an artist with diverse projects and interest, Smith is naturally excited about the potential of his "day and night" facility, and eager to get down to basics.

"So much of the music I like to play," he says, "happens so spontaneously that at any time I can put a group together and say, 'Come on over to my house and let's play,' and theoretically be recording a record at

the same time if the music is exceptional enough."

"Or," Smith speculates, "if I record basic tracks at another studio, I can always finish recording at my house."

In addition to his solo pursuits, Smith envisions the studio serving as a valuable tool for his work with Journey, both for songwriting, and in the possible creation of basic tracks for the band. This application assumes an added dimension when one considers that Jonathan Cain, Journey's keyboardist/songwriter, is also building a 24-track studio in his home, not far from Smith's. Cain's studio is also being designed by George Augspurger and will have virtually the same equipment as Smith's. The two are hopeful that this interchangeability will allow them to work with ease on demos of Journey's material, in addition to doing overdubs on songs recorded elsewhere.

When asked if this flurry of studio construction by members of Journey would lead to other band-members building studios as well, Steve Smith says he doesn't think so.

"Neal Schon [Journey guitarist] says, 'Why should I build a studio when you guys already have them? I'm gonna buy a sports car!'"

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—from page 5

sounds funny, but sometimes something magic would happen as the guys got to playing. On a good day they would really get "into a groove." The signal went directly to a mono or stereo tape machine, or better yet, direct to the disc cutting head. Bingo! A hit record. Press it up.

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—from page 140, VIDEO NEWS

toire; this is a fine first excursion by a non-rock recording company into the visual idiom . . . Also of note, an elegant music video for *Jean Luc-Ponty's* recent "Far From The Beaten Paths." Time-lapse clouds pay homage to Magritte (yes, we *are* getting high-brow here) and the whole was produced by *Ken Walz* and directed by *Adam Friedman*.

Video People: *Steve Barron* of Limelight Productions (London) is directing his first feature film, *Electric Dream*, set for release this summer. . . . *Mike Cooper*, former music director for Atlanta's Video Music Channel, has formed *Music Video Services Inc.* with two other principles. The company will provide clubs with video clips and will offer a tracking service for labels. At press time, 20 nightclubs have signed contracts with the Atlanta-based firm.

*Doug Hall*, *Stephen Laub*, *Ilene Segalove* and *Bruce Yonemoto* are recipients of the 1983 James D. Phelan Art Award for their video art works. . . . Editor/director *Doug Dowdle* was coaxed away from his five-acre macadamia nut farm in Hawaii to produce *Rick Springfield's* clip "Souls" for RCA. . . . *Joe Dea* teamed up again with the gang from *Video Caroline*

(SF) for *Hyts'* "Backstabber" video, a madcap and macabre merger of *Psycho* and old Busby Berkley routines. . . . *Ed Volkapich*, best known for his Jontue and Sassoon jean commercials, directed "Trash it Up" for *Southside Johnny*, the latter's first shot at MTV outside of a long-running beer commercial. . . . The U.S. Intrepid is the scene of *Industry's* "State of the Nation" video. *Peter Israelson* directed a cast of 100 in and around the aircraft carrier during one long night of shooting, using flight deck lamps as keylights, augmented with flares and artificial fog.

## Combo Cameras: The Future's Not Here Yet.

There's still much confusion over the half-inch and quarter-inch tape format camera with lightweight, attachable recorders (VRCs). Many independent producers are attracted to the one-piece "filmstyle" cameras (no wires, no bulky decks to schlep) now available for rental (*Ruxton* in LA and *SFPG* have Betacams, for example, *E.J. Stewart* in Philly has the Hawkeye). At the recent SMPTE conference in Los Angeles, producer Paul Shaper showed a videotape reel shot with Betacam by a cameraman on roller skates—with highspeed closeups that at-

test to the usefulness of a one-piece in the field.

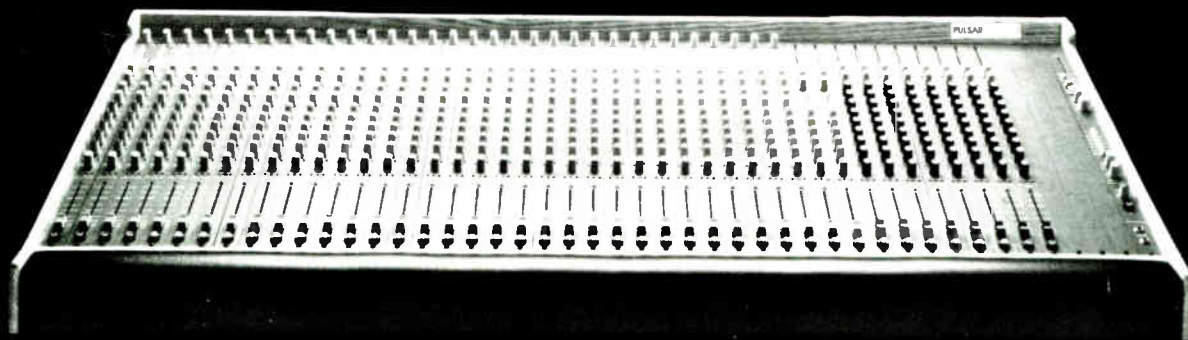
But winter's SMPTE also showed that these portables have a long way to go before accepted as a production tool for anything beyond the 6:00 news. Only Panasonic's "M" format (Recam) exhibited a full postproduction system—and that was a motley but workable assortment by several manufacturers. Other available makes and models must transfer to 3/4-inch or one-inch before any editing or special effects can be done; this means at least one drop in generation and deterioration of picture. Why? The hurdle here is that the combos introduced by Sony, RCA, Panasonic, Bosch and Hitachi all make use of a new technology, *component recording*, which (simply put) separates the recording of picture detail (luminance) from color information. The picture quality is indeed far superior to 3/4-inch portable technology, but the lack of standardization, and incompatibility with other existing formats is still a problem. Two years after introduction, no major U.S. network has elected to purchase. At SMPTE, RCA unveiled its plans to build a one-inch component video recorder, but roll-out of component cameras and necessary postproduction gear will be very slow in 1984. ■

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