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THE RECORDING INDUSTRY MAGAZINE

# Mix

Interview: Leon Russell

## Northwest Recording Studio Listings

**Digital's Roger Lagadec**  
**Superbowl Sound**  
**Springsteen on Stage**  
**Ray Parker Jr.**  
**TEC Awards Ballot Inside!**

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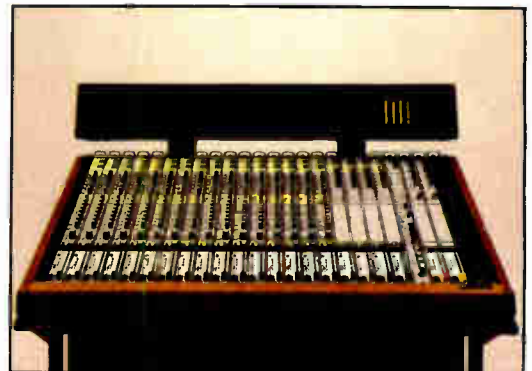


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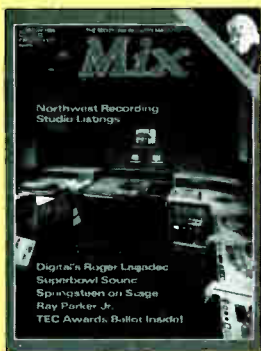
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**Harrison**



Cover: Control room "B" at Robert Berke Sound, San Francisco.  
Photo by: Rick Mariani and Wanderly Revert, Mediawest.

Designed by Randy Sparks of Sonic Landscapes/Architectural Acoustics and equipped by David Angress of Sound Genesis, Robert Berke Sound specializes in commercial and video soundtrack production.

Leon Russell Photo: Jon Sievert



Sound for the Super Bowl on page 18, takes an inside look at the elaborate preparations involved in bringing state-of-the-art fidelity to Stanford Stadium for what may be the sporting event of 1985.

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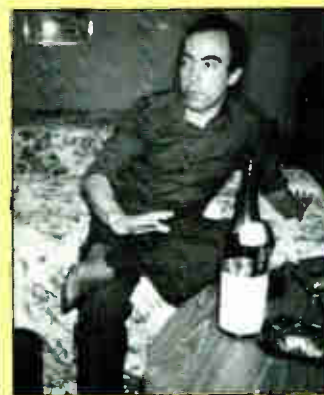
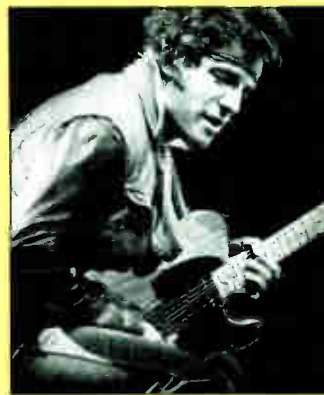
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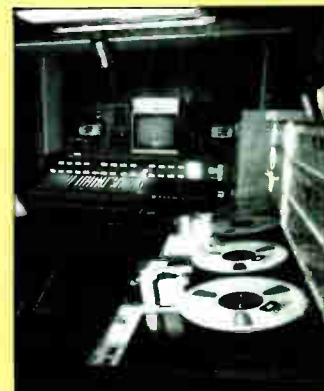
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When the Boss comes to town, it's not just a concert—it's an event. *On Tour with Springsteen* by David Schwartz is both a back-stage pass and a front-of-the-house examination of what it takes to pull it off. Page 36.



This month, the inquisitive Mr. Bonzai lunches with Roger Lagadec, Studer's digital designer par excellence. Their candid and informative conversation appears on page 44.

This issue focuses on the *Studios of the Northwest*, with listings beginning on page 78. Related articles include Elizabeth Rollins' update of studio activity (page 66), Robin Tolleson's peek at The Tubes' studio (page 52) and interviews with five leading figures in the San Francisco music scene (page 55).



# OUR NEW BABY

Announcing the arrival of the MTR-90's little brother; Otari's one inch, 16 channel MX-70. A multitrack mastering recorder that lets you do virtually anything you want to do in audio, affordably.

The MX-70, specifically designed for multitrack recording, derives its features from our experience with MTR-90 customers and their applications. For example, the "70's" microprocessor controlled constant tension transport is ideal for use with SMPTE time code-based video editing systems, machine controllers, and synchronizers. Its "3-way" design (1 inch 16 track; 1 inch 8 track, and 1/2 inch 8 track) allows conversion right in the studio, so if need be, each session could be done on a different format. And as your needs change, this machine will stay with you all the way up to 16 tracks—you won't be left behind as your business grows.



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# Mix

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Dear *Mix*:

I just opened the November '84 issue of *Mix* and the first thing I read was a letter from Craig O'Donnell of Acme Studios. Although he made some good points about acoustic sources being the hardest to record well, I'm just a little upset at the tone of his letter as I have been with some others from engineers in larger recording studios and their references to "cheap" eight track studios. I'm starting to get the feeling that these engineers are getting a little upset that some of their engineering brethren are getting just as good if not better results in their "cheap" eight track facilities than they are with all their state-of-the-art hardware. I operate an eight track studio here in Visalia and I have had the experience more than once of a client coming here after going to a larger, more "professional" studio and telling me the results he got from me were far better. And my studio is in a converted garage! Going into a large 16 or 24 track studio does not guarantee that you will come out with perfectly engineered drum and vocal tracks, and going into a small eight (or four) track studio does not mean you will automatically have problems with comb filtering and bad sound on those same tracks. It all depends on who's flying the plane.

As far as saving time and money is concerned, about 75 percent of my customers are amateur bands who would be foolish to pay more than \$25 an hour in any studio, because their sound isn't together enough to warrant "state-of-the-art." Part of the reason they are coming in to the studio at all is for the experience and to get an idea how they really sound as musicians, or for demos.

I guess what I'm really trying to say is the old "you can't judge a book by its cover" proverb. State-of-the-art studios serve their purpose well in the record industry but smaller studios are just as important, especially in getting those future "stars" started. Musicians should be encouraged to listen to a studio's work when shopping around, and really talk to the engineer to find out what he knows. In the end, the results should speak for themselves.

Sincerely,  
Reid Power  
Powerhouse Recording  
Visalia, CA

Dear *Mix*:

I felt compelled to write to you in reference to something mentioned in Carol Kaye's "Session Player" column (entitled "Notes from Denver") in the September issue of *Mix*. The Philadelphia studio in which most of Lou Rawls' new album was recorded is, in fact, Sigma Sound Studios, not the "Gamble-Huff studio" as it was referred to in the column. Sigma Sound has been the studio where Gamble and Huff have recorded almost all of their hits over the years, and this long-term association between Gamble/Huff and Sigma has caused many to think of Sigma as being "their" studio. Sigma is, in fact, owned by its founder and president Joe Tarsia, and Sigma Sound has played host to numerous artists and producers outside of the Gamble/Huff family, including, in this case, Lou Rawls on his latest recording.

Thank you for letting me set the record straight.

Sincerely,  
Arthur Stoppe  
Chief Engineer  
Sigma Sound Studios  
Philadelphia, PA

Dear *Mix*:

In your North Central studio listings in the November '84 issue, you listed Rising Star Recording as a 24 track facility, where in fact it is a four track facility specializing in remote recording. Thanks.

Sincerely,  
Rudy Ising  
Chicago, IL

Dear *Mix*:

Last night I was listening again to *Pet Sounds*, an album that has always been to me the greatest source of recorded inspiration and amazement. I always hear it in a new light, even after probably 100 plays.

Today, I was contemplating what could it have been like to be one of the musicians on those sessions. Who was there, who played what, and what were they thinking about Brian Wilson at the time?

Then I opened *Mix* and saw the article by Carol Kaye! I was totally thrilled! It answered all my questions about this stunning masterpiece.

I want to thank Carol for remembering for all of us. I only wish I could personally thank Brian for having completed this supreme artistic statement.

Sincerely,  
Douglas Snyder  
Trold Nossel Recording  
Studios  
Wallingford, CT

# CURRENT

## 15 Percent Rise in Record Shipments

The dollar volume of U.S. manufacturer net shipments of records and prerecorded tapes rose 15 percent for the first six months of 1984 over a comparable period last year, calculated at suggested retail list price, while unit shipments showed an 18 percent gain, according to figures released by the Recording Industry Association of America. Prerecorded cassettes lead the way with a 36 percent rise in dollar volume and a 45 percent increase in unit shipments from the first half of 1983. Singles showed a 2 percent increase in units shipped and dropped off 6 percent in retail dollars. Compact Discs were not tracked for the first six months of 1983, but shipped 1.5 million units at a dollar volume of \$30.6 million for the first half of 1984.

## SPARS Initiates Testing Program, Elects Board

With the support of a generous Sony Corporation endowment, the Society of Professional Audio Recording Studios (SPARS) has signed a contract with the Center for Occupational and Professional Assessment, Educational Testing Service of Princeton, NJ, to jointly develop a national examination for would-be audio-video recording studio employees. This announcement was made at a SPARS General Membership meeting held during the New York AES Convention, which also served as site for election of officers. The 1984-85 SPARS Board of Directors consists of Bob Liftin, president; Nick Colleran, secretary/treasurer; Lenard Pearlman, first vice president; and Charles Benanty, John Rosen, Bruce Botnick, Guy Costa, and Shirley Kaye as regional vice presidents.

## NAMM Scholarship Program Expands

Nine colleges and universities with accredited Business of Music and Music Merchandising programs have been chosen by the National Association of Music Merchants to receive scholarship funds for school year 1984-85.

"NAMM is interested in seeing that our industry attracts the very best, well-prepared people from college business programs," says NAMM president Jim Kleeman.

Schools are selected by the Scholarship Committee of the NAMM board of directors on the basis of curriculum eligibility. Such courses as sales fundamentals, music business, marketing, music retail and wholesale, principles of accounting, advertising and economics have been judged by NAMM to be part of a well-rounded preparation for a career in the music products industry.

The following schools will receive \$1,000 scholarship grants, to be dispersed to worthy junior and senior business of music students for school year 1984-85: Appalachian State University, Boone, North Carolina; Columbia College, Chicago, Illinois; Elmhurst College, Elmhurst, Illinois; Emporia State University, Emporia, Kansas; Indiana State University, Terre Haute, Indiana; University of Lowell, Lowell, Massachusetts; University of Southern Mississippi, Hattiesburg, Mississippi; University of Texas at San Antonio; University of Wisconsin-Oshkosh.

## notes

The Los Angeles *Record Plant* will be leaving its Third Street Hollywood location to make way for the wrecking balls next July. A new RP site has yet to be announced. . . .

*Ampex Corp.* has established a Northwest Regional office for their Audio-Video Systems Division in Redwood City, California, headed by *Tom Neilson*, formerly national sales manager; *Robert L. Natwick* has become the new N.S.M. . . .

*Harrison Systems* has expanded their Nashville operation to include a new facility at 618 Grassmere Park Dr., suite 18, zip 37211. . . .

*CompuSonics Corporation* has announced the dealer network for their studio, broadcast and postproduction products: *Audio-techniques*, New York City; *Allied Broadcasting Equipment Company*, Hammond, Indiana; and *Audio Intervisual Design Systems*, of Los Angeles. . . .

*Quad Eight/Westrex* has been appointed the exclusive United States distributor of *AEG-Telefunken* professional tape recorders. . . .

*Robert C. Crooks* has been named inventor/principal engineer of *Barcus Berry Electronics, Inc.* . . .

*Edward J. Rudnic* has been named manager, information systems, at *Video Corporation of America*. . . .

*Jim Hansen* has been named national sales manager of *Sony Video Communications*. . . .

*William H. Madden*, vice president of *3M's* industrial mineral products division was presented the Vision Fund of America's Focus award for outstanding contributions to the video industry. . . .

*China Record Company's* recording studios in Beijing, Guangzhou and Shanghai have taken delivery on three *Solid State Logic* SL4000 E Series consoles and computers, allegedly the largest single pro audio equipment order in the history of the People's Republic. . . .

*TOA Electronics* has announced the appointments of *Steve Cunningham* to product

specialist, *Rick Rosen* to national accounts manager, and *Dennis Cash* to service manager. . . .

The *University of Miami's* School of Music has introduced a Master's Degree program in computer and electronic music. . . .

*Crown International* has completed a 36,000 square foot addition to their Elkhart, Indiana manufacturing facility. . . .

*Ken Lee* is the new coordinator of technical services and *Jamie Marantz* is now the head of the custom services department at *Sonic Arts Corporation*. . . .

An Electronics Systems Contractors tour of the inner workings of Disney World and Epcot Center has been arranged for those attending the *National Sound and Communications Association* convention in Orlando, Florida, March 9 through 11. . . .

*Ewald Lehrmann* has been named marketing operations manager, professional markets, in *3M's* magnetic audio/video products division. . . .

*Gayle Campbell* has been promoted to national sales manager of commercial products at *Altec Lansing*. . . .

*Burdette Hansen* has joined *Versatile Video* of Sunnyvale, California as general manager. . . .

*George Douglas* has been appointed technical services administrator for *Dolby Laboratories'* motion picture division. . . .

*Ron Petty* has joined *Sony Broadcast Products Company* as director of marketing services. . . .

*George Rehklau*, vice president of engineering and one of the founders of *Electro Sound* Sunnyvale, retired on November 1, 1984. . . .

*Fuji Photo Film U.S.A., Inc.* has appointed *R. Stanton Bauer* division manager of the magnetic products division. At the same time, Fuji has created two separate divisions for its tape and floppy disk product lines, which will henceforth be the magnetic products division and computer media division. . . .



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## NORTHWEST

Recent activity at *Prairie Sun Recording* studio in Cotati, CA included 1983's Miller "Rock to Riches" West Coast winner, *Atlantis* recording new material with *Gregg Rolie* (Journey, Santana) producing, and *Allen Sudduth* engineering. At *Montage Recording*, Newark, CA engineer *Jamie Bridges* was in working with jazz players *Jeff Wood & Future Stream* laying tracks for their latest EP. Recently completed projects at *Studio C*, in San Francisco included mixes by *Luther Greene* for Howard Roffman's *Mailroom Blues*, C.J. Appel, editor; and three films for John Korty: *Fast Forward*, *The Get-Together*, and *The Kennedy Center Awards*, Diana Pellegrini, editor. Recent activity in *Patchbay Studios* in San Rafael included jazz master *Tony Williams* mixing live tracks recorded on his 1980 tour of Germany, and the legendary *Buddy Miles* mixing live material from a September concert presented for the inmates at Clayton Farms. The tracks feature Buddy's new trio, and opening act, *John Lee Hooker*. *Gordon Elliott* engineered both projects. *Womach Recording*, Spokane, WA, has been busy with album sessions for the *Wayne Johnson Trio* (guitarist for The Manhattan Transfer), *Jim Eschenbacher*, *Michael Newman*, and *Kelly Hughes*. . . *Jonathan Richman's* new album was mixed recently at *Different Fur* in San Francisco. The record was produced by *Andy Paley*, engineered by *Dan Levitin* and *Howard Johnston*. . . For more Northwest studio information see this issue's update on page 66.

## SOUTHWEST

After *Sumet Studios* in Dallas got such a great review of their work with *Jermaine Jackson* for the nationally syndicated radio show "The Hot Ones," they were recently called on again to record *Boy George & Culture Club* while in Dallas rehearsing for and premiering their current U.S. tour. At *Rivendell Recorders*, in Pasadena, TX, studio engineer and manager, *Chuck Sugar* produced a folk-rock album by Houstonite *Pete Van Beek* titled *On the Front Line*; and CCM artist *Jeff Lynn* was back in the studio completing lead vocals and mixing his premiere album release. *Bob Griffith* produced with *Brian Tankersley* engineering. At *Pantego Sound Studios* in Arlington, TX, *The Van Dykes*, a popular soul group in the mid and late '60s, completed their new album *License to Kill*, with producer *Charles Stewart* and engineer *Jerry Abbott*. Recently, *Omega Audio's* mobile rig was retained by the Discovery Satellite Network, Dallas, to provide live uplink services and 24 track recording for a live concert by five time Grammy award winning artist *Andre Crouch & the Disciples*. Producer for the Discovery Network was *Dan Sampson*. . .

## NORTHEAST

At *Planet Sound Studios* in NYC, former Crusaders guitarist *Barry Finnerly* produced an album for *Hiroshi Fukamura* for Apollon Records with *Julian McBrowne* at the board and *Tom Durack* assisting; *Rick Derringer* produced *Dave Gruen* with *Tom Edmunds* engineering and *Richard McLean* assisting. London recording artists *Loose Ends* whose first album was a platinum success, were in *Alpha Studios* in Philadelphia working on their second album. *Al Albertini, Jr.* was at the controls being assisted by *Richard Walter* and *Steve Pala*. Also, working on their second album for Philly World Records, was recording group *Cashmere*, being produced by *Mike Forte*, *Donald Robinson* and *Bobby Eli*, with *Remo Leonporra* and *Albertini* at the controls assisted by *Mike Bonghi* and *Richard Welter*. . . At *Excalibur Sound* in NYC, *Art Polhemus* was in producing *EDIII* on their followup to the hits "Get Tough" and "Success." Also cutting there were *Doreen Rose*, *Walter Foster* and *Feature MCs*. . . Among other projects *Northeastern Digital* finished an album for the Boston jazz group, *The Fringe*. The recordings were produced by *Bill Ford* and mixed to an NDR digital two track machine at *Blue Jay Studios* in Carlisle, MA. . . At *Celestial Sounds* in NYC, producers *Paul Lawrence Jones III*, *Keith Diamond*, and *Richard Burgess* were in cutting tracks for *Melba Moore's* upcoming Capitol Records LP; *Ron Banks* and *Steve Goldman* engineering, with *Larry DeCarmin*, *Kurt Upper*, and *Katheryn Good* assisting. At *Evergreen Recording* in New York, *Rob Stevens* was in mixing *Torsten DeWinkel's* debut album for EMI. The album features *Bill Cobham*, *Michael Brecker*, and *Alphonse Mouzon*. *Lothar Segeler* was assisting on the mix. Producer *Scott Billington* has been recording *Duke Robillard's* new album for Rounder Records with engineer *Phil Greene* at *Normandy Sound* in Warren, RI. Recent activity at *Skyline Studios* included *Sheila Jordan* recording a new album for Palo Alto Records. *Herb Wong* is producing with *Dave Baker* behind the board assisted by *Scott Ansell*. At *Secret Sound Studio* in New York City, *Janet Dailey* completed tracks and mixed her latest material. *Jack Malken* and *Bob Telson* produced with *Scott Noll* engineering and *Warren Bruleigh* assisting. Recent activity at *Midnight Modulation Recording* in Saugerties, NY included *Richard Alderson* producing a *Fugs* Reunion Concert from the Bottom Line, and *John Hall* working with a new band. Singer/songwriter *Jay Hirsch* and *Dana Calitri* finished overdubs and mixing of fine original dance tunes at *Inner Ear Recording* in Queens, NY. Production was by *Jay Hirsch*, featuring programming on the Synclavier synthesizer. The engineer was *Steve Vavagiakis*. . . At *Music America* studios in Rochester, NY *Acts* finished their upcoming album with producer *Paul Cur-*

*cio*. . . At *Quadrasonic Sound Systems* in NYC *Jennifer Holliday*, of *Dream Girls* fame, was in the studio laying down tracks for some cuts for her upcoming album on Geffen Records. Activities at *Boogie Hotel* in Port Jefferson, NY included the group *Voices*, who completed their first LP on Atlantic Records. The project was produced by *John Robie* and engineered by *Chris Isca*. Recent releases recorded at *39th Street Music* in NYC include Capitol artists *Ashford & Simpson's* hit album *Solid* and *Laurie Anderson's* new release *United States Live* on Warner Bros. Records. *Fates Warning* has released their LP *Night on Broken* on Metal Blade Records. The LP was recorded at *The Gallery* in Hartford, CT, and mixed at *Track Record* (L.A., CA).

## SOUTHEAST

Capitol Records artist *George Clinton* was at *Criteria Recording Studios* in Miami doing a 12-inch version of the single "Bodyguard." *Richard Achor* was at the board with *Stan Lambert* assisting. Also at Criteria, *Dizzy Gillespie* was doing some overdubs for a new album. *Lambert* engineered with *Steve Johnston* assisting. *Nicole*, a newly signed CBS-Portrait artist, did work on her debut album at *International Sound* in Miami Beach, with *Eric Schilling* engineering and *Lou Pace* producing. *Hidden Meaning Studios* in Warner Robins, GA had *Ace Miller* in working on his second album for Baywest Records. *A.C. Black & the Mean Kats* and *K.I.T.T.E.N.* were in working on some demos. Producer *Jimmy Bowen* was in Nashville's *Castle Recording* mixing tracks on MCA recording artist *John Schneider* with *Bob Bullock* and *Steve Tillisch* engineering. Also, *Nelson Larkin* was producing artist *Tom Rowe* with *Chuck Ainlay* engineering. At *Hummingbird Studio* in Nashville, *Shelly West* completed overdubs for her newest album with *Barry Beckett* producing and *Scott Hendricks* engineering. At *Cotton Row Recording*, Memphis, TN producers *Carl Marsh* and *Loris Baccesschi* finished overdubs and mixed the new *Diane Tell* LP for Polygram Records. Engineers for the project were *Nikos Lyras* and *Danny Jones*. The album was mixed down onto a Mitsubishi X-80 two track digital recorder. Longtime Stax writers/producers, *Homer Banks* and *Chuck Brooks*, have been recording at *Ardent Studios* in Memphis and have teamed up with another longtime Stax musician, *J. Blackfoot*, to produce *Blackfoot's* latest album, *Physical Attraction*, for the Sound Town label. Recent activity at *New River Studios* in Fort Lauderdale included CBS artist *Cyndi Lauper* mixing the audio track for a video of the hit "Money." *Ed Thacker* engineered, assisted by New River's *Ted Stein*. *Lenny Petze* from CBS produced. At *Morrisound Recording* in Tampa, FL work included an album project with the *Ted Shumate and Dann Reno Jazz Quintet*.





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At Group IV Recording in Hollywood, Chris Boardman and Tony McShear are overwhelmed by 15 Yamaha DX7's assembled to cut the score for the film "Movers & Shakers."

Rick Miller was the engineer. Also at Morrisound, *The Outlaws* completed a five-song project with Tom Morris engineering. A.M.I. Studio in Hendersonville was host to producer Michael Radford, working on a new single with Randy Boudreaux, with Bernie Vaughn engineering. Also, Rich Landers cut new material with co-producer Vaughn.

## NORTH CENTRAL

Recent activity at 5th Floor Recording Studios in Cincinnati included Reggie Calloway of Midnight Star finishing up tracks for a new album with Jeff Cooper producing and Robin Jenney at the controls, and Bootsy Collins producing tracks on *Mico Wave* for Bootsilla Productions. Brad Keuning and Robin Jenney engineering these sessions. Recent activity at Ryansound Recording Studio, Detroit, MI, included Tracy Science completing their EP with Nate Jones producing, engineered by Raymond Wimbley; and *Film at Eleven* cutting tracks produced by Wayne Model Citizen was in at Pearl Sound in Detroit laying final overdubs on their first EP. Among those working at Paragon Recording Studios in Chicago were the group *Smoke City* who completed mixing their new singles "I Really Want You" and "Fantasy," produced by Ron Scott and engineered by George Warner of Paragon. At A.R.S. Recording in Alsip, IL, *Essex Beat*, produced by Bob Sheffield, recently completed two singles was engineered by Gary Cobb.

## SOUTHERN CALIFORNIA

Current recording activity at L.A.'s Larrabee Sound included artist Nina Hagen mixing her new CBS International album 32 track digital to two track digital on the SSL console with producer Adam Kidron and engineer Steve Hodge assisted by Fred Howard. At Soundcastle in L.A. Dennis Lambert produced and Jeremy Smith engineered *The Commodores* for Motown with Paul Ericksen assisting and Lenny Petzie pro-

duced and Ed Thacker mixed a Cyndi Lauper live project for Epic. Producer Michael Maser, engineers Michael Mancini and Russell Schmitt completed a George Benson project at Devonshire Sound in North Hollywood. Maurice White was in at Mama Jo's in North Hollywood producing his new CBS Records album with co-producer Robbie Buchanan. Jack Joseph Puig was at the controls with Steven Ford assisting. Alcatraz recorded their third LP, their first for Capitol Records, with producer Eddie Kramer at Cherokee Studios in Hollywood and Skyline Studios in Topanga. At Group IV Recording in Hollywood, engineer Dennis Sands, assisted by Andy D'Addario, was behind the board for Steve Lawrence and Eydie Gorme, laying vocal tracks for their new LP. Producer Herb Pedersen was in Skip Saylor Recording cutting an LP for singer/songwriter Michele Curtis for H.F.M. Productions. Skip Saylor was engineering with Tom McCauley assisting. Working at Sunset Sound in Hollywood on their forthcoming Warner Brothers record, *The Blasters* were in with producer Jeff Eyrich and engineer Dennis Kirk, with assistance from Tchad Blake.

## STUDIO NEWS

Creative Audio, in Urbana, Illinois, has acquired the first complete PPG System (Wave 2.3, Wave-term, PRK and EVU) in the Midwest. The studio has also added two AKG C-12s, a Neumann U-67, Yamaha DX7, and a Dr. Click, among other goodies. Florida Sound, a new 24 track facility in Clearwater, on Florida's west coast in the Tampa Bay Area, features Studer recorders and a Neve console formerly owned by producer Phil Ramone. The studio is located at 3350 Ulmerton Road, Clearwater, Florida, 33520 (813) 577-7112. New York City's Audio-Tech Studios, which opened last fall, has continued to expand their studio arsenal: Stephen Crump updated their 40x32 APSI console; and the studio has purchased a 1/2-inch Otari MTR-12 two track, four Lexicon PCM-42s, Drawmer noise gates, two dbx 165As, Lexicon 224x, new Saki heads for their Soundcraft 24 track, and a variety of instruments including a Roland MIDI network, Yamaha grand piano and an

electric grand, Yamaha DX7 and DX9 synths, and an Octave-plateau Voyetra 8. Boogie Hotel Studios, in Port Jefferson, New York, has completed the installation of a custom Neve 80-series console with 1081 four-band EQs, 48 inputs and 70 mix returns. In New York City, Phil Gitomer has been appointed director of remote recording at the Record Plant Studios. Comfort Sound Recording Studio has moved to a new Terry Medweddyk-designed, 2,000 square foot facility in downtown Toronto at 26 Soho Street, Suite 390. The studio has also added SMPTE video interlock capability and installed a synthesizer suite for scoring to picture. In Hollywood, California Recording Studios has upgraded for audio/video sweetening with the installation of a BTX Softouch system, currently in use by engineer Tim Garrity on the score for the CBS TV series *Dreams*. After two years in the making, Millbrook Sound (in Millbrook, New York) has celebrated their grand opening, reports studio manager Rick Kennell. The studio feature a custom NEOTEK series 3C 36 input console, Ampex 1200 24 track, Otari MTR-10 and MTR-12 mastering decks, and a wide assortment of microphones, instruments and out-board gear. Call (914) 677-3733 for more information. The San Francisco Production Group has become the first West Coast facility to install a Computer Graphics Laboratories Images II high end computer graphics system, a high resolution turnkey paint system. GHL Audio Engineering in Hilliard, Ohio, has completed the testing of their new remote recording track. The mobile unit, enclosed in a 40 foot trailer, features a Harrison MR-4 36 input console with ARMS automation, two Otari MTR-90 24 tracks, an MTR-12 1/2-inch two track, Lexicon digital reverb, BTX Softouch, and a dbx 700 digital processor for recording or satellite uplinks. GL Mobile Recording of Coral Gables, Florida, will now be operating "Criteria's Wheels," a state-of-the-art mobile recording facility, according to an agreement reached between the two studios. The truck will soon be equipped with a Mitsubishi 32 track digital recorder, as well as standard 24 and 48 track analog configurations. At Studio A, Dearborn Heights, Michigan, recent acquisitions include Sony TC-K555 cassette decks, Lexicon 200, Lexicon PCM 42 delay line, and the sampling system with terminal support for the Syclavier II. Also, construction has begun on a new 24 track facility designed by John Storyk Associates of New York City. Tim Pinch Remote Recording has relocated to 10,000 Riverside Drive #16, Toluca Lake, CA 91602, phone (818) 841-8247. Evergreen Recording in New York City has added four new pieces of out-board gear: the Lexicon 224XL digital reverb; the Lexicon PCM 42 digital delay; a Bel BD-80 digital delay and sampler (8 seconds); and a Dr. Click. Also on hand are four new synthesizers: Yamaha DX-7; Oberheim OB-8; Roland MSQ 700 and MSQ 100 sequencers; and the LinnDrum. They also have plans in the works to enlarge their control room. A.R.S. Recording Studio in Alsip, Illinois, has completed construction of its live end, dead end-type control room. The project ended with the installation of Quadratic Residue Diffusers along the back wall. The new room was designed by Doug Jones of Electro-Acoustic Systems, Inc., in conjunction with Gary Cobb of A.R.S. Enterprises.

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# CONVENTION

## PRODUCTS • AND • PROGRESS

by George Petersen

The 76th Convention of the Audio Engineering Society, held October 8-11 at the Hilton Hotel in New York City, seemed to mark an affirmation of the industry's direction towards digital. Of course, every aspect of analog technology was also well represented, from the tenth anniversary celebration of Ampex 456 mastering tape to the strong showing of new analog recorders from Akai, AMR/Peavey, Otari, Studer, Tandberg, Tascam and others. But it was no surprise that digital was *the* buzzword in the air throughout the convention — CD players were almost universally used for amplifier and speaker demonstrations; digital synthesizer exhibits were packed; nearly half of the attendees appeared to be either looking to buy a digital reverberator or were seeking software upgrades for their present systems; both the Sony and Neve digital consoles attracted much more than mere casual interest; and the digital recording systems exhibited by CompuSonics, dbx, Dolby (they introduced their Adaptive Delta Modulation technology), JVC, Mitsubishi, Sony, and Studer all turned the heads of interested buyers, rather than "wait and see-ers." Sony, for example, took orders for over twenty 3324 recorders at the convention, which would more than double the number of commer-

cially available Sony digital multitracks in the U.S.

Digital technology was also well covered by the papers program (please see AES Papers Chairman Ken Pohlmann's summary of these in his "Audio Applications" column in this issue) and a most comprehensive selection of seminars put together by John Woram. The seminar topics included: Computers in Audio/Recording Techniques, Compact Disc Technology, Digital Signal Processing, Low Cost Digital Recording, SMPTE Time Code, Digital Systems Interface, Physics of Musical Instruments, MIDI Interface, FFT Real Time Room Analysis, Tape Machines, Audio Education, and The Economics of Running a Recording Studio.

The equipment exhibits are always a major attraction at any AES show, and this year's meet proved to be no exception. AES Executive Director Donald Plunkett stated that the 1984 convention was the largest ever, with 184 exhibitors occupying three floors of space. While the brevity of this report precludes listing all the new unveilings here, we will continue to keep you informed on many of these products in our "Preview" section.

One of the exhibits which kept attendees buzzing during the show was the Holophonics demonstration. One of the principals of the company, record producer Ken Caillat, explained that

the system comprises the technology for encoding spatial information on a stereo audio track in such a way that decoding is psychoacoustically performed by the human hearing process. The system can be applied anywhere in the recording chain, from live tracking to final mix, utilizing standard release formats — audio disks, video tapes/disks, broadcast and cable systems, etc. — since no decoding hardware is required.

The net effect of the Holophonics demo was astounding, and listeners were easily able to localize sounds with excellent side and rear perception while listening over standard stereo headphones. The result when listening on point source monitors placed in a typical home stereo spread was less convincing, but effective nonetheless. Unfortunately, only a half dozen people at a time could hear the 15 minute presentation in the small room, but most of those who braved the long lines were impressed by what they heard. Holophonics is currently involved in licensing the system.

One of the major points of contention at the show was the issue of scheduling conventions on both coasts which would alternate with the SMPTE meets. The AES Governors, after polling members and exhibitors, decided to hold two conventions for 1985 (Spring: May 3-6, Disneyland Hotel, Anaheim, California; and Fall: October 14-17, New York Hilton) and thereafter hold only one convention/exhibition each year, in the fall. Thus, the 1986 show would be held on the west coast, as would future shows occurring during even years — the 1987 and other odd-number year shows would take place on the east coast.

Overall, the 76th AES Convention could be described as a success on every level — papers, seminars/workshops, exhibits, and the spirit of compromise which prevailed over solving the scheduling problem. The always crowded hotel bar and the numerous parties hosted by Ampex, Dolby, *Mix*, Otari, and SPARS (among others) provided adequate diversion from the exhibit floor, the loading dock, technical sessions, committee meetings, and the urban thrills that only a New York cabbie could survive. In case you missed the convention, circle those 1985 dates on your calendar now. You won't want to miss 'em. ■



George Currie and Masaru Nagami of Sony Professional Audio present Jerry Barnes and Chris Stone of SPARS with a \$55,000 grant to establish an educational testing program for studio personnel. The presentation ceremony preceded the SPARS fifth anniversary party held at Studio 54.

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# AUDIO-APPLICATIONS

by Ken Pohlmann

What? Technical papers? In a self-described *applications* column? What could be more inappropriate than egghead theories in a forum for real world discussions? Well, consider this: A certain engineer working for AT&T presented a technical paper to the AIEE convention in New York, way back in February, 1928. It was entitled "Certain Aspects in Telegraph Transmission Theory" and judging from the title, it might have been a real sleeper. As it turned out, the author, a certain Mr. Nyquist, was establishing fundamental dogma which would ultimately culminate in digital audio, and cause a shake-up in communications technology in general. The sampling theorem presented in his paper is the motherlode for audio digitizers everywhere and dictates the conditions under which sampling provides lossless encoding. You see, sometimes a little egghead stuff trickles all the way down to reality.

**W**hich of these papers will go down in history? Frankly it's still a little early to tell.

## AES TECHNICAL PAPERS

### NOT FOR EGGHEADS ONLY

No fewer than 76 technical papers were presented at the fall Audio Engineering Society Convention in New York, and while it is unlikely that all 76 will influence the future course of audio as profoundly as Mr. Nyquist's paper has, it is certain that as a whole the papers point out audio's direction, and at least a few of them will meaningfully shape the research community's thought, which in turn shapes the future. The problem, of course, is to separate the signal from the noise (or the data from the dither) and pick the winners. While no one is presumptuous enough to attempt that, I at least am willing to point out the ones which piqued my interest, or otherwise caught my eye, for whatever it's worth.

The race to perfect an erasable Compact Disc system is well underway. The audio giants of Europe and Japan have prepared prototypes and are zeroing-in on specification standards. Two papers were presented, by Matsushita and Sony, outlining very similar approaches to the problem. "An Erasable, CD-Compatible Magneto-Optical Disc Recorder," authored by Noboru Kikuchi, Akira Kurahashi, Tohru Nakamura, Toshio Shimizu, and Masakazu Fukai of Matsushita, presented details of a magneto-optical disk (MOD) recorder designed to play conventional Compact Discs, and afford reading and writing of newly-developed media. The optical system detects the changes in intensity of reflected light for the reading of CDs, as well as the change in the rotational angle of the plane of polarization of reflected light for the MOD. Moreover, the head is used to deliver light from an 830 nanometer wavelength laser of 25 milliwatts power to the magneto-optical disk which in the presence of a magnetic field of 400 Oersteds, provided by a separate coil, causes the amorphous GdTbFeGe (gadolinium/terbium/iron/germanium) recording layer to become crystalline, thus altering the plane of polarization.

"A Writable Compact Disc Digital Audio System" authored by Kenzo Nakagawa, Kiyoshi Osato, Kenichi Urayama, Takashi Yazawa, and Takao Ihashi of Sony, describes a similar erasable CD system. A 120 millimeter pre-grooved disk is used, with a recordable alloy layer. In this case, an alloy of antimony, selenium, bismuth, and tellurium is employed. The output signal processing circuitry is the same as in a conventional CD player. A carrier-to-noise ratio of -55 dB is possible with a scanning velocity of 1.2 meter/second. The present system exhibits less than 100 signal block errors per second, a rate below the acceptable limit of 220 per second. The bit density is sufficiently high for the recording of 60 minutes of audio. Availability date? No one is saying. But you might as well start building your pre-recorded CD library now.

The cost of CDs might well decrease in the future because of more efficient manufacturing methods, such as the one proposed in "Optical Digital Disc Duplication by a Photopolymer Process," a paper authored by Matsushita engineers Toshiaki Kashihara, Naraji Sakamoto, Kenzo Kamio, and Yoshihiro Oki-

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Of course, the consumer isn't the only one faced with the task of upgrading to digital audio. Manufacturers are working hard to insure obsolescence for all segments of the market. Sony engineers Hiroyuki Yamuchi, Hiroshi Takahashi, Yoshinobu Hayashi, Tetsuya Konishi, Yoshinobu Usui, and Matsao Tanaka authored the paper entitled "Eight Channel Digital Audio Mixer for Digital Mastering and Recording." This modular console consists of A/D, D/A, processing, and control units. Low and high cut filters, four band equalizer, and emphasis/de-emphasis equalizers are provided for each channel; fourth order digital filters with coefficient word length of 24 bit and signal word length of 38 bit, and  $24 \times 38 = 44$  bit multipliers are used to maintain resolution.  $16 \times 29 = 32$  bit multiply and accumulator is used in the mixing section. The control panel inter-

faces with the processing unit via an IEEE-488 buss.

Mark Sandler of the University of London authored a paper entitled "Towards a Digital Power Amplifier" explored a method for direct conversion of digital signals into analog power without intermediate analog voltage representation. Pulse width modulation is used such that the amplifier's final stage operates in class D mode; the output is either fully on, or off. Analog pulse width modulation (APWM) amplifiers, using unipolar (AD) or bipolar (BD) pulse trains provide a point of departure. Excessively high clock frequencies (approximately 10 GigaHertz) pose implementation problems for conventional modulation methods, however the author proposes a hybrid modulation scheme with class BD output stage with appropriate pulse height control methods.

Heinrich Pichler of the University of Vienna presented a paper entitled "Design Criteria for Reconstruction Filter-Optimized Sample and Hold Circuits." When a D/A converter and brick-wall filter is used for reconstruction, a sample and hold circuit must follow the D/A for de-gitching and distortion suppression. A zero order hold circuit is typically used because of simple implementation; a hold capacitor is charged to

the value of the D/A output. However, that held voltage is accurate only at the sample time and otherwise deviates to form an error signal with harmonics at side band frequencies around multiples of the sampling frequency. Another type of sample and hold circuit, the polygonal hold with linear interpolation results in a smaller error signal however implementation is difficult. Exponential hold circuits offer a better solution; a voltage source and resistor/capacitor is added to the hold capacitor to minimize harmonic distortion. A simplified output filter can thus be used.

Three other papers pointed out new directions in digital audio. "A High Speed Telecommunications Interface for Digital Audio Transmission and Reception" by Hyun Heinz Sohn of CompuSonic described an audio interface to the AT&T Accunet phone line system for transmission of data at a rate of 56,000 bits per second. Guy McNally of the BBC Research Department authored "Variable Speed Replay of Digital Audio with Constant Output Sampling Rate." Editing and pitch change are difficult to accomplish with digitized data; a system with demand-fed buffering (a real time input/output unit) permits bidirectional replay at any speed up to double speed. Roger Lagadec of Studer authored "A

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New Approach to Sampling Rate Synchronization" in which the hidden problems of connecting two digital devices with nominally equal sampling rates was explored. As opposed to FIFO and SFC methods, a synchronizer was proposed in which each word slip is detected and processed in real time with an adjustment of delay; a time-varying all-pass filter is used to incrementally change the delay for smooth transition from one delay to the next.

"Is Zero Distortion Possible with Feedback?" was the title of a paper authored by Stanley Lipshitz and John Vanderkooy of the University of Waterloo; in principle error feedforward can result in distortion cancellation, however when realizability of gain blocks and summers used for stable feedback is considered, the authors suggest that finite distortion is inevitable over frequency ranges. Closed loop stability limits the loop gain/phase characteristic as a function of frequency which in turn limits the amount of stable feedback applied to an amplifier, and the amount of distortion cancellation. The supposition that total distortion cancellation is possible with error feedback, in the author's words, "sounds too good to be true, and indeed is." However, could feedback be combined with feedforward to at least minimize the complexity of a feedforward design?

Peter D'Antonio and John Konert of RPG Diffuser Systems authored "The RFZ/RPG Approach to Control Room Monitoring" as well as two other related papers; an LEDE™ (Live End-Dead End) room design is proposed in which a reflection phase grating (RPG™) positioned along the real live wall provides temporally and spatially diffused energy at the mix position, and a reflection free zone (RFZ) is achieved at the front dead end of the room by flush mounting the monitors and splaying the side walls and ceiling. The RPG construction is designed with reflective surfaces which reflect energy to diffuse surfaces which direct diffuse energy to the mix position; An optimum vertical position of the RPG cluster can be arrived at geometrically, given elevation of high frequency speaker, distance from speaker to mixer, and rear wall, and mix height; the center of the diffuse scattered hemi-disk is directed to the mix position.

Jack Wrightson of Joiner-Pelton-Rose authored "Psychoacoustic Considerations in the Design of Studio Control Rooms." Experimental data for the perception of directional and temporal characteristics of reflected sounds was used to psychoacoustically optimize the design of an LEDE control room. This phenomenological approach suggests methods to eliminate high amplitude, discrete reflections to the mix position: optimization of room geometry and fin-

ish, reduction of early reflections, spectrally flat random energy 15 dB lower than the direct sound, monitor elevation consistent with microphone location, provisions for single-center speaker for monitoring of single-channel material.

"Equalization Using Voice and Music as the Source," a paper authored by John Meyer of Meyer Sound Laboratories, proposed a source-independent technique for measuring the amplitude and phase response of sound systems; to be accomplished during performance, in the presence of an audience, using music or voice as the test signal. Dual-channel FFT analysis is employed to resolve the transfer function of the sound system, and resonant effects may be compensated for with a complementary transfer function applied to parametric equalizers. Good correlation is obtained between music measurements and impulse measurements in both the amplitude and phase domains. Coherence is lower when music is used thus necessitating longer averaging times. Amplitude ripples due to interference from delayed, reflected sound necessitates smoothing prior to equalization.

Tom Rutt of Aardvark Audio authored "Vacuum Tube Triode Nonlinearity as Part of the Electric Guitar Sound"; a class A triode coupled directly

to a cathode follower appears to be a configuration common to amplifiers with the much-beloved vacuum tube sound. Overload distortion of this configuration results in soft grid limiting via the voltage drop across the grid circuit source resistance caused by grid current flow. Emulation of grid limiting with solid state devices yields different results; the exponential relationship inherent in solid state devices results in a fast transition into hard limiting, and "undesirable" intermodulation distortion, as any guitar player will tell you.

So there you have it—a sampling of the 76 technical papers presented in October. Everything from photopolymer resin methods for CD manufacturing, to a case for the longevity of 12AX7s was presented. Which of these papers will go down in history? Frankly it's still a little early to tell. It took us fifty years to appreciate what Nyquist was rambling on about.

Technical paper reprints available from: Audio Engineering Society, 60 East 42nd Street, New York, New York 10165.

Ken Pohlmann acted as Chairman of the papers presented at the 1984 AES Convention. ■



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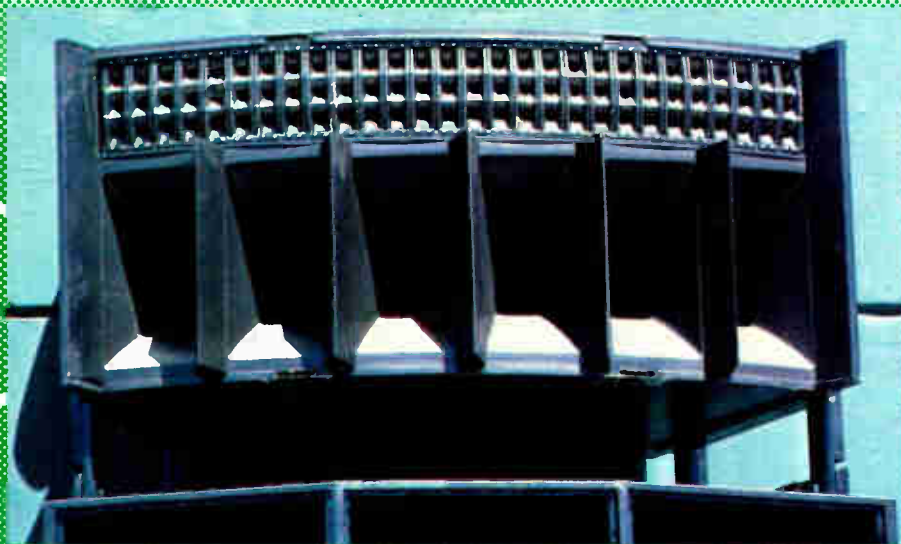
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## Sound for the

# SUPERBOWL



by Jim McCullaugh

For most U.S. and international viewers it's a one-day event, perhaps the biggest drama in professional sports. But those who work behind the scenes of this month's Super Bowl XIX—when America's top two pigskin rivals slug it out amid pre-, halftime and post-production extravaganzas—know better.

For Ken DeLoria, chief architect of San Francisco's Harry McCune Sound's 1985 Stanford University Super Bowl project, the design, installation and logistics in installing a world-class sound system comprise torturous and painstaking hours and efforts, a complicated drama of its own actually dating back to the fall of 1983. DeLoria, a five-and-a-half year McCune veteran, tells the story:

We were originally solicited by the National Football League two years ago when Super Bowl XVII was held at the Rose Bowl in Pasadena, CA. They had heard of the really fine sound system we had put in the Oakland Stadium. We hung a speaker on a crane, a large 3,000 pound dedicated single source array and we used it for a Monday Night Football game on ABC-TV and it was successful. We ended up building them a permanent version of that. It's a real high fidelity stadium for a change.

It's a single point source which has a response from about 50 to 17,000 cycles. They play rock and roll through it before baseball games. The NFL had heard about that and also heard that we were doing some real pioneering work in trying to improve the quality of stadium sound, so they contacted us and we agreed to do a rental system for the Rose Bowl. They first asked us for a permanent system but at \$175,000 it was deemed a little too steep for a one-day event that's held there every couple of years.



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*Gary will be playing the lead male role (opposite Linda Ronstadt) in the New York Shakespeare Festival production of "La Boheme". Catch him at this event or in concert in your area soon.*

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World Radio History



**W**hat we are doing is the same thing we did in the Rose Bowl, which is a single source sound system as opposed to many other approaches which utilize multiple source, or some kind of distribution system of horns. It's a large scale dedicated array.

We provided a large scale single source dedicated array on a rental basis and put it at one end of the Rose Bowl and used it for the announcing and the music that was part of the half-time show. It was fantastically successful.

Stanford's seating capacity is close to 85,000 and in many respects it's almost a carbon copy of the Rose Bowl, but only as far as elevation and angles. The seats and construction are different.

It's not all concrete. There's dirt under the seats that form the rise of the hill. And there's an opening [at one end], unlike the Rose Bowl or L.A. Coliseum, which are pretty much like bowls all around.

It's got an entrance way where the teams come in and out where the seats completely stop. They're interrupted and then they start up again, something like a 60-75 foot span which is

—PAGE 22

## Inside McCune Sound

San Francisco-based Harry McCune Sound is primarily a large-scale rental house. It's perhaps the biggest sound rental company in the country, probably the world, more diversified than the industry thinks. They've been in business 53 years, employ 143 people and have offices ranging from San Diego to Napa Valley.

They do everything from specialized music concert equipment and sporting events like the Super Bowl to Broadway. At one time the company had seven shows on Broadway and that's with no New York-based office.

"We've recently branched out pretty heavily in the audio/visual field" explains installation division manager Ken DeLoria, "where in addition to large scale concert sound we also do daily in-house servicing at a number of hotels throughout the state where we handle their needs for projectors and sound equipment when they have conventions. We've also got a small eight track recording studio in San Francisco. We have a 3/4 inch on-line video editing suite. A pretty good-sized research and development department where we design and build sound systems primarily for our own in-house use as rental equipment.

"In the last four years, though, we have made a thrust in the permanent

sales installation business which we had never been in before. We've always held forth that if you are in both the rental and sales business you are cutting your own throat. But in specialized cases, such as churches where a sound system will be needed daily, we decided this was opening up another area of business. It isn't practical for a multiple use venue to lease or rent a system all the time. Sooner or later they will want to purchase their own



*McCune's eight track studio in San Francisco.*

system. So far we've been successful at that.

"We have some very special loudspeaker equipment that we design and build and that's what we sell. The bulk of our sales work has gone into existing venues where a sound system hasn't been working correctly and putting in a temporary system from our rental stock, and then setting up a different approach to the loudspeaker system which solves the problems on-site as opposed to on-paper. Then we'll duplicate a permanent version of that for the venue if they want to buy it.

"A good example is the Crystal Theatre, Anaheim, CA. They had \$2.1 million in sound equipment that was a complete failure. The first system cost \$750,000, the second cost \$1.2 million and then there were add-ons. It was a total disaster. They never had more than 50% intelligibility in the house at any given time. We came in there and in two days, after two years of their agony, we put in a single source cluster of speakers hung over the altar that was simple, direct and to the point. We left it in for two weeks and they wanted to buy it. We duplicated what we did for them and it cost them \$107,000. And they pulled out all of the \$2 million in equipment they had." ■

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broken up where there aren't any seats which might account for another 10,000 seats if they were continuous. That would make it close to the 100,000 or so— Rose Bowl or Coliseum capacity.

What we are doing is the same thing we did in the Rose Bowl, which is a single source sound system as opposed to many other approaches which utilize multiple source, or some kind of distributed system of horns. It's a large-scale dedicated array. The difference between that and normal high fidelity or rock and roll music sound systems you encounter is that they are somewhat modular, built around low-frequency cabinets, mid-range cabinets and high frequency horns or full range cabinets which have those components in them

but are still some kind of module of individual units.

And when people want to build larger sound systems they stack up these individual boxes to build larger walls of speakers that act as a larger system to a degree. But we've found that mechanical misalignment of boxes just randomly stacked on top of each other causes a lot of phase cancellation and phase incoherence and to a degree distortion or a form of distortion which produces an inaccurate reproduction.

You also lose an awful lot of power by randomly stacking up boxes, especially square boxes where the separation of drivers by fairly significant amounts, will cause multi-path interference because at any given point in space

in front of your stack of boxes you have different path lengths to the different driver units.

So what we have done to overcome is to build these large dedicated arrays which are boxes stacked on top of each other with individual driver units in them but designed from the ground up as a large scale array as opposed to individual boxes built for small settings which can be stacked for large settings.

We have a system called the HMS-12 [Harry McCune Sound] and it's comprised of only four cabinets that's trucked as four different pieces (plus amplifiers). The smallest module is about 1,000 pounds and the largest one is about 2,000 pounds. It has to be removed from the truck with a fork-lift. The only assembly that takes place in the field is the mid-range and high-end unit that is stacked on top of the low-frequency unit and bolted into place.

There are two sets of low-frequency with mid-high on top of them that are put side by side. They are very large trapezoidal cabinets so when they are put side by side the front or mouths of the horn units actually touch each other but are pointed in two different directions. A trapezoid is the only geometric shape that allows you to do that.

You actually bring your drivers together so that they are adjacent or actually touching each other. But one cabinet is pointing 45 degrees in one direction and the other is pointing 45 degrees in the other direction. We built a nice 90 degree array. The mid-high units are stacked on the bass cabinets. Since it's designed to be a large scale array and can't be broken down it gives a nearly perfect mechanical alignment between the low and mid and mid and high driver planes.

The amplification for the system can either be two large scale arrays that can either be separated and used on each side of the stage, a classic configuration or they can be stuck together where they form one large continuous arc, a true single point source. And each of the two 3,000 pound stacks or arrays are powered by 14,400 watts of amplification. Basically 12 Hafler P-500's that we have souped up a little bit so their output power is a little greater.

Each stack has its own amplifier rack. The amplifier rack is fairly novel in our treatment of it. It's a dedicated amplifier rack, not just an Anvil case with a lot of amps folded in it but a frame we built from the ground up out of one inch by two inch square aluminum rectangular tubular steel and the whole frame sits on a wooden tray with rubber isolation mounts which are made by the Berry Corp. Commonly known as Berry Mounts, they're used frequently for things like missile transport, avionics, electronics, manufacturing and launch

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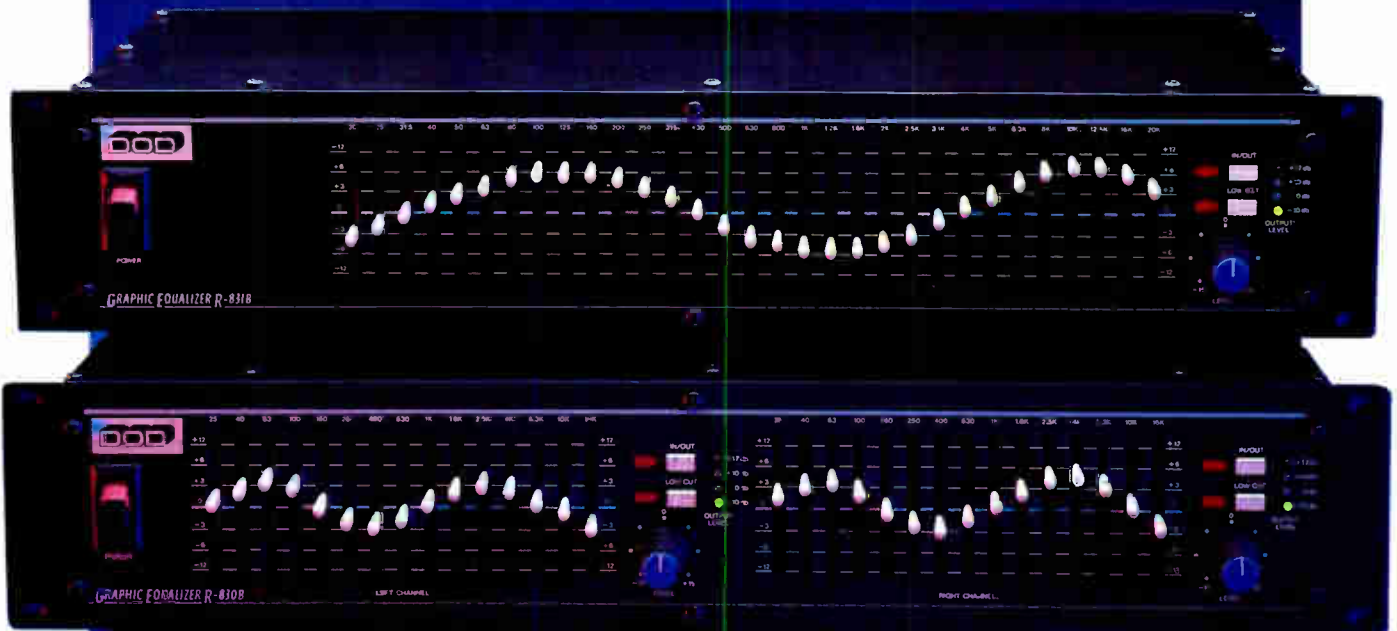
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Technician runs A/B tests of HMS-12 and JM-10 systems.

sites. They're not just rubber mounts but you can actually get something that can match the exact weight and vibrations you will encounter so they do their best to dampen it and not resonate and cause worse problems if they weren't there.

Electronically, we do a few novel things. Within the rack we build our own power distribution system that consists of a main circuit breaker and an individual circuit breaker for each active

device within the rack and we specifically use magnetic hydraulic breakers which are fast acting, many many times faster than the normal thermal circuit breakers you find in your house or basic power service in a building.

We select them carefully for the devices that they are protecting so they are fast enough to trip before any harm is done to the device in the event of a failure or as little harm as possible and yet

they're protected from initial turn-on surge so they don't falsely trip when there isn't anything wrong like when an amplifier is just firing up. With that we do a two stage power on, power off sequence in our power distribution design. Series resistors bring the power up to half voltage for about two or three seconds and then another contact closes and doesn't draw up so much power when the amps are charging up. That's so you don't pop a breaker somewhere in a building that you might not be able to get to right away and you can't afford that if you are doing a show.

We are going to try to locate the amplifiers in the Super Bowl as close to the speakers as possible.

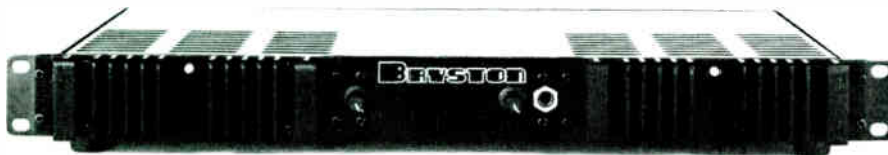
The speaker locations will be on a custom built steel platform we designed and had fabricated which will mount on top of the scoreboard at the south end of the stadium where the larger of the two scoreboards are. There are some pretty large H beams which hold up the scoreboard so we'll be extending those beams and building on to it. It's possible that the equipment will have to be installed with an Air Force or private helicopter. Because of the location, you can't park a crane very close.

We have to use generator power. The building there is old and has never had much power source brought to it. There isn't much nearby. Pacific Gas & Electric is bringing temporary power. And ABC-TV will pretty much take what's available. A smaller user like ourselves would have to pay PG&E a large amount of money to bring in a power source, so we will use a main and a back up generator and a transfer switch so in the event of a primary generator failure we can switch within a second or two. We'll have a full-time operator there on the generators, who will be monitoring power and be in communications with the rest of the production staff throughout the stadium. Both generators will be 500 amp three-phase units that are the kind that are used for movie shooting. Very very quiet. We've used them many times before. They're quiet and vibration free.

The time frame for the event is ten days for us. That's on-site time and if you include pre-production and preparation time we have been working on it sporadically for the past year. Probably more than 40 days of time will go into it. Planning, designing, laying out equipment, testing it, attending meetings for over a year.

On-site there will be a crew of at least 15 which could increase to 17 before we are all done, since new circumstances are coming up all the time. There's a project supervisor which is myself; a mixing editor; and one person dedicated to the outside perimeter system since we are also providing a

# BRYSTON



## Bryston's 2B-LP

Bryston has been known and respected for years as the manufacturer of a line of amplifiers which combine the transparency and near-perfect musical accuracy of the finest audiophile equipment, with the ruggedness, reliability and useful features of the best professional gear. Thus, Bryston amplifiers (and preamplifiers) can be considered a statement of purpose to represent the best of both worlds - musical accuracy and professional reliability to the absolute best of our more than 20 years' experience in the manufacture of high-quality electronics.

The 2B-LP is the newest model in Bryston's line, and delivers 50 watts of continuous power per channel from a package designed to save space in such applications as broadcast monitor, mobile sound trucks, headphone feed, cue, and any installation where quality must not be limited by size constraints. As with all Bryston amplifiers, heatsinking is substantial, eliminating the requirement for forced-air cooling in the great majority of installations. This is backed up by very high peak current capability (24 amperes per channel) and low distortion without limiting, regardless of type and phase angle of load. In short, the 2B-LP is more than the functional equivalent of our original 2B in spite of the fact that it occupies only half the volume, and will fit into a single 1.75" rack-space.

The usefulness of the 2B-LP is extended by a long list of standard features, including: Balanced inputs; female XLR input jacks; dual level-controls; isolated headphone jack; and indiv dual two-colour pilot-light/clipping indicator LEDs for each channel. In addition, the channels may be withdrawn from the front of the amplifier while it sits in the rack, vastly facilitating any requirement for field-service, including fuse-replacement.

Of course, in keeping with Bryston's tradition of providing for special requirements, the 2B-LP can be modified or adapted to your wishes on reasonably short notice, and at nominal cost.

Best of all, however, the 2B-LP is a Bryston. Thus the sonic quality is unsurpassed. The difference is immediately obvious, even to the uninitiated.

Other amplifiers in Bryston's line include the model 3B, at 100 watts per channel, and the model 4B, at 200 watts per channel. All ratings continuous power at 8 ohms at less than 0.1% THD or IMD.

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sound system for the outside perimeter fence of the stadium which will cover all the concessions selling food, beer and shirts, which will carry the CBS Radio broadcast. People will be able to leave their seats and still hear the action. There's also going to be sound systems in the 22 bathrooms carrying the CBS Radio broadcast. There may be some video monitors which we will also provide, a dozen or so Sony 25-inch Profeel's.

There will be a man dedicated to the perimeter sound system who will make sure all the horns are working correctly. There is an outside press tent for the overflow and for after the game and we will have a sound and video system in there with a person attending to that. We will have two people walking the house

in general inside the stadium so they can report via walkie-talkie to the person at the mixing board so they can discuss levels and clarity at different points in the stadium.

There will also be three men down on the field responsible for the wireless microphones for the referee, the field monitors which will be used for the half-time show, and setting up on-field mikes for the national anthem which will be sung by a choir of 500 elementary school boys, and for announcers on the field. An amplifier man will be stationed with the amplifiers for the primary single source system. The amplifier racks both have a built-in spare amplifier. We use all Hafler amps which we have found to be extremely excellent both in terms of cost

effectiveness and ultimate quality.

A company like ours can virtually afford to buy any amplifiers we want for our applications. But in the rental business you can't live with any down time at all. We could afford some of the very exotic \$1,500 and \$1,800 amplifiers that are on the market but we have found Hafler has given us the quality we want and the quality we can't get with anything else.

We felt the elegance of the Hafler circuit design was just too good to pass up—the MOS-FET power stages, the cleanliness, quality, simplicity and lower price encouraged us to purchase them. At that time they were pretty much consumer products only and we made necessary structural changes with the enclosures and some minor circuitry changes such as grounding scheme improvements. We got to know the Hafler people very well and even made some suggestions. When they came out with their P Series they attributed much of the improvements to our suggestions. The amps match our needs closely and we don't have to make many changes. We feel they have a very special place in the market right now. Hafler, as far as we are concerned, is tried and true. We've probably got some 200 Hafler amps in service and our failure rate is maybe one percent. And many of those are the older series, never designed to be put in a rack and bounced around on the road. I love the P series.

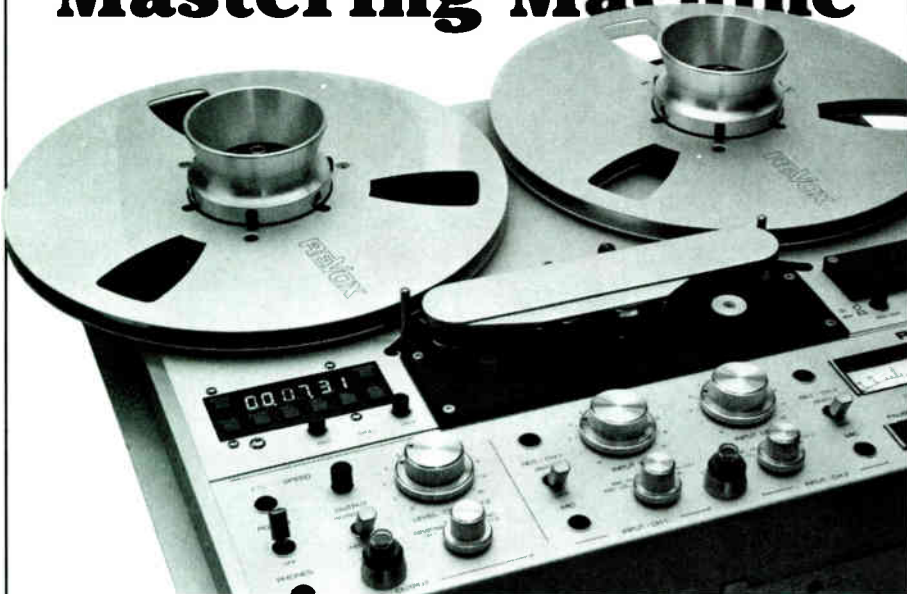
We've spent weeks in the recording studio engineering the soundtrack for the Super Bowl half-time show. It's being produced by the U.S. Air Force, hired by the NFL. It's a 12-minute show but we have spent weeks in the studio... 18-20 hour days beginning in San Antonio for basic tracks, L.A. for horn and synthesizer overdubs and then back to San Francisco for mixdown. Even though it's recorded we'll make it sound like it's happening right there on the field.

There will be a band on the field lip or band synching. Just to give an idea of the scope of the show, seven 45-foot semis are required to get their staging down from Sacramento—a cast of 950 people, pyrotechnics, the Jet Pack guy doing the similar jump he did at the Olympics, 20-foot hydraulic riser on the main stage, five smaller stages with lighting and movement, and large floats.

All the musicians are Air Force players except for some of the horn overdub players which were used in L.A. It's 13 different songs ranging from 14 seconds to two minutes and it's one continuous piece of music. That's been my most consuming project, beginning last August in San Antonio. There will be two different mixes, one of the stadium feed and one of the broadcast feed that will be enhanced a little. ■

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World Radio History Circle #016 on Reader Service Card

# DIGITAL DISCUSSIONS

by Neal Weinstock

There's a new iceberg of technological change just off our starboard side, and ready to hit. The tip of that iceberg surfaced at a New York press conference in October, as Dolby Laboratories announced a digital audio conversion system aimed at the commercial and direct broadcast satellite markets.

The Dolby digital system is quite different from the Compact Disc system already being marketed to consumers; it is more like the "Delta Modulation" developed by Dolby's distant rival in the noise reduction business, dbx. The new system converts analog audio not only into digital form, but into compressed form, so that it can fit in the standard audio bandwidth of any satellite transponder. A decoder is necessary to get any sound at all out of the other end.

Dolby is licensing the system to any and all comers, two of which (thus far) are MTV and USCI, with many others to be announced in coming months. According to Ed Schummer, general manager of Dolby Lab's Licensing Corp., several licensees are capable of manufacturing, and have expressed a desire to market consumer decoders—

both as part of DBS service and, more commonly, as a remarketed cable service.

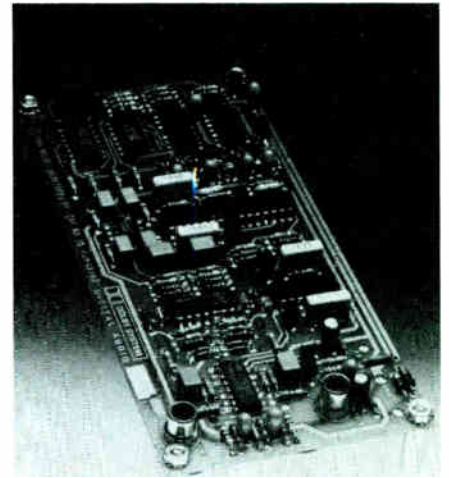
Since Dolby is not a manufacturer, Schummer did not want to go on the record as to exactly what uses the system will be put. Although he said he expects it "unlikely" that MTV will market consumer decoders for the benefit of earth station owners, Schummer reiterated, "We are not going to turn down anybody who wants to make decoders for the consumer market."

Schummer expects such a decoder might sell for 20 percent of the current cost of consumer digital equipment (now as little as \$300). The full Dolby system presently consists of two cards, for D/A and A/D conversion; it was announced that both will soon be available on chips.

Other such digital transmission systems for high quality audio are also in the works. To name one monstrous competitor Dolby may have to face, AT&T has been working for some time on voice-quality digital transmission for telephone signals; "You can routinely link two or more voice channels," of such a system, Schummer said in a private interview. Although analysts do not expect AT&T will come out with such a product aimed at hi-fi audio for consumers, it is quite possible that another entity would lease AT&T digital lines for such a

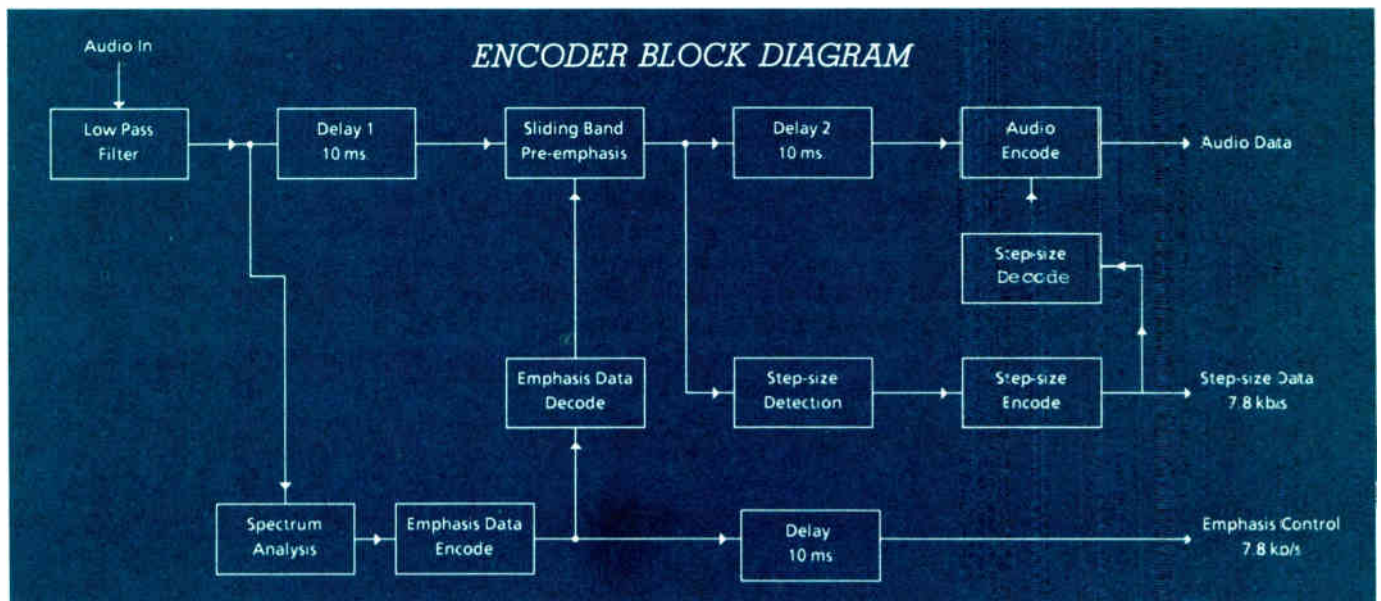
system. "I don't rule out that's entirely possible," says Schummer.

The significance of such a phone-line compatible system is multifaceted. AT&T, too, has birds in the heavens, so it may serve to expand attractive channels for dish owners. AT&T is now allowed to compete in any business it wants, and it is not so far-fetched to think it may wish to be involved in some digital pay-per-song high tech music retailing operation. More likely, though, such a service would be aimed at large resellers, such as cable, MDS or STV



*Prototype of the consumer decoder card for the Dolby digital audio system. Signetics is currently developing a chip which would contain most of this circuitry in a single package.*

companies. These companies are the market that Dolby cares most about, too, the universe of cable consumers being



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The ability to compose 32 different tracks on 16 assignable MIDI channels with all the expression and nuance of your performance is now possible. This MIDI sequencer integrates perfectly with the drum machine in the 9000 yet it's easier to use than a multi-track tape machine. The beauty is in the simplicity of the operating system; punch-in and out, auto-locate, fast forward, rewind, insert a part, copy another, merge them all. The 9000 operates the way you've always wanted to — simply, yet without compromise.



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"From the inventors of the Digital Drum Machine."

# HARRY HIRSCH



PHOTO: FAYE ELLIEMAN

## *A look at the Center for the Media Arts*

by Radcliffe A. Joe

Lovingly nurtured by Harry Hirsch, the Audio Arts division of the Center College for the Media Arts has made astonishing strides since it opened its doors to 15 students 19 months ago.

Hirsch is a dedicated man who personally supervises every facet of the school's broad-based curriculum. That curriculum spans 700 hours of mostly hands-on training, and covers a wide spectrum of the recording studio business, from a history of the industry through such vital areas as editing, mixing, audio and video production, digital, marketing and location recording.

The courses were formulated when Hirsch was an adjunct professor at New York University working in tandem with professor Richard Broderick, NYU's director of the music business technology division. During this time Hirsch also served as an audio consultant to NYU's School of Engineering, and

even today is still on the advisory council for NYU's School of Arts & Sciences. His dream of creating a broad-based school of audio arts became a reality when the Center for the Media Arts, an organization that merged such long established vocational schools as the School of Television Arts (formerly the RCA Institute), the Pels School of Commercial Art, and the Germain School of Photography, was formed. When Hirsch was offered the opportunity to build an Audio Arts division for the Center for the Media Arts, he leapt at the opportunity.

Hirsch began his career as a drummer playing with what he describes as a wide variety of "authentic" Latin bands, large orchestras and small jazz groups. He made his recording debut as a jazz drummer, and with each new visit to the recording studio, Hirsch found himself growing more fascinated with the technology that transferred his music to audio tape. That curiosity, coupled with his natural talent for working with technical things, soon resulted in his working behind the console instead of in front of it. Thus began Hirsch's career as an audio engineer.


Hirsch was not content with

merely mastering his command of the recording console. He soon began suggesting and implementing innovations and new techniques that enhanced the capabilities of the "board." In 1968 his innovative flair led to his design and construction of Media Sound recording studio in an old church on Manhattan's West Side. The dazzling array of state-of-the-art equipment incorporated in Media Sound, along with Hirsch's own winsome personality, catapulted the facility into a place of prominence among top recording artists of the period, playing host to such artists as Judy Collins, Stevie Wonder and George Harrison.

By 1976 Hirsch had become convinced that the pop music and advertising industries were capable of supporting a major, new, state-of-the-art recording studio. He knew the cost of such a project could be prohibitive, so he set out to find a backer for the project.

He later joined forces with the Sound One Corp. (a film-editing, production and equipment rental firm) to raise the capital for the venture, and with this critical aspect of the project behind him, he leased raw space in the famous Brill Building—a landmark location in

# DIFFERENT DRUMMER

We don't call the TR-909 a drum machine for some very good reasons. True, it's a machine that makes drum sounds, but that's the end of any similarities between run-of-the-mill drum machines and the **TR-909 Rhythm Composer**. In fact, playing with the TR-909 is more like playing with a real drummer than anything else. Here's why. **The Best Sounds**. We start with digital recordings of real drums, then through a 3-D waveform analysis, re-create the sounds through a hybrid digital/analog process. Not only does this provide the best drum sounds, but also the most flexible. Change the snap of the snare, the decay of the bass, you call it. The sounds you get are the sounds you really want. Even better—in addition to the 11 internal drum sounds, add up to 16 more drum sounds (digital and analog) through external sound modules. That means 27 drum sounds with no major surgery. **The Best Programming**. Program a roll on most drum machines and you'll see why they're called machines. That's why the TR-909 gives you the choice of Step Programming (highly visual and accurate) PLUS the additional spontaneity of Real-time Programming. The TR-909 also gives the most expressive and easily programmed dynamics. **The Most Flexibility**. Think of any way to interface, and you'll find it on the TR-909. MIDI, Sync-24, Tape Memory Save/Load, RAM-Pak Program storage, they're all here. So what does this mean? It means that years from now, when other drum machines are sitting in the closet gathering dust, your TR-909 will still be on the job. Hook up the TR-909 through MIDI to a personal computer (like the Apple II or IBM PC). Only Roland has the Hardware and the Software to make it possible. **The Most Expression**. Compare the results you get from the TR-909 Rhythm Composer with any drum machine. Because why would you want a machine, when you can have a Rhythm Composer? RolandCorp US, 7200 Dominion Circle, LA, CA 90040. 



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Manhattan for various facets of the music industry.

Out of Hirsch's idea grew Soundmixers, a recording studio designed around a full complement of video tape and film pre- and post-production facilities. The basic concept of Soundmixers was that it was a hub of activity around the clock. In the day, the facility was utilized for the production of commercials for firms ranging from Volkswagen and Pan Am to Kentucky Fried Chicken, and at night a dazzling array of recording artists would take over. The result was that Soundmixers soon became one of the most successful studios in the country.

Hirsch believes that diversification and a constant awareness of changes in trends in the industry are the key to the success of any venture that targets the recording business. He has taken this philosophy with him into the Center for the Media Arts; instead of merely training his students to be competent audio engineers, Hirsch believes that they should have an excellent grounding in the theory of the science, "especially in areas such as digital logic techniques, automation programming, control room acoustics and time code technology which were once considered highly esoteric."

It is with this in mind that Hirsch's curriculum is designed around 700 hours of training. It is also for this reason that more than two-thirds of the curriculum stresses "hands on" applications so that when a student graduates from the school he or she can walk into any recording studio and begin work with more than just a degree of confidence.

For the same reason, Hirsch is constantly upgrading the equipment his students work with. At present there is in excess of \$500,000 worth of state-of-the-art equipment in use at the Center for the Media Arts, and Hirsch is constantly negotiating with manufacturers for demonstration units of their latest equipment.

Another unique aspect of the Center, thanks to Hirsch's innovative ideas, is a fully-equipped 24 track studio in the basement of the building in Manhattan's trendy Chelsea district. Using a sophisticated projection TV system, students at the school can watch top recording artists record their work in the studio while the students do their own live mix on individual consoles in the upstairs mixing classroom.

Hirsch, a founding member of SPARS (Society of Professional Audio Recording Studios), is exploring ways for his students to participate in SPARS testing of Compact Disc (CD) records. He is also closely monitoring the growth of digital technology, and will expand his curriculum to incorporate more hours of digital training when he feels the marketplace warrants it.

Although Hirsch is reluctant to turn away students from his school, he has little use for the individual who shows up in his office and expresses an interest exclusively in "making platinum records. My first responsibility is to broad-based job education," he says. "I am committed to training my students in every aspect of audio engineering. If, in the process, they make platinum records then that is the icing on the cake."

Next year Hirsch will expand his school's curriculum to include audio electronic technician courses for trained entry level people in the demanding area of studio maintenance. He feels that technicians are an important adjunct to the recording industry, and that such a

course will be very viable. He will also be adding a 300 hour supplementary intensive course for college majors with a basic background in the business of music, or professionals in allied fields

With a jam-packed itinerary, Hirsch still finds time for other challenges. He sits on the board of governors and is a vice president of The National Academy of Recording Arts & Sciences (NARAS). He was also an audio consultant on the design of the multi-million dollar Christian Broadcasting Network based in Virginia Beach, VA. "However, my first love is the Center for the Media Arts. It is a project that is very near and dear to me, and will always take priority over my other interests." ■



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# ON TOUR WITH SPRINGSTEEN



PHOTO: RON DELANY

## SOUND ON STAGE

by David Schwartz

This is Bruce Jackson's third tour as chief sound mixer for the Bruce Springsteen concert odyssey. Jackson was called on to "sort out some problems" in the middle of the 1978 tour and stayed on for the duration. He was brought back for the 1980-81 road show. And, last June, he packed his bags once again for what is scheduled to be a fourteen-

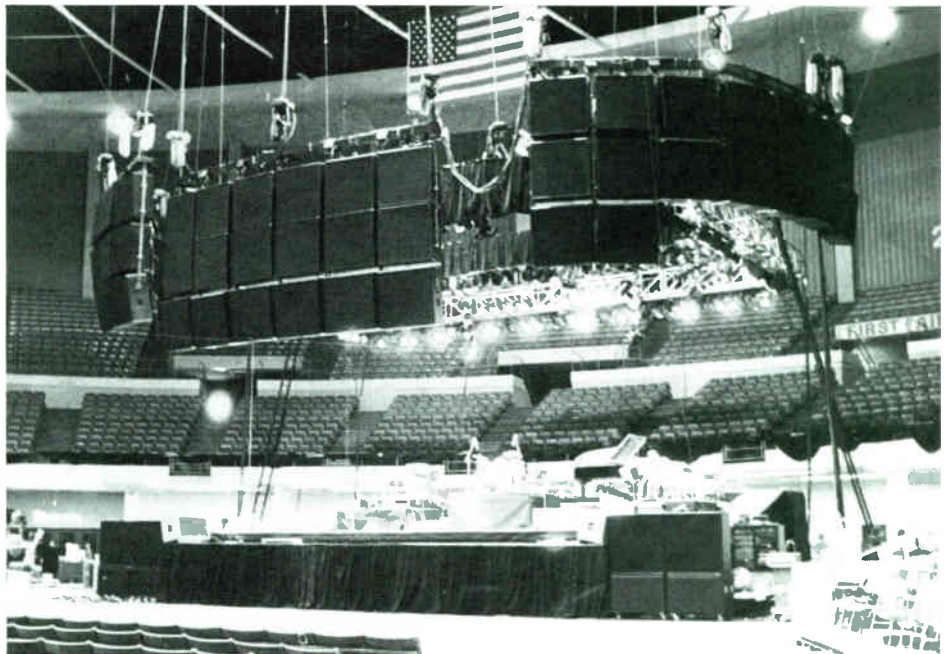
month outing with "The Boss" as he reconquers America, Europe, Australia and Japan.

Jackson got his start in the concert sound business in his native Australia, where he started a sound company called Jands in 1967. In 1970 he sold that company after meeting up with Lititz, Pennsylvania-based Clair Brothers Sound, while they were passing through Oz on tour. Clair, the PA support group for Frankie Valli and the Four Seasons in 1966, had become one of the pioneer sound reinforcement giants by 1970. Bruce joined Clair on the road in 1971 and stuck with them until 1978, doing concert production as well as design and development, before joining the Springsteen tour as a freelance mixer. To pass the time between the first and second tour, Jackson acted as U.S. distributor for a couple of Australian friends who had developed the Fairlight synthesizer.

tickets in LA for any of his seven recent dates there were going for as much as six hundred dollars apiece.

So what's all the fuss about? What is it about this concert that seems to drive everyone to such a frenzy? Well, Springsteen does deliver. His concert is action packed—about four hours of searing, gutsy, heartfelt rock and roll. He seems to have boundless energy, strutting and jumping and chugging and whooping it up until anyone else would have collapsed from exhaustion. He has an intense confidence, combined with a sense of decency and an underdog's fearlessness that not only draws love from his audience, but seduces them into wanting to identify with him. He commands respect, by earning it.

*The Clair S-4 cabinets are flown to provide even coverage of the house.*



As anyone who has witnessed, or even read about, a Springsteen concert knows, this show is an Event. All of the shows are sellouts, usually within a few hours of tickets going on sale. Many promoters have said that they could have sold five or ten times as many tickets, given the opportunity. Black market

Springsteen cares about his audience. He walks all areas of the house before every show with Jackson, checking sightlines and sound system coverage. He doesn't want anyone to walk away from this show feeling cheated. Jackson, who has toured with many top attractions in popular music, says that

*Chief sound mixer Bruce Jackson supervises the 8 a.m. rigging call to get ready for the 4:30 sound check and concert that runs from about 8:00 til 12:30. The fourteen month tour averages two days on, one day off, as the band reaches out to about 5 million fans.*



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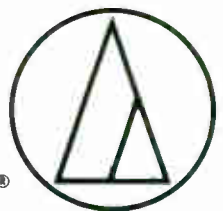
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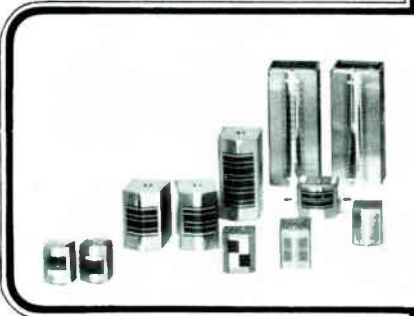
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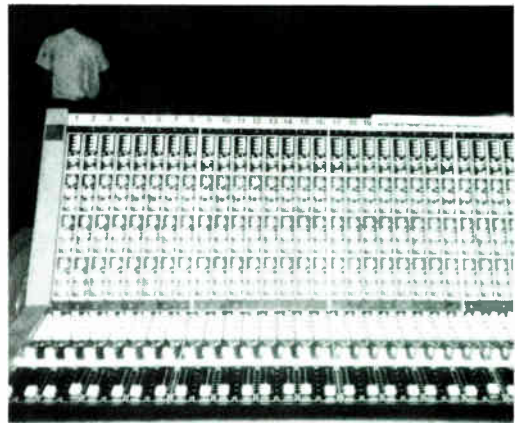
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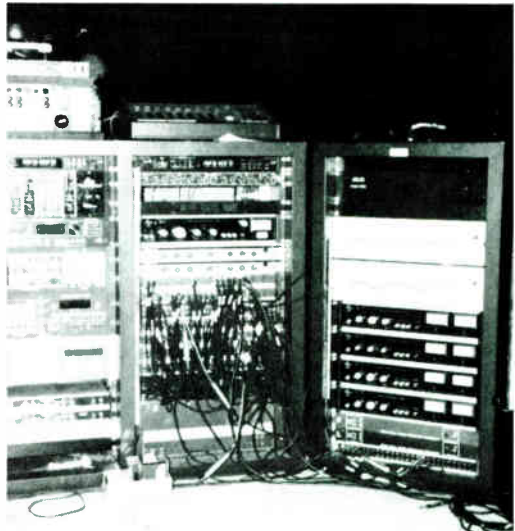
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he rarely finds an artist so tuned in to the audience.

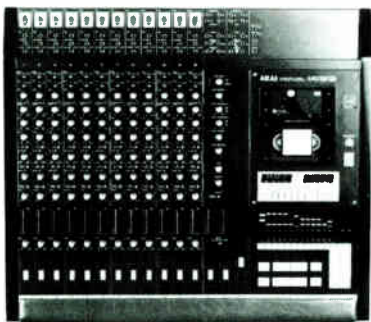
This special relationship with the audience places a special demand on the sound reinforcement system. As enthusiastic as the crowds are, The Boss can bring them to total silence as they hang on every word or whisper that fills the moment. Vocal intelligibility is key, as much of Springsteen's magnetism comes from his monologues, dialogues and soliloquies; not an easy task in a sold out house of 20,000 or more. Fortunately, Springsteen crowds are good listeners. And also, fortunately, he realizes the importance of placing a high priority on the sound system. Says Jackson, "He used to be very uptight about the sound situation; and as he realized that things were



One of ten in existence, the 32 input house mixing console with three sections of parametric EQ, four busses, and assigns to seven different stereo submixes, was co-designed by Jackson to fold in the center for easy portability. Combined with a well-loaded signal processing rack array, the mid-floor sound mixing position has been compressed to a width of six feet (four seats) so as to minimize seat blockage.



## The Future is Here . . .



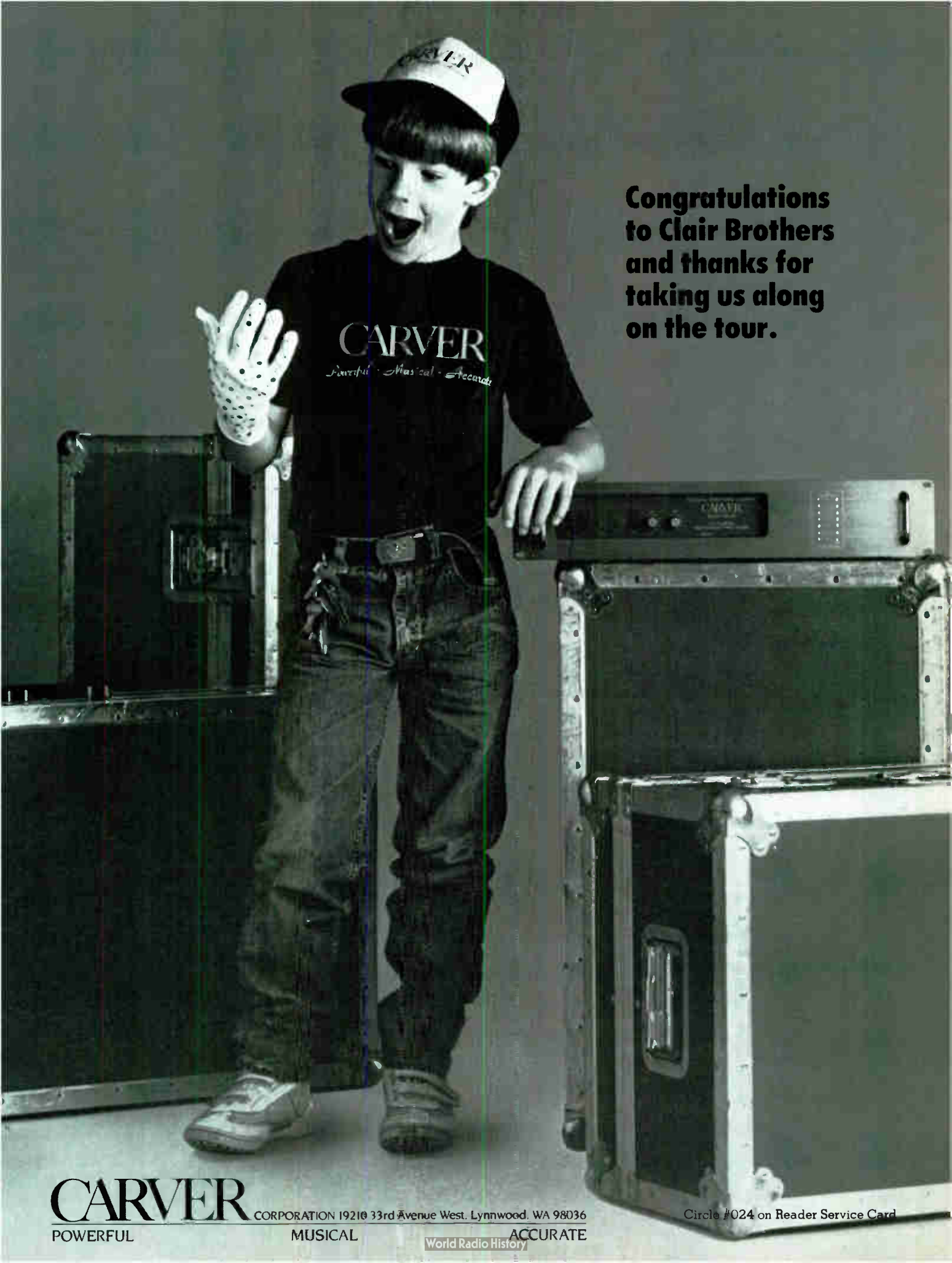
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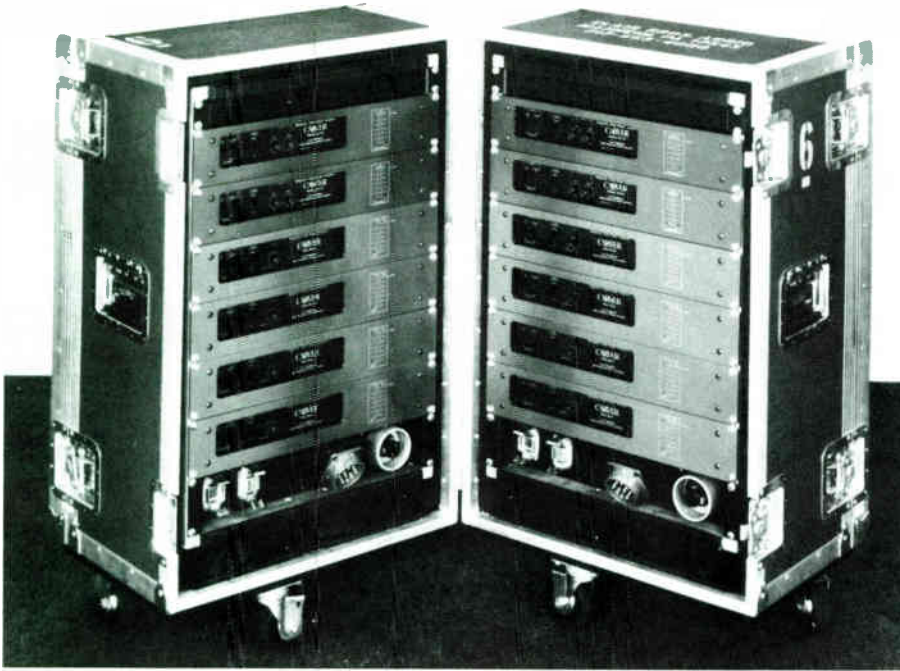
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*The lightweight Carver power amps are packed twelve to a case.*



1250 watts into four ohms. The 72 loudspeaker cabinets used on this tour are Clair's newly introduced S-4 Series II, which contain two 18-inch speakers, four 10-inch speakers, two compression drivers and two superhighs. Sixty-eight of the cabinets are "flown," with the configuration approximating a very large point source, or more accurately, surface areas of a sphere. There are five sections of this cluster, allowing 360 degrees of coverage, and each cabinet is aimed separately so that its 20 x 20 degree coverage is assigned to a specific and exclusive area of the house. The sound is sent out in stereo, but not the conventional left side/right side. Instead, the cluster is treated as a series of columns with four stereo feeds sent so that the sound alternates left/right, 1/r, 1/r, 1/r, as one goes around the house. This allows every seating position to sense the stereo effect.

pretty much under control and he didn't need to worry as much as he did, he got more confidence with his performance."

The main house reinforcement system is a blend of power and cover-

age. The power is provided by over 100 of the new lightweight Carver amplifiers, 72 mono amps running to the bass side of the cabinets and 36 stereo amps handling the mids and highs, each running

As rock shows go, for all the sound pressure level produced this one would still qualify as a minimalist stage production. There are no fancy stage sets (barring an occasional dancing bear or shade tree) and the lighting is quite



# SOUND MANAGEMENT

Dyna-Mite provides the sound reinforcement professional with a complete arsenal of problem-solving signal processing modes. When used as a limiter with Linear Integration Detection, the Dyna-Mite delivers a dramatic, yet natural, increase in apparent loudness for vocals, horns, pianos, and even drums without the squashed, strained sound caused by conventional limiters. And, with the flick of a switch, Dyna-Mite becomes a fast peak limiter for absolute overload protection.

Further evidence of Dyna-Mite's versatility is found in its expansion and noise gating modes. By "stretching" dynamic range as it eliminates noise, Dyna-Mite's expander provides a greater range of expression for velocity-sensitive keyboards. Inserting the Dyna-Mite into the pre-fader patch point of a sound board allows its peak expand and gate modes to eliminate amplifier buzz or to quiet open microphones,

providing instant and automatic access to the system by on-stage performers.

As are all good managers, Dyna-Mite is tough! Its custom aluminum and steel enclosure provides excellent RFI rejection and lets Dyna-Mite withstand the punishment of on-road use.

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basic . . . no pyrotechnics or dry ice. Just Bruce on guitar and vocals, Clarence Clemons on wireless sax, Roy Bittan playing Yamaha concert grand with custom Helpinstill pickup, DX-7 and Ya-

*When The Boss steps up to his Electro-Voice DS-35 vocal mike, he also gets a stereo mix in his floor monitor systems. The two JBL eight inch speakers and horns are on top and the low end is recessed into the floor of the stage, under the grates.*



maha CS-80 synth, Danny Federici on a heavily modified Hammond B-3 with two Leslies, glockenspiel and DX-7, Nils Lofgrin handling wireless lead guitar, Gary Tallent on wireless bass, Max Weinberg on drums and Patty Scialfa singing backgrounds.

The band is a powerhouse, nonetheless, that can rock any venue into submission. And Springsteen gives them the respect they deserve, featuring and recognizing them generously throughout the performance. And they do deserve respect, if for no other reason than their learning a good eight or so hours of material that is drawn upon for the dates.

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Monitor sound mixer Jim Devenney at one of the two stage monitor boards. The 32x32 Harrison handles mixes for Springsteen, Nils, Roy and Patty. Clarence and Max are mixed from the other side of the stage by Dave Skaff on a Soundcraft board. Denny does his own monitor mix on a small Soundcraft board next to his B-3.



Beyond that, Springsteen frequently will launch into a song the band has never played before, because it fits the mood. This element of the unknown has its up as well as down sides for the crew. According to Jackson, "He has a basic core of songs, but he shuffles things all over the place. I think it's great because it keeps everyone on their toes. Plus, he'll throw in songs left, right and center; I mean, we'll have a set list and you might as well throw it away. We'll have a glance and get a jist of what he wants to do, and then come the show he does what he feels. And the band has to run around and change all their presets with no advance

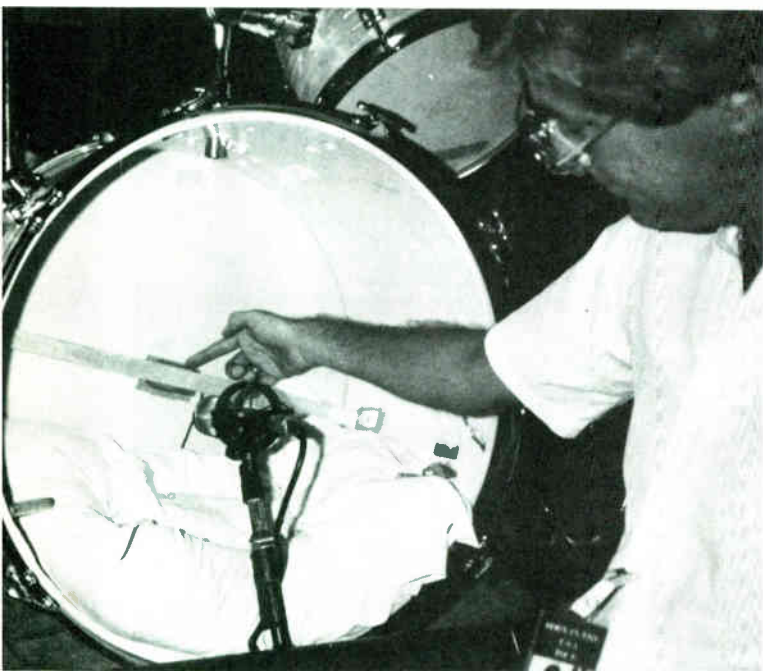
warning. I think he likes to test the band as they get better and better, he makes it harder and harder."

The Springsteen show represents all-American rock and roll at its

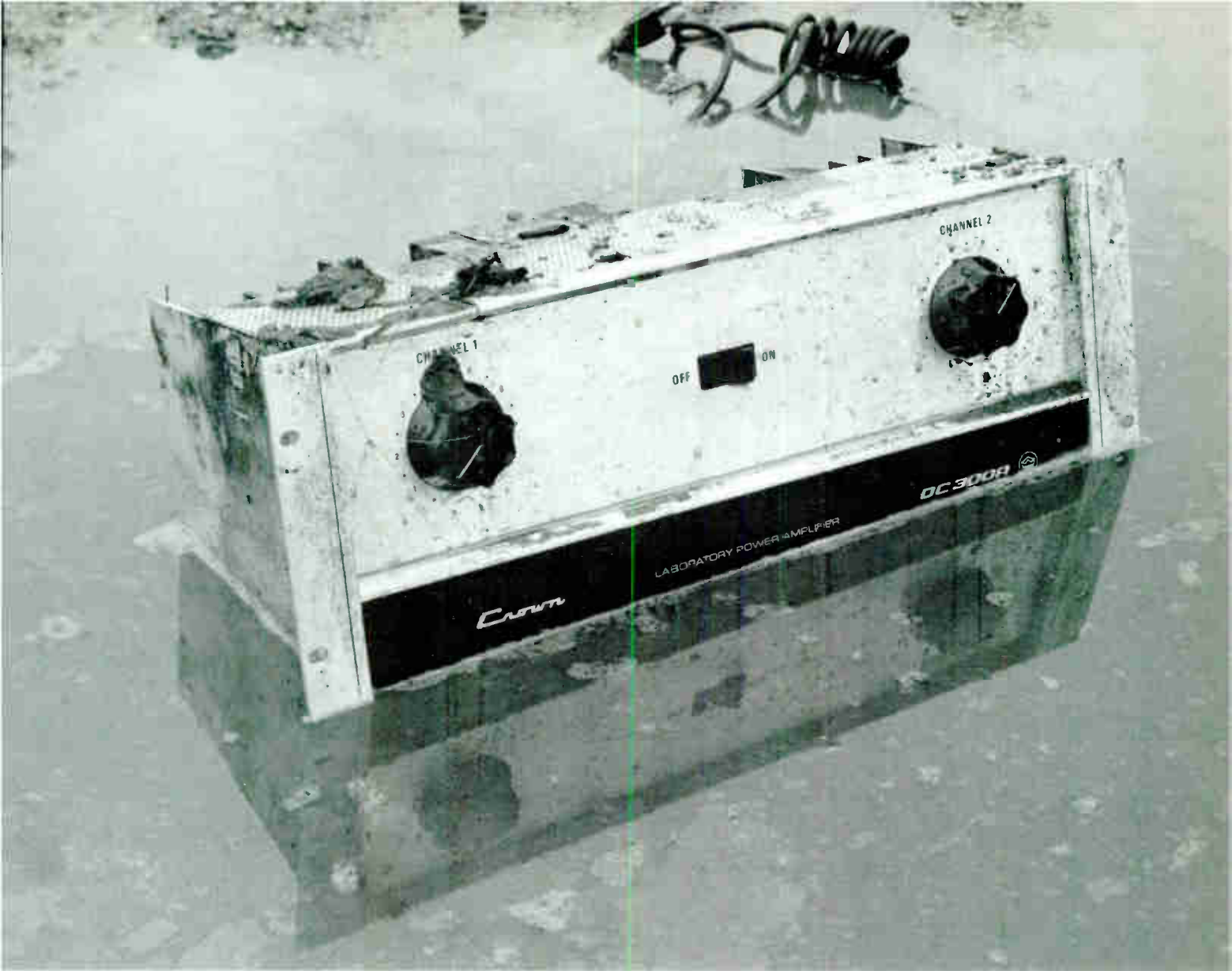
peak. The intense demands of the situation are well handled by a capable and well prepared crew, and the audience comes out the winner every time. It is a show worth the wait in line. ■

*For all the explosiveness of Max Weinberg's drums, the physical kit is surprisingly stripped down. Says Jackson, "Mainly what you hear are synthesized drums. The problem with using synthesized drums is reliably triggering them. I found that unfortunately what happens in the really loud monitor situations which we have up on stage is that the snare drum is so loud in the monitors that it vibrates all the other heads and triggers them off, too. So I tried something different, which as far as I know has never been done before. We glued and taped a thin metal washer to the underside of the drum heads in the center, with a guitar pickup underneath. A six-way buffer runs those signals low impedance out to the house mixer. Then it goes into a Marc Electronics MX-1 triggering device that trig-*

*gers some custom chips we had made for our Oberheim CMX, and also it triggers one of the new Simmons SDS-7 Digital/Analog programmable drum machines. And then for the dynamics there is a (Valley People) Dyna-Mite, which is also triggered by the (control) signal coming from the stage that modulates the signal coming out of the drum machines to pick up the accents and subtleties that Max is playing. He's also miked ( Sennheiser 421 on toms, modified Shure 81 on snare with AKG 451 underneath, Beyer 88 in kick, AKG 451 on hi-hat, Sennheiser 416 overheads) and we mix the acoustic sounds in to vary the consistency. Plus, there's a Lexicon 200, purely for snare reverb on songs like "Born in the USA."*







In the early evening of Sept. 17, 1973, Jay Barth was at the wheel of a 22 ft. utility truck that was loaded with sound equipment. Just south of Benton Harbor, MI an oncoming car crossed the center-line; fortunately Jay steered clear of the impending head-on collision. Unfortunately, a soft shoulder caused the truck to roll two and one half times. Exit several Crown DC-300A's through the metal roof of the truck's cargo area.

The airborne 300A's finally came to rest — scattered about in a muddy field, where they remained partially submerged for four and a half hours.

Jay miraculously escaped injury; the amplifiers apparently had not.

Unbelievably, after a short time under a blow-dryer all the amps worked perfectly and are still going strong.

The rest — and the truck, is history.



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# ROGER LAGADEC

## TECHNOLOGY WITH A HUMAN FACE

**W**ho is Roger Lagadec, this suave and gregarious Continental gentleman? He is Swiss-born with Celtic origins in Brittany and his name means "keen-sighted." He is also the digital product manager for Willi Studer AG, and is active in development and design of new technology, marketing, education and public relations. Could this spry leprechaun in impeccably tailored quasi-gangster duds be one of the top dudes in digital audio?

Let's join Mr. Lagadec for a late lunching at the Hilton in New York City just as the annual Audio Engineering Society convention has closed. As the Beaujolais breathes, he catches his breath and begins to unwind like a fine Swiss watch.

**Bonzai:** I've heard that the Swiss government is very humanistic, tolerant and understanding — for example, people who would be institutionalized in most countries are employed by the Swiss, as say, streetcleaners...

**Lagadec:** Yes, it's true. As far as sanity goes, or mental diseases, it is a very well integrated country. There is a tradition, you see — we have had such influential guests as Freud, Jung, and Einstein. There is a very open attitude and it is a very well integrated place, perhaps too well integrated. Switzerland is tolerant as a matter of policy. It's deadly — well organized and flawless. They say that in Switzerland, everything that is not forbidden is compulsory.

**Bonzai:** Speaking of Einstein, would you consider yourself a genius?

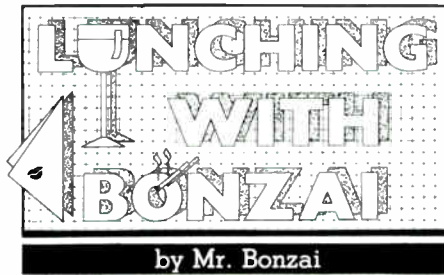
**Lagadec:** No. I am committed, enthusiastic — but that is very different.

**Bonzai:** Why are you so committed to your work?

**Lagadec:** For the sheer fun of it. It's pleasure; it's playing. If it all comes together and gives you the feeling that you are playing the right way, that's great. When there is an intuitive feeling and things come right, it's a joy.

**Bonzai:** Is that what you're doing now?

**Lagadec:** Oh, sure.



"We must have people with impeccable knowledge of technology, but [also] there will be no progress unless there are people with strange ideas. Digital audio started that way . . ."

That's one extraordinary thing about digital audio at this stage. You can go off and have a shower and something happens in your mind and you say, "Why don't I combine this stupid idea and that stupid idea?" Nobody seems to have done it before and you combine them and it has a clarity to it, a rightness to it. Then you go and try it on a big main-

frame computer and it comes out right and the analysis is right and the mathematics are right. The clarity remains and you can begin to play with it. And it sounds right. Then you can even go and make a product out of it. That's tremendous.

After all the work it seems so simple, and at the same time that you've got the great feeling that it's so simple, nice and clear—you feel let down, because you can explain it in two sentences. The first stage where it all comes together is pure exultation, an uplifting feeling. You work it all out and you come to that clear sentence, and then there is a letdown. You begin to feel a bit addicted. If it doesn't happen again you're going to be sorry—and you never know if it will.

**Bonzai:** The painting is finished and you have to do something else.

**Lagadec:** That must be a terrible feeling for an artist—the feeling that no brushstroke is ever going to improve it. You have a blank canvas again, and you don't know if you will have the inspiration. I feel that if you knew that the inspiration would come again, you would be like a robot, a scientific clerk.

**Bonzai:** Do you believe in a higher mind beyond everyday consciousness?

**Lagadec:** That is the humility of the engineer. He must have that. If you don't have that, forget it. You'll just be a robot. You have to disconnect, and some subliminal part of you works. You can get the answer, but don't look for it.

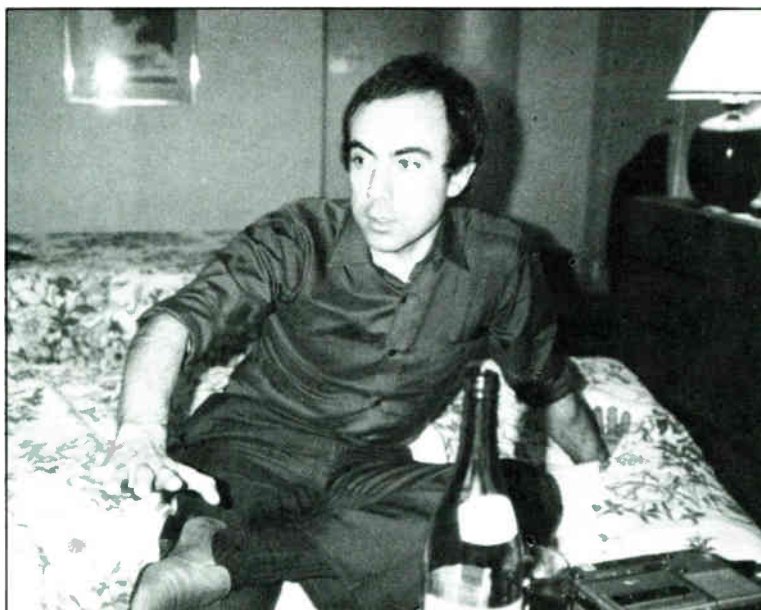


PHOTO MR BONZAI

**Bonzai:** Can you describe these moments of clarity?

**Lagadec:** There are a few classical problems in digital audio—things that are intuitively simple, and yet we didn't have the solutions. One of them is sampling frequency conversion. You want to translate between different digital systems, but the sound itself must remain the same. It is not easy, because digital is synchronized and what we want to do is something that is not synchronized, and is loose, and elastic—and analog. We made a machine that was supposed to take digital

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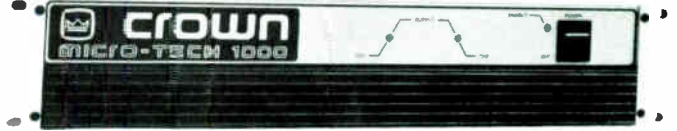


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audio with one sampling frequency and translate it to another. There had been a private report that it was just impossible. It was one of the roadblocks to standardization. I took a favorite record of mine, a Vivaldi cantata, "Nisi Dominus," and made it digital with one sampling frequency. We put it through the machine, changed the sampling frequency, and then had a listen. It was tremendous, because all of a sudden I heard the music and there was no difference—I recognized everything coming out of the record, a record that I knew so well and meant so much to me.

**Bonzai:** How will the new technology improve human experience?

**Lagadec:** The way I see it there will be a weird mixture of things. We must have people that have an impeccable knowledge of technology, absolutely flawless—but there must also be people who do strange things. There will be no progress unless there are people with strange ideas. Digital audio started that way, when the very idea of transmitting sounds with pulses was thought to be ludicrous. But films had been expressed with a series of still pictures. The digital sample and the still picture are the same thing. A sampling frequency converter means I give you a movie that has been filmed with a weird camera—23.739 pictures per second and you have a projector with 24 frames per second and you don't want to see the film speeded up. So we have to make something that generates pictures between pictures—samples between samples, manipulating things until they look real again.

Cezanne manipulated things. He is a terrible engineer and he takes some-

---

**T**he man in the studio is confronted with such a creative and complex tool. Sooner or later the engineers must take away the complexity and present the user with the essence of what the machine really does.

---

thing very technical—a brush, and he takes a piece of canvas, and paints, which have lots of technical parameters, and then he does things wrong. He does not show you every detail, but the painting is in front of you. If you analyze it in a very robotlike way, it is not a painting of a real mountain—but the essence of the mountain is there speaking to you. It's purely technical. There is a controversy about how much artificial means we can use for generating music, but painters

have been doing it all along. There is nothing more technical than a paintbrush and there is nothing more artificial than not presenting pictures as they are, in the Impressionist way. And we accept it.

In digital audio, in audio generally, and in pictures there will be the same approach. You take technical means which are slightly different and you try to go with your sense of things, what they really mean, what they represent.

**Bonzai:** How did you meet Dr. Studer?

**Lagadec:** I had been employed by Swiss industry on a number of projects—I once worked for a company that made machines for manufacturing noodles. I had access to big computers, I had the free time of academia for research, but also the pressure of delivering reports on time and making things that worked—building prototypes. I worked for the telephone company on a project that required the recording of speech in a tremendously accurate way, and then while working on a digital audio project I met Dr. Studer for the first time. When the professor I had been working with retired, I decided to move on to another job. I had good offers but the only one that came to me directly from the man who owned or ran a company was from Dr. Studer. He did not bother about details. He said, "I want you and I want you personally. There is no alternative; please come, or I will be unhappy." I first turned the offer down because his company had a formidable reputation for being very tough to work for. He asked me to come around and explain, and to reconsider. He got me hooked and that's how I started working for him five years ago. He is such a driving person, with such an extraordinary commitment to quality—but I haven't regretted it.

**Bonzai:** He is getting on in years, isn't he?

**Lagadec:** Yes, he is almost 72, but he is very much alive. He runs the company with loose reins—you have a lot of freedom. I think the driving force is that there is something that he leaves in you that tells you whatever you do, it's got to be right. You must have the feeling that you can't do it better.

**Bonzai:** It must be inspiring . . .

**Lagadec:** It is. You cannot say that he is an extraordinary manager or technician, but he's got a great business mind and he has a remarkable technician's mind. We had discussions on digital audio and I was amazed at how he cut through the bullshit. He sees the substance of things and applies it in very real terms. Even without his business mind and his engineering mind he would be a very strong person, because of that feeling of commitment that he passes on to you. He can walk into a room and domi-



PHOTO: GEORGE PETERSEN

*Design engineer Roger Lagadec gave a preview of the Studer A820 analog recorder (at left) and compared it to the D820 digital machine, which also made its North American debut at the AES Convention last fall.*

# Take a Winter Vacation with Mr. Bonzai

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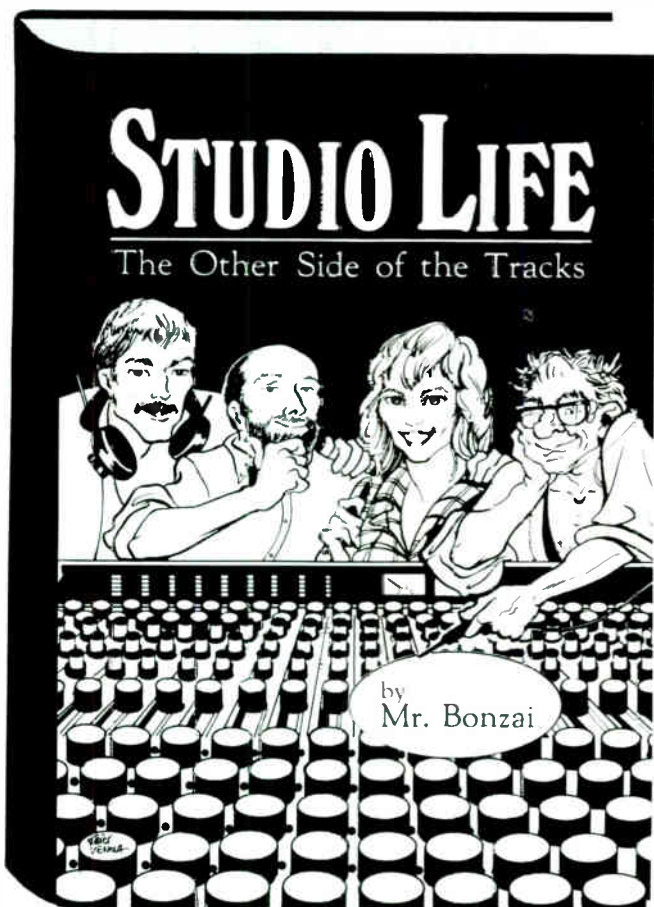
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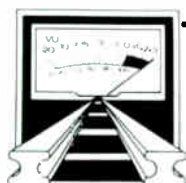
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nate it. He can be very quiet, but nobody talks bullshit—nobody dares.

**Bonzai:** I bet the Japanese respect that.  
**Lagadec:** I think to some lengths he is quite a Japanese person. Very quiet, very powerful, and very self-contained, with a remarkable sense of quality. I have seen photographs he has made, and within the company, in all the factories we have, every single picture on the wall belongs to his private collection. He has selected every picture, so we're surrounded by signs of him—and the signs are good.

**Bonzai:** If you are with Studer ten years from now, what kinds of projects do you imagine yourself involved in?

**Lagadec:** I would guess that in ten years there will be optical recording, but there will also be magnetic recording. My guess is that in the coming years we will get closer and closer to the user. In my view, one of the things about digital audio that has not been solved is the man/machine interface. Analog is fairly simple, because the systems are simple. Now we have microprocessors, time code, digital audio, and we try to marry them all together, and we will then have optical recording—just another way of recording stuff. The man in the studio is confronted with such a creative tool, and such a complex one at the same time. Sooner or later, the engineers must take away the complexity and present the user with the essence of what the machine *really* does. We must spend a lot of time understanding what is in the mind of the people who use the machine—otherwise you have an extraordinarily complex machine with five thousand knobs, or a glorified computer console. That type of thing is meaningless—it will stop us from being creative.

Everybody perceives digital audio today as being a further step towards the complexity of audio. I accept this because digital audio came together with the first wave of microprocessor control, so you have knobs everywhere and every option on Earth. But in the future I see it as just having to become simple. Simple in the sense of being a true creative tool. Think of a video system for painting. You can imagine the keyboard where you can type "Yellow 12.3" and you will get a specific color, but that's ridiculous. A painter doesn't think that way—he mixes two colors. The future of such a system must have something which is as intuitive and as appealing as a paintbrush. Give us ten years and give us the humility the engineer must have of accepting that the user's hands and eyes and ears are more important than his engineering approach, then we'll get somewhere. What we need is technology with a human face—the human interface—so that the technology makes itself disappear. ■

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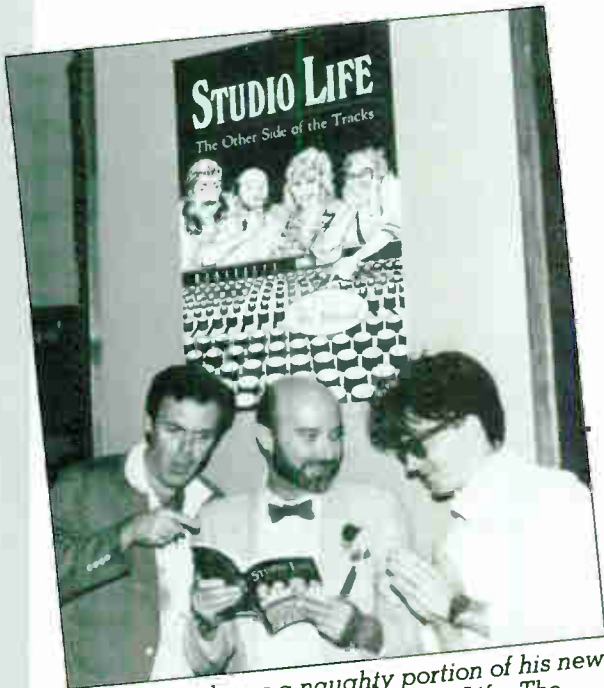
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A Hollywood Premiere for  
**STUDIO LIFE:**  
 THE OTHER SIDE OF THE TRACKS

PHOTOS KATHY COTTER



Mr. Bonzai shares a naughty portion of his new recording industry satire, "Studio Life: The Other Side of the Tracks," with Devo's Mark Mothersbaugh as Phil Proctor, of The Firesign Theatre, begs to differ. The book was launched at a gala reception attended by 500 at the Los Angeles Record Plant's scoring stage, Studio M, on Hollywood's Paramount movie lot.



Illustrator Trici Venola (left) and the author autograph books for patient fans Pascal and boa friend, Constance, and actor Bob Weir.

(Below) Mix editor/publisher David Schwartz and the author greet legendary session drummer Jim Keltner. (Below right) Record producer Bones Howe and wife, Melody, drop by the book signing party to compare notes on recording studio life.



Recording artist Mark Turnbull questions Mr. Bonzai on one of the touching illustrations in his new book.



# PRODUCERS - DESK



PHOTO: PHIL HRAY

dependent jazz label of his career after spending the last two years trying two very unfamiliar ways of living: relaxing and being an independent producer.

"The term 'independent producer' is a terrible misnomer. Independent of what? I've been spoiled most of my career. If I wanted to produce an artist I could go and do it. If I was wrong I might blow some of my company's money, or I might get someone I was working for mad at me, but nonetheless even when I was working for someone else I could pretty much call my creative shots. When you're an independent, I've got someone I want to record, and suddenly I've got to try to persuade somebody else to accept my judgement and to spend their company's money on my judgement. So by being an independent, I introduced a whole new set of dependencies," he explains.

Another perfectly good reason for starting a new label is, of course, that you think you can do it better than anyone else. Keepnews is no businessman, no salesman. He'll let his former employers of 12 years, Fantasy Records, take over the manufacturing and distribution chores while, as he says, "I like to think I'll be doing things that are sufficiently unusual that if I didn't do them, they wouldn't get done."

Something no one else would do, for example, might be to release in the United States Yusef Lateef's newest album. According to Keepnews, it's a wonderful amalgam of saxophone and flute parts over Nigerian percussion and vocals. It will bear the Landmark label if it ever makes it to American record stores. Keepnews has always been most interested in selecting the talent as it exists naturally and presenting it — endorsing it with his company.

To understand his unique attributes as a producer, one should know how he evolved. In the early 1950s, a particular set of circumstances presented themselves, and young Orrin Keepnews caught his foothold in jazz history. As a jazz buff in the late 1940s, this native New Yorker naturally made the club scene, but he also wrote for a jazz magazine called *The Record Changer* run by his friend Bill Grauer. In 1948 he wrote the first article ever published on the obstreperous genius Thelonious Monk. In 1955, by the time executives at the very well established Prestige label began to think of Monk as a troublesome, unwelcome personality on their roster, Keepnews was educated, enthusiastic, and vice president of River-

## ORRIN KEEPNEWS

### IMPROVISING IN THE '80s

by Elizabeth Rollins

Jazz producer Orrin Keepnews is pacing, massaging his Solzhenitsyn beard behind the console in Fantasy's Studio C—it seems not because he is nervous but because he simply doesn't want to sit down.

Indeed he has nothing to worry about during this session. Jazz bass virtuoso Ron Carter is directing the classical Kronos Quartet with instinctive charm and purpose. Keepnews bobs his head like a beatnik every now and then as the 19 orange LCD readouts bounce to a jaunty interpretation of Thelonious Monk's "Rhythm: Inning." They get it in two takes.

After playback in the control room, one member of the Kronos Quartet winces over a nagging doubt about how he'd played one part. Legen-

dary bassist Ron Carter then suddenly appears from off scene and explains that it was the spirit of Monk's work that is most important here — that take two *does* indeed capture the big idea, and that an artificial standard of perfection is not the issue. All agreed. Take two it is. Keepnews says he can live with that, and flashes a sticker that says "Close Enough For Jazz." The round of laughter means consensus, and with that executive decision, the artists are off to the fourth of a total of five complete songs they cut in one day.

"This album is among the most carefully prepared albums I've ever done," says the 30-year veteran producer Keepnews of this second release on his brand new label, Landmark Records. (Bobby Hutcherson's album will be the first to be released this spring.) He's decided to launch the third in-

(Above) Sonny Rollins with Lyricon and (right) Orrin Keepnews.



# ECHO TIMES

## TIMEFLEX SURFACES AT A E S NEW YORK



Timeflex is a modified and specialised version of the DMX 15-80S dedicated to time compression or expansion. Whenever audio, film or video is speeded up or slowed down the dual de-glitched intelligent pitch changers within Timeflex can restore the correct audio pitch. The system is housed in a 2 Unit high rack mount case and is capable of either stereo or dual channel operation. Timeflex also incorporates the possibility of programmable delay offsets should sound/vision

## THE HOLLIES DROP IN AT A.M.S.



synchronisation be required.

Following the preview at AES New York and subsequent demonstration of the system at certain facilities immediately after the exhibition, A.M.S. received orders for the first 11 units for delivery in December '84. ■

### REVERB PROGRAMME BAR CODE UPDATE

The first issue of barcodes on laminated card for updating existing RMX 16 digital reverberators via their remote terminals were made available in mid October. This software update includes both new programmes and issues of programmes previously released, but not currently available on REV 3.0 version software. The initial list of programmes available includes: DELAY 8, DELAY 16, ROOM B1, FREEZE, ROOM A0 IMAGE P1, REVERSE 2, NONLIN 1, PLATE B1, HALL A1. Any three of these programmes may be stored at the same time in the soft programme locations, programmes 10, 11 and 12 in the RMX 16 mainframe. This first issue will be supplied free of charge to all RMX 16 owners when updating their remote terminals to accept bar code readers. ■

Tony Hicks and Bobby Elliot of the Hollies called in at A.M.S. to collect an RMX 16 and a DMX 15-80S which had been purchased by the band for both studio and live work. The Hollies had become familiar with A.M.S. equipment whilst working in studios both in England and America. ■

## KEYBOARD INTERFACES NOW BEING SHIPPED

The first batch of 50 keyboard interfaces were shipped during October following the demonstration of the first prototype unit at the APRS exhibition in London during mid June.

The keyboard interface is a 1 Unit high addition for any DMX 15-80S DDL Pitch Changer allowing control of various functions by means of any keyboard capable of providing a 1 Volt per octave control voltage and Gate. The unit has currently four major functions:

1. Control of either the A or B channel pitch changers over their 2 octave range by means of any compatible keyboard.
2. Control of Loop Edited Samples over the same range.
3. Rotating pot control of both A and B channel pitch changers.
4. A new programme called Chorus which when selected automatically randomly varies both pitch changers about the unity setting, the user having control of both speed and depth variation.

The general feeling amongst the first owners of this low priced add-on is that it provides a wealth of additional facilities, particularly in the realms of manipulation of stored sampled sound, for the already versatile DMX 15-80S. ■



## PEOPLE IN THE KNOW

"On Leave It I used a Linn and played that through an A.M.S. and delayed it for a full bar".

*Alan White, drummer with Yes talking about tracks on the Yes 90125 album with Andy Hughes of International Musician.*

☆☆☆

"Being a re-mix room and not a control room, the outboard selection is very special indeed. Offerings include the A.M.S. RMX 16 and 80S units which are almost becoming as essential as the new Dragonslayer Video-disc games!"

*Chris Everard, Editor of sound Engineer magazine.*

☆☆☆

"The thing that has been most exciting to me over the last few years has been the effect of a good reverberation units. I like the sound of the A.M.S. better than anything else. I got terrifically excited when I first tried that out because it's beautiful – one of the deepest and best reverbs I've ever heard. I always look for a unit that gives me that perspective back behind the speakers - the Lexicon does a bit, but the A.M.S. has got real depth to it."

*John Foxx in an interview to HSR magazine.*

☆☆☆

"The A.M.S. is God. That's all you need to know. Totally the single most

revolutionary thing I ever acquired was the A.M.S. digital delay. I've never had a session on my own stuff or anyone else's where my finger's off that button for more than half an hour."

*William Orbit of Torch Song in an interview with Sean Rothman.*

☆☆☆

"One of the things we need most where digital technology has really helped us, is to be able to put a voice in a room; considerable numbers of clients ask for the sound effect of an empty room. You tweak the old A.M.S., define a room of a certain size and suddenly - yes! - you've got a room. At first we were seriously concerned whether the cost of the unit would be recouped. Well now we've got four A.M.S. systems.

From the manager's point of view, the way to get the best employees is not only to pay good salaries; it's got a lot to do with the equipment the engineers are going to work with. I think it's absolutely certain that if an engineer was offered another job with a higher wage which meant switching from the latest good equipment to old rubbish, he wouldn't move. If they are working eight or nine hours a day in a studio the equipment is very important to keep the motivation high and maintain excitement and interest. If we had a staff meeting and said do we want five pounds a week more each or shall we buy a couple of A.M.S. harmonizers, another reverb unit or whatever

I honestly think there would be no contest. Staff prefer new equipment and are willing to make five pounds extra a week on overtime when we get more bookings. Modern, high technology equipment enables you to attract and keep the best engineers.

*Robbie Weston, M.D., Silk Sound – one of the UK's four major companies in the field of audio for T.V. or Radio talking to Alvin Gold, International Broadcasting.*

## USA DEALERS IN THE KNOW

"A.M.S. is Hot: I've got a studio with three rooms who bought an RMX 16, they then bought another and they are used all the time. I even have a studio who've got all their existing outboard gear up for sale to finance the purchase of A.M.S. systems."

*Nigel Bramwell. Audio and Design/Calrec... A.M.S. dealer Washington State.*

☆☆☆

"A.M.S. products are proven products universally well received in the marketplace. Each customer's evaluation has turned into a purchase."

*Courtney Spencer. Martin Audio Video Corporation... A.M.S. dealer in New York City.*

☆☆☆

"We feel the A.M.S. product range offers our clients the sound quality and ▶



## THE FLXX

*Pictured above are the Flxx whilst spending some time on the A.M.S. stand at the APRS exhibition in London. Being produced by Rupert Hine means they are no strangers to A.M.S. equipment and their time was valuably spent examining the keyboard interface for the DMX 15-80S. ■*



## KEN TOWNSEND TESTS THE DRIVING SEAT.

*Pictured above is Mr. Ken Townsend, studio manager of EMI Abbey Road studios in London during a recent visit to the A.M.S. factories. Not unused to the pressures of management Mr. Townsend is pictured here behind the desk of sales and marketing director of A.M.S. Mr. Stuart Nevison. It should be pointed out that Groucho Marx look-alike Mr. Nevison had opted to remain incognito during Ken Townsend's brief spell of duty at the helm! ■*

performance they are looking for in digital audio processing. What more can we say? – They must be great as they are selling like hot cakes on a cold winter morning!"

*John Alderson. Studio Supply Company...  
A.M.S. dealers in Nashville.*

☆☆☆

"Everywhere I take A.M.S. equipment producers and engineers get

real excited when they get a chance to play with it... it really is fun to show!"

*Ron Timmons. A.I.C. Company...  
A.M.S. dealer in Northern California.*

☆☆☆

"A.M.S units are the hottest thing in town! The reasons people are buying them is the quality of sound, their versatility - there is a lot more

to them than delay, pitch change and reverb - and of course their reliability factor. What's most exciting is we are really beginning to hear their effect on American productions as well as the European ones that they have dominated for so long."

*Harry Harris. Harris Sound. ... A.M.S.  
distributor and dealer for the  
Los Angeles area. ■*

*Humberto Gatica arrived in the U.S.A from Chile in 1968. Thirteen years ago he accidentally walked into a recording studio and knew that he wanted to be involved and by his own admission he has been very lucky and very successful. He has been involved in many projects including part of Michael Jackson's 'Thriller', and albums by Kenny Loggins, Fee Waybill, Dan Hardman, Kenny Rogers and many more. Humberto enjoys his work and was able to confirm the rumour that he was recently spotted running three control rooms at Sunset Sound studios in Hollywood - the simultaneous projects he was involved in at that time were Kenny Rogers, Kenny Loggins and Chicago!!*

**A.M.S.:** What was it that alerted you to A.M.S.?

**H.G.:** I listen to a lot of other people's records and I really am a big fan of 'The English Sound'. I've listened to a lot of English records and there was definitely a sound that I considered unique. For instance, there is an English band called The Fixx and they have a source of delay they use that I really love - and I know you'll tell me it's A.M.S.

**A.M.S.:** The Fixx are produced by one of England's most fanatical A.M.S. users - Rupert Hine.

**H.G.:** Exactly! The same sort of sound that he used on the recent Tina Turner album - and the best way I can describe it is 'unique'. So for three years I've been using A.M.S. units and there isn't a session when I don't use them in one way or another.

The most important thing I can say about A.M.S. is that the products are very musical. I can be recording a synthesizer and the musician will say - "Hey, what are you doing to the sound? It's fantastic! - I can't believe it!" - and my easiest explanation is - "Oh... just using a little A.M.S." There is always something in the recording process that if put through A.M.S. units makes it sound better. I recorded a Christmas album for Kenny Rogers and Dolly Parton where many of the A.M.S effects used were very subtle - but, if you took the A.M.S. effects out even when used subtly you really

## HUMBERTO GATICA



could tell the difference.

**A.M.S.:** How do you like to use the RMX 16?

**H.G.:** I am fanatical over a drum sound. I will use 'Necam' to remove every drum back beat from a snare so all I am left with is the impact of that snare - now feed that to the RMX 16 reverb and the effect is awesome and well worth the time spent. I really like the brightness of the RMX 16 - take the Ambience programme, it's clean with lots of top end which means when you bring the music up in a mix it's still there - that's just not the case with all digital reverbs. I also like very much the Nonlin and Reverse programmes. I recently completed a new Chicago album and there were several cuts where I used the Reverse programme on the brass sound - and they loved it. It really added a new dimension to the sound. For the past 17 years their horn section has been a major part of the record and what do you do if somebody asks you to give a new sound? Somehow a short decay setting on the Reverse programme does!

**A.M.S.:** What about strings?

**H.G.:** I find it impossible to explain what I want from strings, but by

using the RMX 16 I can place the strings exactly where I feel they sound best. Taking an RMX 16 everywhere with me I can go into any studio and hardly worry about the room. I can make a big room sound small and a small room sound big! A.M.S. units are everything I need in a mix because they make it so easy to create depth and place for not only strings but everything. I believe it is important to make a record feel like everyone is there and playing at the same time and A.M.S. units are my biggest help in creating this feel whether it be delay, echo, pitch change or reverberation.

**A.M.S.:** And how about the DMX 15-80S pitch changers?

**H.G.:** A.M.S. have literally changed the whole business with their units. Everywhere I go I make fans for A.M.S. - Julio Inglesias is a very sensitive man and to him the vocals are the most important part of his recording. The last time we worked together it was in America and he just wasn't happy with the result because with American musicians he had been forced to sing right on top of the beat. He was very precise when recording but afterwards we could play around with the DMX 15-80S and program it so that each phrase he sang could be 'laid back' just sufficient for him to feel comfortable again with the end result. And he was right, it made a lot of difference. Julio fell in love with the A.M.S. and was looking for a unit to take everywhere with him!

**A.M.S.:** Do you use the Loop Editing System?

**H.G.:** There is so much you can do with A.M.S. units but there again there are many things I feel I haven't fully taken advantage of yet. I started work on Quincy Jones's new album and when we sat down to talk about it Quincy was very excited about getting very heavily involved with this new sound - and of course he's talking about A.M.S. sampling! I am a really big fan of A.M.S. and the best way I can put it is - A.M.S. makes recording fun. ■

# ELECTRIC LIGHT ORCHESTRA

*In the very early days of A.M.S. it was thought that the DM 2-20 Flanger, because of its stereo outputs and dual channel analog delay function, could successfully replace rotating speaker cabinets for use with electronic keyboards. E.L.O. were the first band approached and asked to consider the DM 2-20 as a valuable piece of equipment for their use. Both Jeff Lynne and Richard Tandy of E.L.O. are now both A.M.S. converts and carry their own units wherever they go.*

**A.M.S.:** After your introduction to A.M.S. when did you next come across any of our units?

**Richard Tandy:** Following our first meeting, which I do remember, I next encountered A.M.S. systems at Ridge Farm. What immediately excited me was the quality of the DMX 15-80S - particularly the bandwidth of the system.

**Jeff Lynne:** The quality just made it so difficult to use anything else. They are all fabulous, we really do just get so blasé and it's not unusual to hear a shout of "just put another 2 hours of delay on this for us!" - confident that that will not cause any problems.

**A.M.S.:** Between you what do you really make best use of when you are working with A.M.S. units?

**R.T.:** For me, I do work a lot with drum machines and when writing, the accuracy of the programmability of the DMX 15-80S has made it so easy for me to get the sound I want.

**J.L.:** I am a big fan of the RMX 16 reverb. I really do like the Ambience



programme if only because it is so obviously designed to have very little colour. I love either very short decay settings or very long ones.

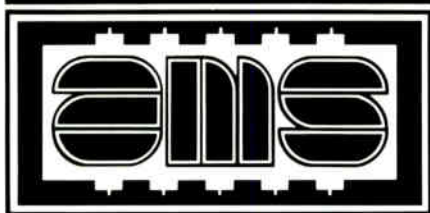
**A.M.S.:** We have talked to people who write tunes around pieces of equipment. Do you work like this or not?

**J.L.:** No, not really. I do write a song by trying to get a good tune first - that's the most important bit. What's really nice then is that I always find that A.M.S. comes into how the arrangement works and they really

are such a pleasure to work with at that very important level.

**A.M.S.:** So do you feel A.M.S. plays an important role for you?

**J.L.:** There is no question that A.M.S. really did change our lives! Sampling using the Loop Edit System is amazing. I've actually done a Christmas Record for my friends - it features my father and we really should send you a copy - it's brilliant. There really is no point explaining it to you now because you would never get away with publishing it in any respectable magazine!! ■



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side Records, which he'd started with Bill Grauer two years earlier. The label advanced Monk the \$108.27 he needed to buy himself out of his Prestige contract, and acquired a heavy hitter. Now everyone knew Riverside meant business.

Wes Montgomery, Bill Evans, Cannonball Adderley and his brother Nat, Bobby Timmons and Coleman Hawkins were some of the notables who gravitated to this earnest label where Keepnews had become The Producer. By the time an 11 year run was up in 1964 and Riverside went bankrupt, Keepnews had all the basics. He was able to start another label in 1966: Milestone. Many of the Riverside people followed the current and other great artists such as Sonny Rollins, McCoy Tyner, and Flora Purim added magic and distinction. Perhaps this explains how Keepnews became spoiled. But it gets worse.

In 1972 Fantasy Records had already acquired the mighty Prestige label, and in one fell swoop, bought out both the Milestone and Riverside catalogs, and instated Keepnews as A&R Director of the most active jazz label at the time. It was a good situation. He had the muscle of a fairly large company but retained the privilege of ruling his own domain.

In his first year he gushed to



McCoy Tyner (left) and Orrin Keepnews.

*Melody Maker* magazine: "A thing that's fascinating about Fantasy is that it's our intention to be the best as well as the biggest jazz operation in the world." That association lasted for 12 years.

Fred Catero boasts as many or more years in the biz as Keepnews, except his primary experience has been as an engineer. It was by that route that he grew into producing and then, into his own jazz label, Catero Records. (See the Northwest Studios article for more details.) Keepnews credits him as one of the only engineers he knows who successfully made the transition from two track to multitrack recording. Catero assesses his crony in this way: "Orrin is an old-time producer—a person who knows what he's looking for. He doesn't ride the artist, he lets him do what he does best. He also trusts. It's a pleasure to work with someone who hires you because you are the

one he wanted to do the job. He treats people he works with like adults."

The Keepnews philosophy on producing can be condensed into his remark, "The hallmark of success is being unidentifiable." Perhaps this is a function of—or more aptly, a luxury of—working with the best musicians. The ones who *can* lay it down in a few takes flat out. After all, if the raw material is of fine quality, artifice might only come between the music and the listener. A little sanding and polishing may be all that's required.

But his approach may also reflect Keepnews's sheer love of the music and his respect for the qualities that often make a good jazz musician. In 1966 he wrote an article for *Downbeat* Magazine about Lenny Bruce. He said the late comedian, with whom he hung out with quite a bit, was the only non-jazz player he'd ever met who *talked* exactly like a jazz musician. Eighteen years later he couldn't explain how they talk, but he did venture what makes a good jazz musician: "A trusting of one's own instincts and an exploring and challenging attitude and a dissatisfaction with just accepting the boundaries. I guess it's improvising on a standard set of changes."

These same qualities have served him well as a producer, whether in successfully trying to coax Sonny Rollins back into the studio after a period of aversion to recording, or in combining an improvisational bass player such as Ron Carter with a classical quartet such as Kronos.

"Jazz recording is relating to personalities," he says. It's not just knowing your way around the studio, but knowing your way around people. The producer's relationship with the artist determines how you approach the thing you're working on...the difference between dealing with a supremely self-confident, arrogant artist, and maybe one who is used to a lot of opposition from producers they've been working with is one thing. Working with someone who is totally convinced that he's never done it right is another: people like Bill Evans and Wes Montgomery, both of whom were tremendously self-critical to an insane extreme. Or working with someone like Cannonball [Adderley] who was a wonderfully relaxed and in-command-of-the-situation kind of person."

Keepnews says the exception was when Cannonball used to work with his brother Nat, and after a few sessions it became apparent that one way the two brothers dealt with tension was to always have a fight, and then get down to work. Keepnews learned that the sooner he could get the two to duke it out, the faster he could proceed with the productive part of the session. "Certainly you'd never find that in a book of rules on how to produce!" says Keepnews. ■

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Circle #031 on Reader Service Card

by Robin Tolleson

"The studio's called Cavum Soni. That's Latin for 'Sound Hole,'" laughs Tubes drummer Prairie Prince. The San Francisco rock band has built a reputation of spending more money than they take in over the years due to extravagant tours and over-budget albums, and they've recently invested in a recording studio inside their Folsom Street warehouse. Actually they hope the move

that's not willing to work at our studio. So that's what took a long time—filtering through people."

After agreeing not to work with producer David Foster for a third album early in 1984, the band began its journey to find the right set of ears. They settled with a familiar name to Tubes fans, Todd Rundgren, who had produced the group's *Remote Control* LP in 1979. Rundgren decided to record basic tracks at Fantasy, then brought the tapes to Cavum



*Tubes guitarist Bill Spooner in the control room of Cavum Soni.*

**W**e finally decided to invest in some equipment and quit spending thousands and thousands of dollars making records and never having anything to show for all the money we spent.

## THE TUBES' CAVUM SONI

will save the band money over time.

"We've always had a little eight track or some kind of funky little studio that we've done our demos on," says Prince, "but we finally decided to invest in some equipment and quit spending thousands and thousands of dollars making records and never having anything to show for all the money we spent. We took some of our album budget and invested in a 24 track Otari [recorder] and a Sound Workshop board."

"We were negotiating for a long time with Capitol, because we wanted a studio out of the deal," explains guitarist Bill Spooner. "And they said, 'How do you know your producer is going to work at your studio?' Well, obviously we're not going to settle for anybody

Soni for all direct overdubbing and background vocals.

"If he was game to pay the higher buck and go into Fantasy that was OK with us," says keyboardist Vince Welnick. "He went with that for the insurance. He made the slaves there. We spent a lot of money there, but not that much time, and we did all the rest very inexpensively at our own studio. And it turned out to be as good a sounding room as anything. Especially using Todd's Fairlight, it sounds better than some of the stuff we did at Record One on the last album. It's just a cleaner sound."

While the band and Rundgren were working on basics at Fantasy, Tom Paddock was working with a computer designing the nine-sided, bilaterally symmetrical control room (Paddock has designed several Bay Area studios, and is systems engineer at Different Fur in San Francisco) at Cavum Soni. David Killingsworth, longtime associate of The Tubes ("Random Recurring Bass Player," Spooner calls him), was building it to Paddock's specs. "Everything was going on at the same time," Prince recalls. "We got done with basics in about three weeks, and our studio still wasn't done. Todd was still here, so we all just kind of stopped thinking about the record and everybody got in there, including Todd, pounding nails, soldering wires, nailing dry wall, putting sandbags in the floor." (According to Paddock, changing sand

levels in sections of the control room floor creates varying resonant spaces under the floor. This is useful in the final tuning of the room.)

"This floor has got two tons of sand under it," says Spooner. "We had no idea how much two tons of sand was. Hundreds of bags. We were carrying bags of sand all night long. And one night Todd and I sat up and wired hundreds of wires, and the next day determined they were all backwards. I mean hours and hours."

"We had a lot of help from Todd," agrees Welnick. "He brought in a lot of outboard gear, a bank of dbx's for noise reduction, we leased a real good microphone for background vocals for about \$500, and we were set. Todd worked a deal with us for taking a certain amount of money, but even after we were living on our album budget for awhile he left us enough money to buy the studio. And he had the confidence in us and himself—because he was engineer and producer . . . and carpenter—he was the only guy who had the confidence in the studio and everything. And there it is, the proof's in the pudding. We got the album and now we have a studio. Before, all we'd be getting is future bills for recording time that never got paid off. Now all we've got to pay for is tape.

**B**efore, all we'd be getting is future bills for recording time that never got paid off. Now, all we've got to pay for is tape.

"We spent about \$10,000 redoing the rooms, the architecture and everything. And [keyboardist Mike] Cotten and Prince designed the theme, the motif, and it's grand, it's picturesque."

"Once they got the basic room done and got the machinery in here, got the carpeting down, then Michael and I started decorating it with our little air-brushes and stuff," says Prairie, who is also a renowned artist. "It was funny. It was a real hot time of the summer so we

couldn't shut the door because there was no refrigeration in there yet. So we're in there spray painting and stuff, getting spray paint on the tape—a little art on the tracks, you know. But it turned out real funny looking. It's kind of a history of the world, although you don't know which period of history it's from. A lot of marble, fake boulders and columns."

The Cavum Soni control room is equipped with JBL 4311 monitors, powered by a Peavey CS800 amplifier. The mixing console is a Sound Workshop Series 30, the 24 track recorder is an Otari MTR 90, and the Auto Locator is an Otari CB115. The effects rack contains a Lexicon 224, Eventide Harmonizer, DeltaLab Effectron and a UREI Universal Audio Peak Limiter. A LinnDrum machine sits alongside a Sequential Circuits Drumtraks machine.

More wallboard will have to be hung and insulation put in before the studio is ready for a complete album project. (Due to lack of funding, not all of Paddock's design ideas have been implemented.) As of now, only the control room is completed. But The Tubes are looking forward to making full use of it very soon. "Now we don't have to save up \$180 to book an hour of time," says Welnick. "I think the shit's really going to start rolling along now." ■



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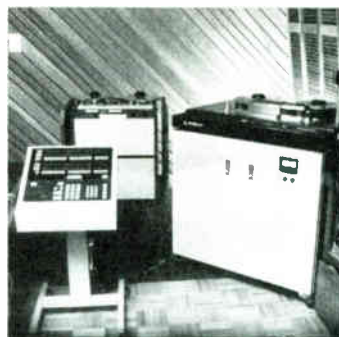


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# BAY AREA MUSIC

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## Five Views

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by Blair Jackson and  
George Petersen

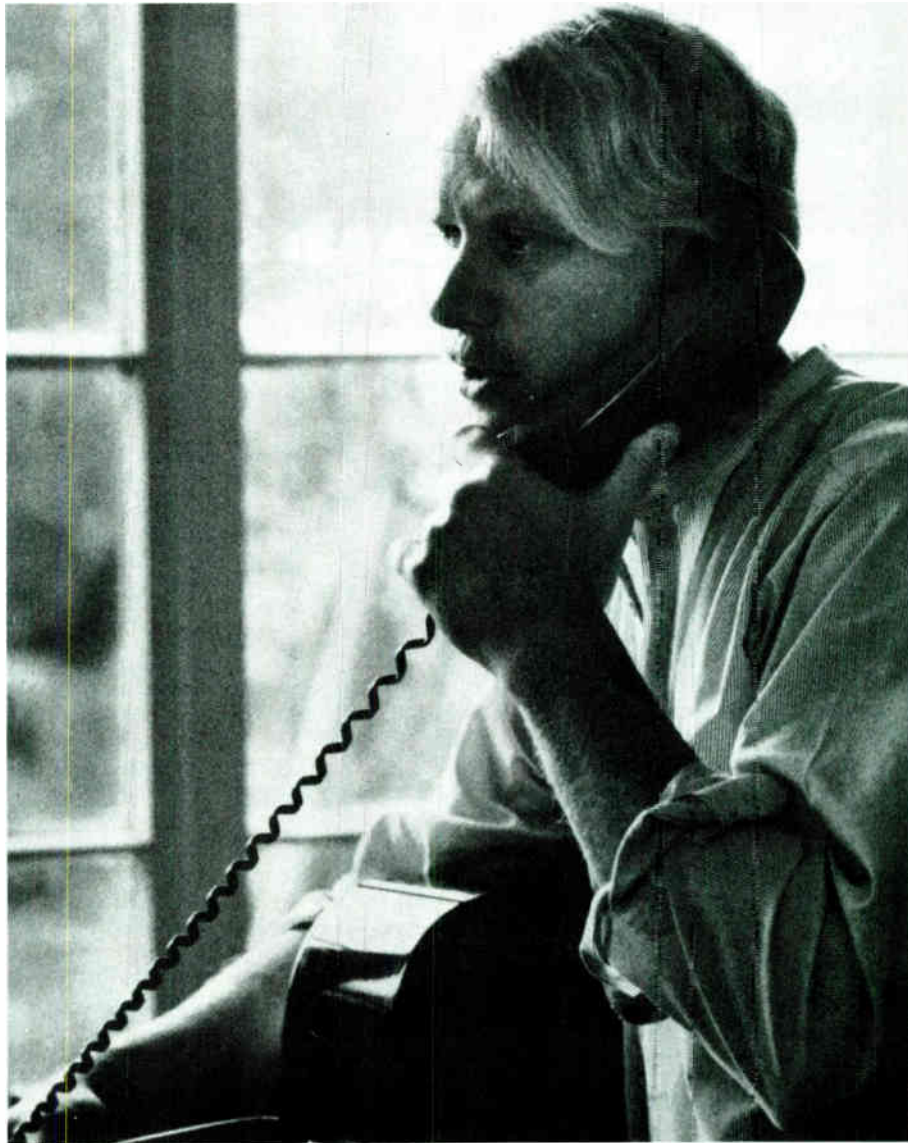
Twenty years after the Beau Brummels became the first San Francisco band to click nationwide, the Bay Area continues to produce one million-seller after another. If there is no longer the overwhelming sense of community there was in the late '60s, when most of the area's top bands could be found jamming in Golden Gate Park's panhandle for free and hanging out on Haight Street, there is a genuine boosterism; artists root for each other because they're in a relatively small market together. There is no San Francisco Sound anymore (some would argue there never was) but instead a marvelous eclecticism. The Bay Area boasts the top independent new wave label in the country (415 Records), the top acoustic label (Windham Hill) two of the top indie jazz labels (Concord and Palo Alto), and of course, the rock scene continues to be vibrant, turning out one superstar after another, from Boz Scaggs to Journey to Huey Lewis & the News.

Recently we talked with a few of the shakers and movers of the Bay Area's music scene to gain some insight into this stimulating and always slightly peculiar music market. Interviewed were Windham Hill founder Will Ackerman, Fantasy Studios' Roy Segal, 415 Records boss and new wave seer Howie Klein, long-time studio pro and artist manager David Rubinson, and independent promotion man Augie Blume.

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### WILL ACKERMAN

Will Ackerman is the founder and mastermind behind Windham Hill Records, a Bay Area based independent label specializing in acoustic and instrumental music that now boasts an avid and quite loyal following throughout the U.S. and abroad. With seven Windham Hill titles now approaching gold record status and one-month sales totals for September 1984 exceeding 300,000 units, this decade-old record company can best be described as a success on every level: aesthetic, technical and financial. A former building contractor turned artist/producer/record mogul, Ackerman is a humble man who is still somewhat surprised by the tremendous amount of acclaim and acceptance that Windham Hill has received.



*Windham Hill's Will Ackerman.*

"The label actually had very modest beginnings," Ackerman recalls, speaking of his first album, *Turtle's Nave!*, released in 1975. "It was never really intended to be anything more than a private release for a select group of friends and people who heard me play at things like theater productions around the Stanford area. I almost scrapped the whole thing when the record presser told me I'd have to order 300 copies, because my wildest ambition didn't include

selling that many—I only had advance orders for 60! I nearly bailed out at that point, but my friends encouraged me to go through with it. Later a neighbor of mine, Michael Kilmartin, who was doing promotion for Fantasy, took ten records (which I thought was an exorbitant amount) and took them to radio stations. This was another notion that never occurred to me. A couple of weeks passed, and he reported that eight stations were playing it; five listed it in heavy airplay.

Suddenly I had stations in Massachusetts, Seattle, Portland, Denver and the Bay Area playing my record. Our first order for 100 records came from the Seattle area."

When asked whether he now characterizes himself as a producer, artist or businessman, Ackerman replies in a typically modest fashion: "If I did any of those well, I would be happy to wear any of those titles," he explains. "I don't really think of myself as a musician in my definition: I consider Alex DeGrassi and Michael Hedges *serious* musicians. I think of myself as an amateur guitar player who has come across some nice accessible melodies. I have no academic training—

I don't even read music—I consider myself blissfully ignorant. As a businessman, I'm also blissfully ignorant. I simply regard business as an extension of everything else in life: my talent is putting the right people together and getting them excited about projects. As a producer, apparently I have something going here, because it's my ears that have determined the A&R direction of Windham Hill and a lot of people like the label. I have a subjective reaction to music—if it moves me, then that's something I want to be involved with."

One key factor in the success of Windham Hill is the company's approach to marketing, which has even

taught the major labels a thing or two. "One of the unique aspects of our deal with A&M Records is we maintain distribution in areas we call 'non-traditional markets'—health food stores, bookstores and that sort of thing," Ackerman explains. "We're actively soliciting bookstore trade, a mostly cassette business. We also maintain an audiophile market independent of A&M, and our CD sales to that are significant as well. A&M didn't really have any knowledge of this alternative distribution, and they've been learning by watching us run it."

However, all the success that Windham Hill has attained has also brought drawbacks as well. "One of the negative impacts of the success we've had is that we've moved outside the consciousness of what's really going on in the Bay Area music scene," Ackerman laments. "Once upon a time, I was in constant contact with Mike Cogan, when he was doing Bay Records very actively; and Mike Nesmith was doing Pacific Arts; Ed Denson at Kicking Mule; and of course my old pal Chris Strachovitz at Arhoolie. I was much more conscious of what was coming up on the independent and private release scene.

"The complexity of our business has kept me out of touch, but we have just debuted a new label called Open Air Records, which will be a broad spectrum label, rather than the narrow thing Windham Hill has been. This will get us involved in a lot of other forms of music; anything we want to do—potentially even comedy albums. This might also serve to get me more involved in what's going on in the garages and clubs, and looking for new groups. My own listening tastes are far broader than Windham Hill alone would indicate; at home I listen to a lot of Dire Straights, Talking Heads, and some of Cyndi Lauper's stuff—I'm not so much of a purist. It will be fun to involve ourselves in other kinds of music."

—G.P.

## INDEPENDENT LABELS A BAY AREA TRADITION

by Jack McDonough

No one in the San Francisco Bay Area is the slightest bit bashful about putting themselves down for posterity on their own homegrown vinyl. Neither are they the slightest bit inclined to wait around for a deal from one of the biggies, if the biggies are too busy buying each others' superstars to get down in the dirt and sign up Northern California grassroots talent. Thus, San Francisco continues to be one of the most active centers for small-label activity in the world.

The spirit and attitude of these very different enterprises is indicated well enough by the names they choose for their companies. Rag Baby? Redwood? Amorous Records?

It's indicated even better by the notes to the Pop-O-Pies' record, on the Subterranean label, which begins by explaining: "Surprise: There Are No Pop-O-Pies. The players listed on the last record are only the members

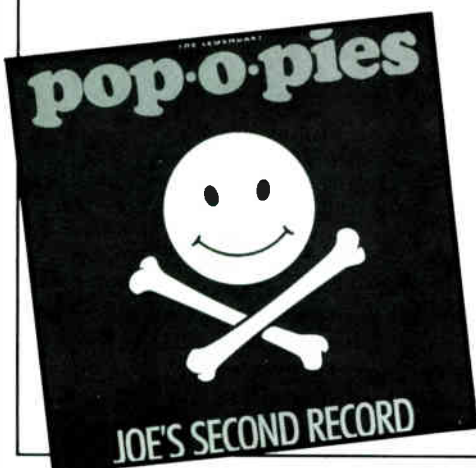
that happened to be in the group that week. While most groups play a lot of different songs and use the same members, the Pop-O-Pies used lots of different members and played the same song." This was the "Truckin' phenomenon." Well, to make a long story short, Subterranean now cops to the fact that the whole concept belongs to one person, Joe Callahan of New Jersey, who will now be known as Joe Pop-O-Pie and do songs other than "Truckin'"—things like "Pop-O-Rap" and "The Industrial Rap."

Subterranean, as you might guess, puts out some of the wildest records you'll ever hear (with the possible exception of Ralph Records, another—yes—San Francisco label), things like the new one from Flipper, which features on the cover a cut-out of a psychedelic bus with graffiti that proclaims: "Flipper Suffered for Their Music. Now It's Your Turn." You know exactly what they mean if you've ever heard "Sex Bomb," the record that made Flipper famous, possibly the most witheringly intense—and funny—five minutes every committed to vinyl.

Okay. Let's get a little more scholastic here and do a run-down and recap on some of these local labels. We may as well start with the jazz labels, since the Bay Area has extraordinarily prolific jazz indies, the granddaddy of which is Fantasy. Fantasy's catalog is so deep and so broad that they achieved major-label status long ago and we need not give particulars here. Running very strong on the outside, however, are both the Concord Jazz label and the Palo Alto Jazz label. Carl Jefferson's Concord label got its

—PAGE 64

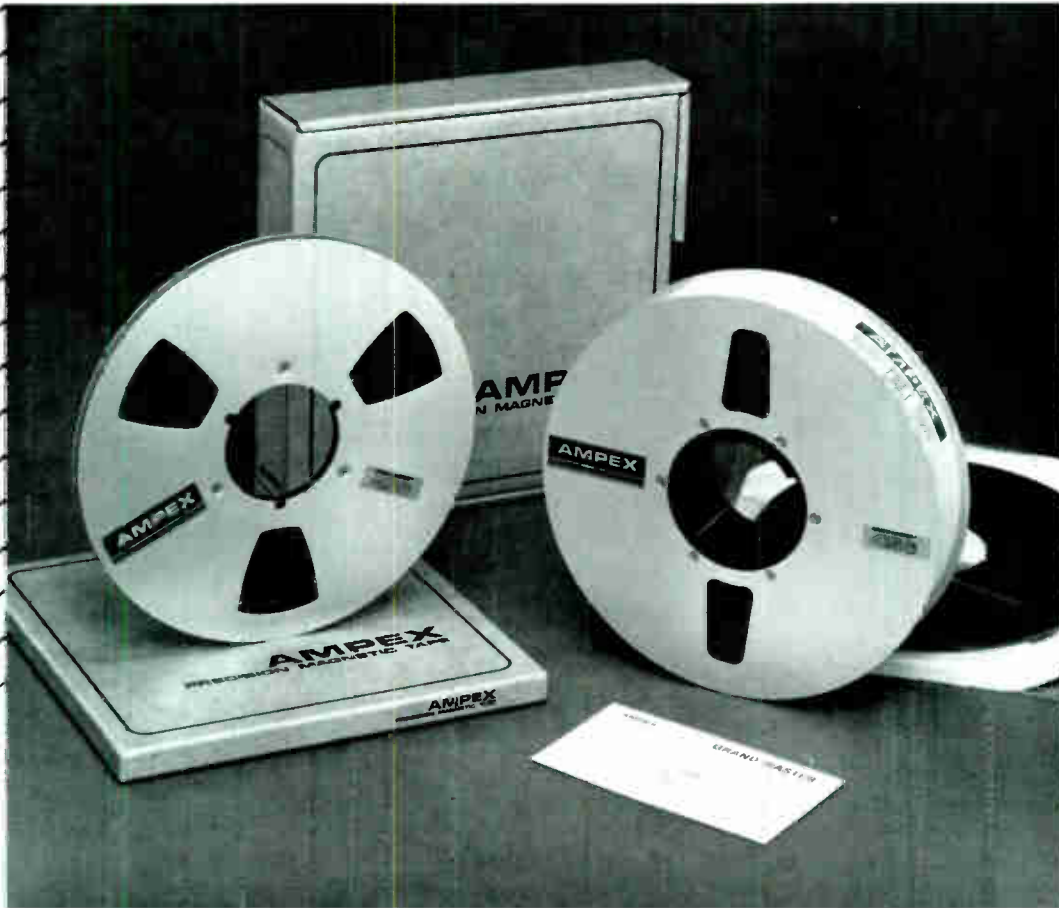
*Pop-O-Pies on Subterranean.*



### ROY SEGAL

In the four years since Fantasy Studios in Berkeley opened for business, it has developed into what is certainly one of the best studios on the West Coast. "I'd say we're now one of the top five studios in the entire United States," corrects Fantasy vice president Roy Segal, sitting in his office, with its panoramic view of the Berkeley Hills. And he may just be right. When Fantasy's upgrading process is completed in February, it will boast four state-of-the-art studios, all equipped with the best Studer recorders, plus artists working there can use the studio's Mitsubishi digital system as well. In addition, the studio has facilities for sync work, film scoring, ADR... "any-

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Roy Segal of Fantasy Studios.

thing in audio," Segal says.

It is not surprising, then, that the studios have been attracting the biggest names in Bay Area music for some time now. Journey was among the first to christen the beautiful Studio D several years ago, and the success of the album they recorded there no doubt helped establish the room in the eyes of others. Since then, acts like Night Ranger, Frankie Beverly & Maze, Greg Kihn, Huey Lewis & the News, Sammy Hagar and the Grateful Dead have availed themselves of Segal's services. Los Angeles-based artists like George Duke and Stanley Clarke have also been regulars at Fantasy since the pair recorded their immensely popular Clarke-Duke Project album there right after the studios opened in 1980.

A studio the size of Fantasy cannot survive on big names alone, however, so Segal and company have worked hard to bring developing artists in too. In fact, along those lines Fantasy works as a production company for worthy young bands.

"I made the decision about four years ago that we would be actively involved with artist development," Segal says. "The labels don't do it. Most groups that are able to help themselves do it by borrowing money or getting investors involved in their career and then taking

the money—which is usually not enough to do it right—and seeking studios that will give them very, very low rates. Consequently they usually end up with a less than acceptable tape as far as getting a record company excited about their potential.

"The other way of artist development is that studios 'spec' time. A lot of times the results are fairly negative because, once again, the bands are cut loose on their own to try to develop a commercial tape. Unless the band is working with a very good producer/engineer type—someone who has good insights into songs and development and so forth—the tape probably won't be that great, and also the band won't learn as much."

At Fantasy, Segal says, the studio becomes an investor in the artist, but also becomes very actively involved in the project both from a production standpoint, and helping steer the artist toward effective management (if they don't have it already) and general career guidance. A good example of Fantasy Studios' work in developing an artist can be seen in the band Billy Satellite. "We worked with them for a year-and-a-half before they got signed to Capitol," Segal says. They made a very professional demo that appealed to Capitol's A&R department; ironically, though, the label brought the band to LA when it came to record their debut LP. "Naturally, we're hoping they'll come here for the second album," Segal says, "but we don't have a contractual guarantee. Billy Satellite's a great band with a brilliant future, and we've loved working with them.

"Artist development is a job that has to be done," he continues, "and in this area in particular, there are very few people willing to take a chance on new talent. It makes sense for a studio to do it. In my mind, hopefully we're creating our own clientele for the future." Other young acts Fantasy has worked with include Eddie & the Tide, a Santa Cruz band who have become perhaps the most popular club band in the Bay Area and are now on the threshold of expanding their following, and Tigge Clay, who had a breakthrough hit single last year after signing with Motown.

Segal is always listening to demo tapes, and in general he is impressed with their quality. But, as he points out, the stakes are higher today than they were ten years ago when record labels were extremely liberal with their signings. "The record companies are much more careful than they were a decade ago. They really scrutinize the tapes now, and that leads them to the band. It's not just the tape, but the whole package. A band has to be able to deliver the goods on a number of levels now. The labels want to see that they're getting

an artist with some broad appeal. Record companies are willing to spend money on artists, but only the ones they think are worthy of it. You need to give them a high quality package because it's gotten very competitive out there and other people *are* giving them a quality package. It's much easier to listen to a well recorded, well arranged tape than a badly done one of a great song. Now that doesn't mean you have to go to a studio like Fantasy. You can still go in the basement and do a good four track if you've got the right technical knowledge and production insight."

Since he moved to the Bay Area in 1970 to work for CBS' studios (which later developed into The Automatt), Segal has seen a gradual winning process going on, in which both bands and studios fell by the wayside if they were unable to earn a big enough slice of the small Bay Area pie to stay afloat.

"In the last few years," he says, "the studio business has regressed and compacted, and that must be in part because not as many people are being signed from this area, so fewer artists are recording and there's more competition for the ones who are." As for the artists, Segal believes that "The cream has really floated to the top. The artists of the late '60s and early '70s who continued to develop their craft have survived." The longevity of such venerable Bay Area institutions as the Dead, Jefferson Starship and Santana attest to that fact.

Segal is optimistic about the future of music in this region and of his studio complex. In fact, the two are tied together. "The Bay Area definitely needs and should have a place like Fantasy Studios. There have been world-class musicians here for years and they need a world-class studio to work in. We brought them a world-class facility for the first time, and showed what could be done here."

The rest, he would probably say, is up to the music makers.

—B.J.

## HOWIE KLEIN

There was a time, really not so very long ago, when San Francisco had the most vital new wave scene in the country, except perhaps for New York. It was the first year of the Mabuhay Gardens, the Filipino supper club turned punk club, and the acts coming through were bands like Blondie, The Ramones, The Dictators and Mink DeVille. Locally, The Nuns, Avengers, Dils, Readymades and a score of other energetic new bands were filling dives and warehouse "clubs" all over the city. And at the center of the cyclone was Howie Klein, who helped promote the local and national scenes by

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*415 Records Howie Klein.*

booking bands, writing about them in countless magazines, playing their music on local radio. Howie, a New Yorker who'd been involved in the music scene since he booked bands like the Jefferson Airplane and Grateful Dead at Stonybrook in the late '60s, was a promoter, publicist and cheerleader all rolled into one. And he still is.

Of course, some of the spark has gone out of the new wave by now, as the original bands have either fallen by the wayside or gone on to play bigger halls for more mainstream crowds, and the once outrageous fashions have been slowly co-opted by Madison Avenue. But Klein is as active as ever on the local scene, constantly checking out bands at the clubs, playing tapes of locals on his

Sunday radio show on non-commercial KUSF radio. And then, too, there is his very successful independent label, 415 Records. With all three of the label's major acts—Romeo Void, Red Rockers, and Translator—still on the rise (with Romeo Void on the verge of true national stardom) 415 has become internationally known and respected. Howie's energy is unflagging, as always, and his mood in 1984 is as upbeat as it was when punk was first belched forth from the garages and basements of urban America.

"There's a tendency for people who've been around for a long time to think that the music scene isn't happening now because they fondly remember the 'good old days,'" Klein says. "But I'd say unequivocally that there are as

many good new bands coming up in San Francisco as there have been since I've been out here. There are peaks and valleys, but in general there are always things happening out there if you look for them. They don't necessarily always get a lot of publicity, and that's especially true now. There are great bands out there that very few people know about yet. Just this last Sunday, for example, I played a tape on my show by a band called Monkey Rhythm. Great stuff. Wonderful music. The good stuff is out there."

Klein says that even though some of the new wave's initial spark is gone, that the spirit ushered in by the original wave of bands continues to motivate aspiring musicians. "In the mid-'70s," he says, when you wanted to be a guitar player, you had to practice for ten years and learn how to play like Jeff Beck or you couldn't even get onstage. Then the Ramones came along and changed all that by showing you could play passionate, great music even if you could barely play at all. That still exists, to an extent, on the underground. I think it's great that people are no longer intimidated about trying to play music, 'cause in so many cases the players who start out rough end up being really good."

Though he is a longtime supporter of the San Francisco underground, of everyone from the Dead Kennedys to the always lovable Mutants, for his own label, Howie has signed slightly more mainstream acts (though Romeo Void is still fairly out there). Howie explains, "We've never been a really radical label. Our philosophy has always been to find bands that are maybe a little out there, but which most people can still relate to musically. The labels that are putting out the really radical stuff—like Subterranean Records—are really important; that stuff needs to get exposure."

415's quest for more national exposure was aided considerably by signing a distribution agreement with giant CBS Records, insuring the acts maximum exposure nationwide, and also a certain degree of entree into mainstream radio by virtue of having the product shipped with more conventional (and accepted) Columbia and Epic acts. Though the CBS deal initially had some new wavers crying "Sell Out!" at Klein, most seem to have come around to the view that the deal has helped the label's acts and that few artistic compromises had to be made on the way. Howie, predictably, has no regrets.

"I really feel that the independent distribution network for white rock and roll records is insufficient for there to be real commercial success. It's much easier, for example, for independent black records to make it than white records, because black radio is much more willing to play a record based on what it sounds like than white album rock sta-

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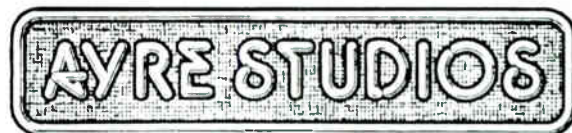
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*David Rubinson in the now-defunct Automatt's studio.*

tions, who like to go for nationally known acts or acts with a real national push."

Most nights you can still find Howie in clubs around San Francisco, scouting the latest bands, keeping his ear to the ground for that act that might really be something a year or two down the line. His current favorites among the unsigned bands in the area are the all-female Stirrups, The Uptones, Monkey Rhythm and Big Race; whether any of these will someday be in the 415 stable is unknown, but the point is, Klein is at least out there looking, which is more than you can say about the A&R people at the major labels.

"San Francisco confuses people," Howie laments. "Some A&R people from a couple of major labels from L.A. were up here the other day and they were just groping around. A friend of mine told me that he went to a show by a totally mediocre L.A. band down there and there were about 40 A&R people there. In San Francisco, though, just an hour away by plane, you very rarely see L.A. A&R people in the clubs, even though it's part of their jobs. They go through the motions but really, they don't have a clue of what's going on."

Which is one reason it's a good thing we have Howie Klein to keep tabs on the Bay Area scene.

—B.J.

## DAVID RUBINSON

Many in the Bay Area were taken by surprise this past fall when David Rubinson, for a decade a fixture on the Bay Area recording scene, decided to close The Automatt recording studios. Throughout the late '70s and on into the current decade, the building on San Francisco's Folsom Street that once housed CBS' studios, was perhaps the busiest studio in Northern California, boasting dozens of superstar clients. Rubinson not only ran the successful studios, but also produced numerous hit albums there. But then, a few years ago, he was felled by a heart attack that nearly killed him, and since then he has not produced any records, choosing instead to devote more time to the management end of his business; clients include Herbie Hancock, Narada Michael Walden and Romeo Void lead singer Debora Iyall. When the lease on the Automatt was up, he decided to shut the doors forever.

"It's time for me to do something else," he says. "Part of the reason I held on as long as I did was because of the terrific people who work here. Also, quite honestly, it's better for my health that I not run a studio. My health really has im-



proved incredibly. I run three to four miles a day, and I have tremendous stamina, but I have to avoid stress and running a studio is incredibly stressful. To update this place would probably cost in the neighborhood of half a million dollars, and there really is no future for the audio-only studio. In the '80s you need to be able to do film and video, postproduction, all of that. Plus, the lease is up. So all of those things make this the right time. If I were still producing four or five records a year it would be different. I'd need a studio. That's what I'd love to do, but I simply can't physically, so I have to find something else now."

"Actually," he continues, "I never really wanted to be in the studio

business to begin with. I saw it as a horrible losing business where you're at the mercy of your clients. I was more or less forced into it. I was in my own little studio in the back of this building when CBS was here, and when they split I either had to take over the building or leave, so I started the Automatt."

The rise of Fantasy Studios in Berkeley took some of the luster off the Automatt, and by 1984, Fantasy was clearly the top studio in Northern California. Rubinson sounds almost resigned when talking about the new kid on what was once a block he controlled. "No one can match the amount of money put into the studios by Fantasy," he says. "I don't begrudge their success at all, though. It's



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a great studio. But literally no one but a company that big could put literally millions of dollars into a studio. Really, unless you have a huge amount of money and need a tax write off, there's no reason to enter the studio business today. That is unless, you need 2,000-3,000 hours of studio time a year like I did for your own projects. I was self-sufficient. To go into it as a business, though, to try to make money, is nuts. It's worse than nuts. It's self-immolation."

Despite lingering complaints about the high stakes, big money business that studio ownership has become, Rubinson stresses, "I have no regrets, none. I think we made some really great music here and I had a ball. I wouldn't trade the experiences I've had for anything. And the people were the best. I'm

really proud of the staff we built here. In my opinion, there was none better in that respect.

"When I originally got into this business, it was because I loved music, not because I wanted to be in the music *business*. I still feel that way. I've run a business and we did make a nice profit always, but that was never the main thing with me. Never."

Rubinson feels that this is a particularly strong time for Bay Area music, citing the success of Huey Lewis, Journey and Night Ranger as proof that with or without The Automatt the music will always prevail. "I don't think that musically the influence of the Bay Area has ever been greater than it is today. This was probably the best year ever, in terms of records sold, for Bay Area artists. Some-

—PAGE 152



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### —FROM PAGE 56, INDIE LABELS

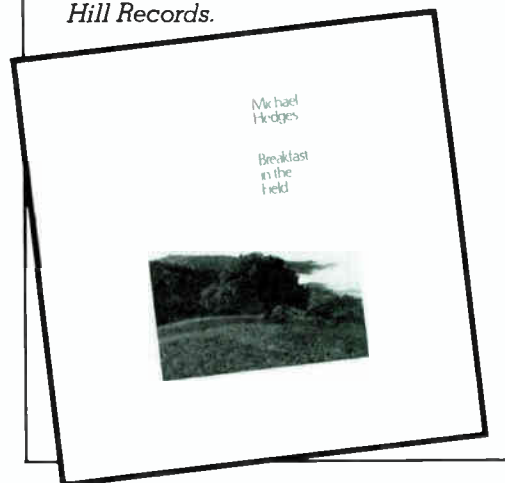
start in conjunction with the Concord Jazz Festival, and many of the catalog items were done live there. The label favors mainstream and be-bop, although they also have a Latin-oriented subsidiary, on which the acclaimed Tania Maria is the best-known artist. A recent Concord item that got good notice brought together George Cables, Warren Gale, John Handy, Eddie Marshall, Mel Martin and Frank Tusa on a project titled *Bebob and Beyond* (reviewed in *Mix*, October 1984).

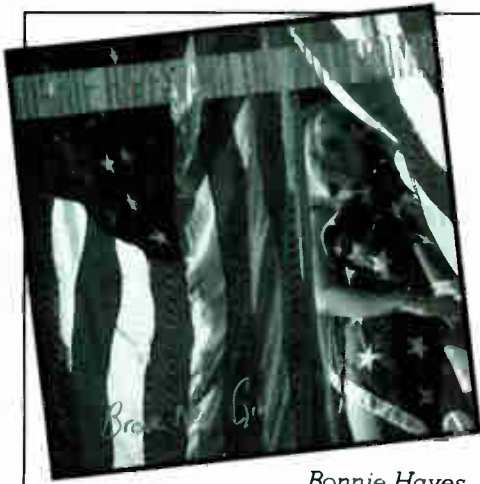
The Palo Alto label, under the direction of Herb Wong, has split its attention between mainstream stars, much of whose material they have licensed, and contemporary crossover artists like Dianne Reeves and George Howard who have garnered well-earned attention. The label puts out a steady stream of top-quality product, with recent offerings, for example, from Richie Cole, Victor Feldman and Free Flight. They have also just released a star-laden, two-record, 22-year retrospective on the Monterey Jazz Festival.

A more modest and newer jazz label is Catero Records. Veteran engineer/producer Fred Catero entered the market last year with a fine set by Mel Martin; recent offerings include disks by Paul Speer (*Collection 983: Spectral Voyages*) and former Joy of Cooking vocalist Terry Garthwaite.

Probably the most successful independent in the Bay Area, in terms of distance covered in so short a time, is Windham Hill, all of whose albums offer a soft-jazz/New Age amalgam that has so struck a nerve in the international audience that it has prompted some in the business to refer to the entire style generically as "Windham Hill music." Windham Hill (now distributed by A&M) has received so much press over the past year (in the latest coup, *Esquire* has named label founder Will Ackerman on its list of

*Michael Hedges on Windham Hill Records.*





*Bonnie Hayes on Bondage Records.*

"Best Young Americans") that little more need be said here; and its best-selling artist, pianist George Winston (three LPs simultaneously on the Billboard jazz charts) has done so well that they gave him his own subsidiary, Dancing Cat Records, whose first release is by vocalist Silvia Kohan. Among the other WH artists, besides Ackerman himself, are Michael Hedges, Alex de Grassi, Liz Story and the band Shadowfax.

Two other very successful labels, a little more squarely in the New Age/meditative vein, are Halpern Sounds, run by Steve Halpern, who does most of the recordings and whose book on the therapy of music, *Sound Health*, has just been published by Harper & Row; and Rising Sun Records, whose LPs *Petals* and *Breathe* were successful enough to allow musician/co-founder Mark Allen to go ahead with a new label for his solo projects, Voyager Records.

Okay. Enough jazz and meditation. On to rock. The most famous rock independent in the Bay Area is 415, who secured their all-important distribution deal with the world's most powerful record company, Columbia, the old-fashioned way: they earned it, and then some. By scouting and developing such important acts as Romeo Void and the Red Rockers, 415's Howie Klein became the industry guru of New Wave, and was able to secure the kind of distribution and market penetration most indies only dream about. Berkeley is another Bay Area logo that, after a series of sour deals, landed Greg Kihn with Elektra distribution and brought him to national stardom. Eddie & the Tide became perhaps the most popular club band in the Bay Area with a series of straight ahead song-oriented rock releases on the Spin label—connected with the Keystone Family nightclubs and management—and will likely go on to full national sar-

dom. Bonnie Hayes & the Wild Combo almost broke through nationally with a release on Los Angeles-based Slash, followed by a set on their own Bondage label. Yanks is making an equally determined attempt with their two albums on San Rafael's DTI label.

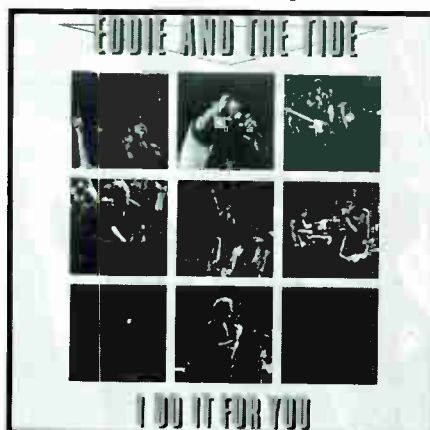
Mary Buffett went a backwards route with her remake of "My Boyfriend's Back"; MTV liked her video so much they agreed to play it—if Mary had a record deal; whereupon she struck a fast one with the local Moby Dick label, which had hit the dance charts shortly before that with Lisa's "Rocket to Your Heart." The aforementioned Amorous label has had good radio reaction to House of Pants' "Just a Movie," and the label has also mounted impressive local production's for Mike Molenda's rock drama, *Passion Dance*.

The Trotter label ("They're hotter on Trotter," of course) made a lot of fans with a kinky sendup by the Flying Tigers called "User Friendly (Phone Sex)" and also did an LP by the locally famous female trio, Contractions.

One great thing about the rock indies is that so many one-shot efforts come and go so fast. While it may be impossible to keep up with them all, the profusion itself proves the unlimited vitality of the scene. Ex-Sons of Champlin guitarist Terry Haggerty, for example, recently cut his own record called *One Fine Day* and didn't even bother to make up a label name. He just put a little "Hag, Inc." down in the corner and let it go at that.

Then there are the specialty and esoteric labels, equally profuse. The venerable Arhoolie/Folklyric/Down Home combine has long specialized in every type of offbeat, ethnic, blues and international style imaginable. The brand new Fat Records is somewhat in the same vein, offering folks easy-catalog ordering of the whole range of "honest music" (country, blues and ethnic) formerly played on the infamous KFAT radio station. The

*Eddie and the Tide on Spin Records.*



*The Yanks on DTI Records.*

folks at Solid Smoke have won international plaudits for their ultrafine series of R&B reissues from James Brown, Barbara Lewis, the Velons, the Sheppards, Dee Clark, the Dells, Gene Chandler and many others. The Solid Smoke sets, always done up with vintage photos and in-depth liner notes, are now distributed by L.A.'s Rhino Records. Dublab Records in San Rafael specializes in reggae: upcoming are sets from former Burning Spear member, Bobby Ellis and Jamaican group called The Two-Ton Machine. These will complement earlier Dublab releases like the live set from Marin County reggae masters, the Tazmanian Devils. And Dublab also recently put out a nice album by Robin & the Rocks, produced by Bonnie Hayes.

Other specialists include the East Bay's Metalanguage and DoSpeak labels, way out in the forefront of avant-garde/performance art rock; Mike Varney's world-renowned heavy metal label Shrapnel; and 1750 Arch, also in Berkeley, which qualifies as the area's most truly eclectic label with everything from Elizabethan madrigals to African drum music to pure electronic/tape compositions. And of course we have a solid array of women's labels, with the main ones, Olivia and Redwood, tops nationwide in the genre. Others, like Second Wave, le Fabulous and Pleides, are often distributed by either Olivia or Redwood. Artists on these labels include Holly Near, Meg Christian, Tret Fure, June Millington and Alicia Bridges.

And of all these, my current favorite??? That would have to be Sausalito's new Coldwater Records, which has rescued Danny O'Keefe from non-deserved obscurity with *The Day to Day*, an album containing nine crisp, crafted contemporary tales delivered in O'Keefe's keening rock alto voice. As Joe Bob would say: check it out. ■

# NORTHWEST RECORDING

## STUDIOS ON THE UPSWING

by Elizabeth Rollins

In an election year the question, "Are you better off now than you were four years ago?" seems to follow business people around like an obnoxious hit tune. Studio owners and managers in the Northwest were nonetheless responsive to general questions about the climate of the recording business in 1984. The consensus seems to be that work was steadier than it has been in several years—and in some cases, actually on the upswing.

The San Francisco Bay Area saw a major shake-up. The Automatt—perhaps the most revered studio in the area, closed down. A new 24 track studio opened in Sausalito to potentially pick up some of the slack. Co-owner Terry Delsing, who worked at The Plant nearby for four years, says Studio D "was put together by a group of engineers, basically with their specifications in mind." Perhaps because they have that experienced Bay blood, they've been able to pull in names such as Marty Balin, Maxine Nightingale, Pablo Cruise, The Flaming Groovies, and Jaco Pastorius.

*Bear Creek Studio, Woodinville, WA, Joe Hadlock (owner/producer) at the console.*



PHOTO PAUL D. LEHRMAN



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*Independent Sound, San Francisco, CA.*

Aside from their Trident console, Studer 24 track and Ampex two track recorders, Studio D boasts an adjoining 2,000 square foot soundstage (called the Mason Soundstage). That company also rents film equipment.

Fantasy studios in Berkeley would seem to be in an excellent position to pick up some high-end business from the defunct Automatt. The Mitsubishi 32 track digital recorder steals the acquisitions spotlight. Greg Kihn recorded his first solo album for Beserkley/EMI using the new floating unit in Studio A. Studio manager Nina Bombardier says Fantasy will be finished with their two and a half year renovation plan in early 1985 when 24 track Studio B is completed. Studios C and A (24 track with Neve consoles) and the high-end 46 track Studio D (also Neve) have all been redone since 1980, when Fantasy first began selling time to the public.

A number of established bands recorded at Fantasy this year: The Tubes with Todd Rundgren producing for Capitol; Jeffrey Osborne with George Duke producing for A&M, Sammy Hagar with Ted Templeman for Geffen Records, and the Grateful Dead recorded some tracks to be augmented this month. Jazz producer Orrin Keepnews stopped by

(see Producer's Desk, page 50), as did Fred Catero of Catero records, who was producing Terry Garthwaite. But Bombardier is quick to point out that in the past couple of years Fantasy has initiated special package deals designed to help young bands looking to produce entire demo packages (including artwork, mastering, and pressing.) "Now it's so damn tight at the labels that a young band has to finance their own demo. We've done about six or seven of these types of albums locally," says Bombardier. She just got word that Atlantic will be doing an album with newly signed Eddie & the Tide at Fantasy. They are one of the bands that has arranged a demo deal there.

The Plant (formerly The Record Plant) is another Bay Area studio that attracted the glitterati this year: The Jefferson Starship, Grace Slick for her solo "Software" album, Santana, Angela Bofill, John Waite, The Busboys and Night Ranger to name a few. Interestingly enough, ex-Creedence star John Fogerty broke his recording hiatus at The Plant this past year, too. Production coordinator John Lawrence says, "They come for the equipment and for Jim Gaines." Gaines is a fabled engineer who took over as the studio's general manager in '84. Indeed, some groups have come far-of-field, such as Pink Cloud, a Japanese band which recorded an album for

*Owner Richard Nebel behind the board at Ayre Studios, San Jose, CA.*



PHOTO RICK EAGLE

foreign release with Gaines.

The Kurzweil 250 synthesizer is a new selling point. Lawrence says The Plant is standing in line for the sampling system software, which should be out soon. Has this stalwart studio taken any chances on new talent this year? "I do not push away the new bands—you can't. The only thing that separates them from the big boys is money," says Lawrence. GNP is a Marin County synthesizer band for which Lawrence has high hopes. He talks about how they achieved a unique

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drum sound by visiting a construction site and recording pile driving noise with a Nagra. The Plant was even willing to do a spec deal with GNP, but leader Yves Blondeau refused to relinquish any con-

trol of his band. Another new band Lawrence is supporting is Paris.

The year-old Live Oak Recording in Berkeley is bent on "trying to be on the cutting edge of technology," as

studio manager Priscilla Gardiner says. Toward that goal, they also purchased a Kurzweil 250 with intentions to snap up the forthcoming software upgrade. Owner and engineer Jim Gardiner has even bigger plans for '85; "We'll be the first on the West Coast to have Master-Mix by Audio Kinetics...it's a disk-based automation system that'll put our MCI console on the Neve level, only without the motorized faders, of course." Gardiner talks with the enthusiasm of a mild-mannered mad scientist as he describes The Plan. "We've been waiting to get the Publison Infernal Machine 90 since the place opened...and you know we're gonna interface the Q-Lock system with the MasterMix." Both the Gardiners are composers, and Live Oak is designed to serve them as well as the musicians who work there. David Grisman did an album project for Warner Brothers there in '84, and Pharoah Saunders used the Kurzweil 250 for the first time at Live Oak for a project with Theresa Records. The owners are hoping they'll reap the benefits in '85 from the demo work they did during this past year.

Peter and Mary Buffet of San Francisco's Independent Sound are enjoying their first taste of pop stardom with their '84 dance chart remake of "My Boyfriend's Back." The Buffet team also prides themselves in high-tech know-how. This fall they acquired the first Kurzweil 250 synthesizer in the area, and sponsored a seminar featuring the new machine, and its inventor, Ray Kurzweil himself, in December. "For \$10,000, being able to plug in a \$30,000 grand piano was worth it by itself," says Peter. Independent is set up for specific types of sound—"We only have two microphones—we've never miked a drum set in our lives and we're proud of it," he explains. "My Boyfriend's Back" taught the team a lot about the music business, "but it didn't get us a deal." Big advertising accounts have come their way to cushion the blow: The Milk Advisory Board, and as Peter describes his newest client, "a group set up to promote eggs in the same way we promoted milk. We call them 'the good eggs.'"

Bear West in San Francisco is revamping both studios. Studio manager Ross Winetsky says the goal is to be able to handle both high-end album, and demo and advertising work. Construction should be completed in the beginning of '85. 24 track Studio A gets a new Sound Workshop Series 34 console with MCI 24 and 2 track recorders and Lexicon delays and reverb. In Studio B it's a new Tascam M520 console with a 16 track recorder. But it's not all under the buttons—Winetsky says he's also taking great pains to add the cosmetic comforts. "We're remodeling the whole look at Bear West."

Some clients in '84 included the Tubes, the New Riders, Ansley Dunbar

## The Bay Area Music Archives

Got a spare Elvis Presley cigarette lighter you don't use anymore? Ambivalent about that disposable Devo canary-yellow rain jacket you keep pushing to the back of your closet? You were correct in not yielding to your mate's pressure to throw that piece of junk in the trash. Now there's a place in history for all aspects of modern popular music: The Bay Area Music Archives. This eight-year-old non-profit organization houses about 30,000 disks, 5,000 audio tapes, 3,000 books, and a staggering still undetermined number of periodicals pertaining to rock, pop, jazz, and R&B. General manager Paul Grushkin also collects photos, posters, handbills, ticket stubs, and he probably wouldn't say no to a Grateful Dead bong or two. The only category of music the archives doesn't cover is classical.

The collection fills a two-story townhouse in a World War II-style development on the University of San Francisco campus. It's not part of the university; funding is funneled through BAM Magazine from their annual event, the Bammies (Bay Area Music Awards). Some of the most generous private contributions have come from such notables as Jerry Garcia of the Grateful Dead, Journey's manager Herbie Herbert, Steve Wozniak of Apple computers, and David Rubinson, owner of the Automatt recording studio.

Metromedia contributed the vast record library from KSAN-FM when it relinquished its legendary role as a progressive rocker to assume a country format in 1980. The precious KSAN live concert tape library has provided material for a one-hour radio show produced by the archives which ran for a year on San Francisco AOR station KFOG-FM.

Some of the irreplaceable items carry great historical significance. As a devoted archivist, Grushkin likes to tell the story behind one of his favorites: "One day I was shopping at a garage sale a number of years ago, and I see this thing and it leaps out at me like the footnote in history that it is. This record," he says as he deftly pulls it out of the maybe 7,000 other records shelved on that wall, "—this record, the Dinwittie Colored Quartet #1716 Victor Talking Machine Company 1902 was

one of the first six sides recorded by black people in the history of the world." Grushkin goes on to explain that after the Dinwittie Quartet recorded this record, it was another 18 years before any blacks were *allowed* to step into a studio to record.

That's pretty much how the archives began—the fruits of compulsive scrounging. Grushkin had started collecting in his home when BAM Magazine publisher Dennis Erokian began funding and organizing non-profit status. The bedroom became too small. David Rubinson then offered the use of a suite in San Francisco's Automatt offices, where the archives flourished for another three years. The next move put Grushkin and his tonage of musicology at the current location, 14 Tapia Drive in San Francisco. (Grushkin is also an author—he wrote *The Official Book of the Deadheads* and is currently hard at work on a book chronicling *The American Rock Poster*.)

It's an interesting clientele that patronizes the archives: journalists, TV, radio and record producers, students and historians. Grushkin cites two role models for the way the Bay Area Music Archives is developing: The New York Museum of Broadcasting and the Nashville Hall of Fame. The goal is to become an exhibit center for the general public and a library for all manner of pop-culture scholars.

He's got just about every Bay Area pop impresario behind him—from Bill Graham to Bill Gavin. Grushkin is determined to see his goal become reality: "We're gonna get the national rock museum in San Francisco—by default—by the fact that we've been patient. We built up our staff so that not a week goes by when somebody isn't calling up to say: 'You know, I've got a box of KYA tapes from 1964-65 and I'm kinda older now, and I've got two kids and it just doesn't quite mean the same thing. But I knew not to throw them away, and when I heard that you guys were out there, I thought I better give you a call.' That's an example of the kind of phone call we get every two hours."

**To make an appointment to use the archives or to contribute—call (415) 469-5846.**

—Elizabeth Rollins



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with a solo project, and Bobby Hutcherson for Landmark Records.

The changes at Hyde Street Studios in San Francisco are all encompassing. As the three partners enter their fifth year together, they've decided to go their separate ways, according to studio manager John Cuniberti. Tom Sharples, who's been involved with Otari's R&D department for years, will go full time there. Michael Ward will own and operate Studios C and D on the second floor, leaving the high-end room, Studio A to be separately owned and operated by Dan Alexander. Current manager Cuniberti says, "Nobody wanted to close the place down—the business is much healthier than it was five years ago when Hyde Street first opened." Cuniberti will help overhaul Studio A, which will be equipped for album projects and audio-for-video, but will be priced from \$85 to \$120. Ward's 24 track Studio D will also handle audio-for-video, but will be priced more moderately. Studio C will have 16 and 24 track capability with lower-end prices. The official ownership changes take place January 1st.

Another San Francisco studio which will enter '85 under new ownership is Different Fur. Pat Gleeson, the current owner, has decided to hand over the deed to studio manager Susan Skaggs and chief engineer Howard Johnston. As a composer/synthesist who's worked on such interesting projects as *Apocalypse Now*, Gleeson wants to devote all his time to his own music. He will continue to record at Different Fur in the coming year. Skaggs, a determined business woman who's been working long hours to close this deal without a bump, says her primary goal is to revamp the control room. "Since today's home studio technology allows for all the preproduction, the studio must offer things the musician can't get anywhere else—such as state-of-the-art signal processing." These observations have lead Skaggs toward maintaining the best possible console and outboard gear.

Some clients at Different Fur this past year have been George Winston for Windham Hill, Johnathan Richman, who did some mixing, James Taylor, who recorded one tune in August, and Walt Disney Productions. (George Winston scored the film *Country* for Disney, who shipped up their 32 track digital recorder for the project.)

The cover photograph this month is of Berke's Studio in San Francisco. "Business is up 35 to 40 per cent from last year," reports owner Robert Berke. Expanding from one to three studios in a brand new industrial park is part of the reason for the dramatic upswing. The former location in the remote Sunset district was far from the bustle of San Francisco advertising executives,

and the centrally-located India Basin area has proven more profitable.

Berke does not concentrate on commercial music composition, but rather on assembling audio elements for various soundtracks. "We act as a complement to the larger studios. We take music which is already produced at other studios, and we do the final mix," says Berke.

Office manager Nancy Berke adds that the music library is their "stock in trade" for many projects that do not commission original music or sound effects. Nancy also points out that their business has burgeoned partly because, "there's not that much competition in video synch yet—it's an up-and-coming field."

Projects have included the soundtrack for a new arcade game—*The 999 Game*, and a series of soundtracks for Fujitsu Corporation's major multi-media image presentations.

Phil Edwards Recording (PER) of San Francisco has also staked out a distinctive area: high-end remote recording. This past year's recording of Lionel Richie at Oakland Coliseum was Edward's first 48 track remote. To summarize '84 he gives a long sigh and says, "I don't think I've ever worked harder in my life." Some other projects included: Phillip Bailey and Deniece Williams 24 track audio for video with One Pass, a very large video production company in town; 24 track live recording for several shows in a PBS series called "The Jazz Makers" sponsored by Chevron USA; a comedy album by Mal Sharp for Rhino Records; and as is traditional with PER, a three album live recording of the Concord Jazz Festival, '84.

Greg Goodwin of Oasis in San Francisco has several new equipment acquisitions to announce: a new Otari MTR 90 24 track recorder, a Soundcraft 2400 console, and he says a digital reverb is on the way in '85.

At Mobius, owner Oliver DiCicco laments the closing of the Automatt. He says "it makes San Francisco a less viable recording center for the major labels." Nonetheless DiCicco says that for studios such as Mobius, there will continue to be plenty of work from independents. "It's been steady all year. Normally we see a couple of slow spots, but it's been even," he reports. Windham Hill has been one of his major clients, and DiCicco expresses great satisfaction with this largely acoustic work—"It's been a lot of fun—easier on the ears."

### North of San Francisco

At Tres Virgos in San Rafael in Marin County, co-owner Jerry Jacob says diversity is the key to his studio's escalating success. "It's not unusual to see us schedule an acoustic solo project in the morning, a rock band in the even-



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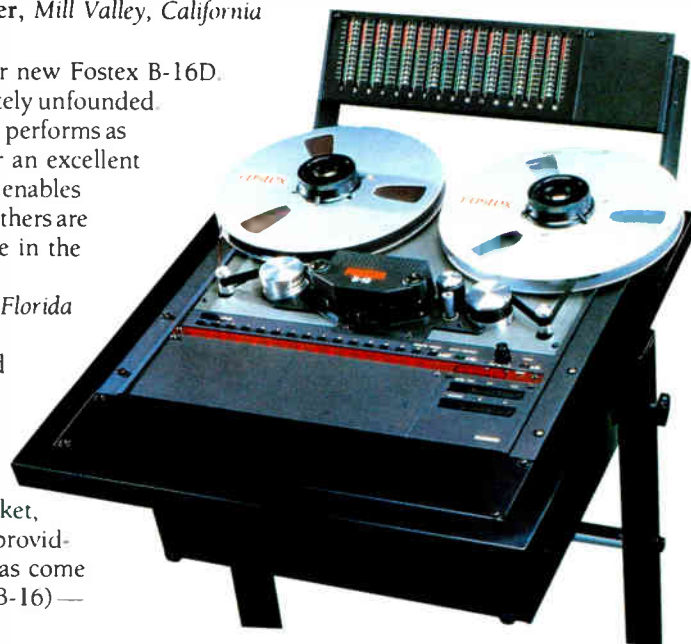
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**Arne Peterson**, *Paradise Studios, Sacramento, California*



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ing, and some guy doing bird imitations in between," he says to illustrate his point. Some album projects this year have included Van Morrison's most recent release, one from Exodus on Torrid Records, and material from the Dynaton on Rounder Records.

Jacob notes that 1984 marks "the first time in three years that we've seen a label demo—we've seen a lot more interest from the A&R departments." Fifty to sixty percent of all music recorded at Tres Virgos goes to vinyl, according to Jacob. Commercial jingles and voiceovers as well as industrial projects keep the log full. A demonstration tape for Yamaha's popular DX-7 synthesizer was done at Tres Virgos.

"Repair projects" supply a significant chunk of the studio's business. "If 60 to 65 percent of our work was mixing, 50 percent of that was redoing other work...you know, 'fixing it in the mix,'" estimates Jacob. Perhaps that is because management values the engineer above all. "The engineer is the key to this industry. That's the person whose needs must be satisfied—the studios are secondary to that," says Jacob.

Patchbay studios (formerly Patchwork) in San Rafael automated 30 channels of their Soundcraft model 3B console (32 in and out with 16 subs and sends.) Owner Ted Boyd says 40 per-

cent of his studio's work is album oriented, and the other 60 percent is a blend of demos and film scores. The very popular Bay Area group Yanks recorded tracks and overdubs for DTI Records; Luther Tucker recorded an EP, and engineers re-mixed the score of a Roger Corman film, *Loveletters* (composed by Ralph Jones) at Patchbay.

Prairie Sun, a converted chicken ranch in Cotati, has found that heavy metal bands like the drum sound they get in the 1,000 square foot drum room—but this year their client base broadened. Studio manager Claris Sayadian says they recorded a Gospel album, Commander Cody's latest, and a project for the Bourgeois Blues Band. Members of Journey tried their hands at producing other musicians at Prairie Sun: Steve Smith produced a newcomer from Connecticut named John Warren; Neal Schon produced a Marin County band, Drive; Gregg Rolie did the honors with a band called Atlantis. Members of the Tubes, Mike Cotten and Vince Welnick produced a band called the Medflies. Mike Varney of Schrapnel Records continues to take his projects to Prairie Sun's 10 acres in beautiful Sonoma County—and CBS sent up their new metalists WASP for some recording seclusion.

Early in the year, Prairie Sun redesigned their main studio and added

an Otari MTR-90 24 track and an AMS digital delay. Sayadian says they've reached a point where business is really picking up. They've even done some local jingles—who knows—last year World of Carpets, next year, maybe Frank Perdue.

The Banquet abbreviated their name this year from Beggars Banquet—perhaps to characterize their upgrade from 16 to 24 tracks. Indeed, beggars would not have such a long acquisitions list. Here are some highlights: a Yamaha 9 foot grand piano and a DX-7 synthesizer, LinnDrums, a Lexicon Prime Time and a digital reverb, and an MCI JH110 two track. Independent labels such as Schrapnel Records and Rising Sun have provided album projects, and the grand piano got broken in with an acoustic solo album called "Solo Flight" from Marcus Allen.

### South of San Francisco

Richard Nebel, owner of Ayre Studios in San Jose, says he's got a Fairlight Synthesizer on order. This augments the array of equipment that Ayre has purchased in the past year: a PPG synthesizer, Oberheim expander, a Yamaha DX-7 synthesizer, a Prophet T-8, the ADR Vocal Stressor and a few Neumann tube microphones, including two 69 stereo tubes. Programmable in-

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struments seem to attract young composers and bands trying to achieve a fuller sound without the personnel and the miking time. "I've been doing a lot of two man groups, a lot of line level synth programming. On demos they're finding if they can just spend an hour programming a LinnDrum, they can save a lot of time and money," says engineer George Mitchell. In the way of album projects: guitarist Tom Taylor did a solo

album with some help from the Kronos Quartet, and a group called Rubicon recorded at Ayre. In a different area of the music industry, drum tones were recorded at this studio for storage on chip in a commercial synthesizer.

The biggest addition at Fane Productions in '84 was people. Owner Fane Opperman brought engineer David Gibbons in from Atlanta's Musicworks, and Vince Sanchez signed on

behind the board, too. This Santa Cruz facility captures a market separate from nearby San Francisco, in addition to some market overflow. Consequently, Opperman says diversity has been the key to growth in the past five years.

"Probably most owners start out thinking it'll be all music—but soon you realize it's a business like any other," says Opperman. One of the most interesting non-music projects was a "motivation tape"—a cassette version of the best-selling book, *Operational Management* by Dr. Andrew Grove of Intel corporation. "That's a big field, cassette publishing, and I don't know if other studios are very involved in this," says Opperman. Earl Nightingales's syndicated radio show has been recorded there for four years, as well.

On the music front, here are some artists who recorded at Fane in '84: Reggae singer and bassist Haile Maskel (Oppulance Records), top-selling gospel artist and former Santana member Leon Patillo (Word Records), Northwind, a band produced by George Winston for Palo Alto Jazz, and both Eddie and the Tide and Lacy J. Dalton did demo work.

Sunnyvale's 16 track Sensa Studio upgraded in '84 with a new Amek "Matchless" console, new playback heads for their Ampex MM-1000 16 track recorder, a new Otari 5050B two track, an Ecoplate stereo plate reverb, various other outboard gear and microphones. Sensa's been working on music to the syndicated TV shows "The Video Game" and "Starcade", and audio for a 16mm film on the space shuttle program. Manager Doug Hopping says he's happy and relieved to report that '84 was Sensa's most successful year since it opened in 1979.

Two-year-old Catero Records, run by engineer/producer Fred Catero, has been picking up some momentum since our last update. A half-dozen jazz albums have hit the market with the Catero label in '84, and here are some artists scheduled for release in early '85: Terry Garthwaite; a Brazilian acoustic jazz group called Metropolis; and classical fusion synthesist Cecil Verteaux. Catero has a new distribution system, American Independent Records.

Leo's Music stores in Oakland across the bay from San Francisco are undergoing a transformation to accommodate the changing demands of today's recording scene. In '85 all three stores will merge: Leo's Professional Audio, Leo's Music, and Leo's Drums. The new company name is Leo's Audio and Music Technology.

General Manager Bob Ulius explains that, "the recording business is changing—everything is becoming automated. You're seeing more one-man studios—electronic home-style studios.

## MUSIC ANNEX RECORDING

A name can only say so much; "Music Annex" doesn't tell the half of it. Plenty of other audio activity, as well as video, is part of this studio's picture. Picture this: you're in sunny Menlo Park, California, at the chief engineer's position inside a pie-shaped control room. Looking through the glass window to your right, you see the 24 track Studio C. Through the window to your left is Studio D, a full-blown soundstage with 3/4-inch video system and fully-stocked lighting grid. A bank of monitors are mounted in the wall directly before your eyes. Behind you, blinking lights indicate the presence of synthesizers, synchronizers, and assorted outboard gear.

With Studios C and D locked together, you can record on two dozen audio tracks and simultaneously carry on a three-camera video shoot. These days, most performers record first at a multi-track studio, then go elsewhere to lip-sync on stage. But Music Annex clients can record and edit their sights and sounds at the same time, from the same chair.

In late '82, M.A. owner/manager Dave Porter, along with studio consultant George Augspurger, began planning video's entry into the Annex. Research determined that the Bay Area needed an acoustically-correct soundstage, not the kind typically available for TV production (most often a huge, acoustically-poor room in a noisy area). The M.A. soundstage was completed in early '84. Add this to three complete recording studios, and you've got quintessential audio-for-video.

This can be expensive. Using Studios C and D together can run up to \$8,000 a day. Therefore the Annex offers performers the less expensive lip-sync production method, in the studio or on location, and uses the soundstage primarily for commercial clients including Chrysler, Activision,

and Apple Computer. The M.A. client pie slices this way: music recording, 50 percent; industrial and corporate video production, 30 percent; ad and jingle production, 20 percent.

Apple Computer is M.A.'s most active client. The Annex worked with Apple to develop the first interactive computer tutorial program, a "prompting tool" recorded on cassette that's synched to visual data appearing on the McIntosh monitor (the program is supplied to customers in lieu of a manual). Many other software designers have since imitated this idea.

Despite all this, Dave feels that M.A.'s biggest accomplishment in '84 was the completion of its cassette duplication plant. Basically consisting of Otari DP-80s and King Sidewinders, the plant produces up to 100,000 units per month. This rates M.A. as one of the area's highest-volume duplicators, and puts a studio in the rare position of being able to provide finished product.

And what of the "music" in the studio's name? M.A. remains popular with jazz artists from Palo Alto Records and Windham Hill; Alex De-Grassi created his latest LP "Southern Exposure" here. Studio C recently received an AMEK 2500 console; here, too, the MIDI standard is often in use. Ronnie Montrose, who Dave calls "the king of MIDI," plays and produces music in Studio C on a regular basis.

In 1985, M.A.'s tape duplicating capacity will grow to 150,000 units per month. The studio will install Sony's 1610 digital two track and plans to purchase a Fairlight synthesizer. Dave would like to get "a real tweaky state-of-the-art SSL console, but we won't commit to it yet. . . I'm afraid there aren't enough big budgets in the Bay Area right now; the Automatt's closing could be detrimental to everyone, because there are fewer premier studios in the area. People might get the impression that the Bay Area is no longer a quality place to record."

But we all know that *that's* not true!

—Linda Jacobson

# Back Issues

- 1982 January, Northwest Listings. Mixing Consoles. Grateful Dead's Studio. Lindsey Buckingham
- 1982 February, Southeast Listings. Digital Synthesizers. Dave Edmunds. John Meyer
- 1982 March, Northeast Listings. Car's Studio Microphones. Phil Ramone
- 1982 April, Video Focus. A/V Studio Listings. Video Music Satellite. Mike Nesmith. Legal Issues in Video. John Boylan
- 1982 May, Southwest Studios. Quarterflash. Charlie Pride's Studio. Digital Recording. Fantasia Digital Soundtrack
- 1982 June, Concert Sound & Remote Recording. Drum Machines, Pt. 2. Keyboard Artists Forum. Video Legal Issues. Bones Howe
- 1982 July, Studio Design. Listings of Designers, Suppliers. Power Amp Report. Quincy Jones. Willie Nelson's Studio
- 1982 August, 5th Anniv. Issue. History of Recording. Asia. Oscar Peterson. Bill Porter. Beatles' Console.
- 1982 September, S. Cal. Listings. Film Sound. The Dregs. Video Synchronizer Survey. Digital Discussions, I. Supertramp Studio
- 1982 October, N. Central Listings. Studio Monitors. John Cougar. Digital Discussions, II.
- 1982 November — SOLD OUT
- 1982 December — SOLD OUT
- 1983 January, Northwest Listings. Multi-track Analog Tape Recorders. Record Restoration. Michael Palin. Narada Michael Walden
- 1983 February — SOLD OUT
- 1983 March, Southeast Studios. Echo, Reverb & Delay, I. Buddy Euse. Electronic Religion. Phil Dunne
- 1983 April, Music Video. Video Production, Post Production Listings. Missing Persons. Echo, Reverb & Delay, II. Toto
- 1983 May, Northeast Listings. Donald Fagen. Mixing Console Forum. Echo, Reverb & Delay, III. Harry Nilsson. Randy Newman
- 1983 June, Sound Reinforcement/Remote Recording. Showco. Frank Zappa. Mixing Console Forum, II. Papa John Creach
- 1983 July, Southwest Listings/Recording School Listings. Audio Special Effects. Josef Zawinul. Education Update
- 1983 August, Studio Design, Designers & Suppliers Listings. Bill Putnam. Phil Collins. Bee Gees' Studio
- 1983 September — SOLD OUT
- 1983 October, Fall AES New Products. Video Production Supplement. Women in Audio. Joe Jackson Interview
- 1983 November, N. Central Listings. Compressors/Limiters. Canadian Recdg. Herbie Hancock. Vocal Miking.
- 1983 December, Tape to Disk. Stereo Mastering Recorders. Audiochips. Godley and Creme. Stan Freberg
- 1984 January, Northwest Listings. Reference Monitors. Video Hardware. Software. Huey Lewis. Michael Sembello
- 1984 February, Independent Engineers & Producers. NAAM Show. Ronnie Lane. Keyboard Artists Forum. Allan Holdsworth
- 1984 March, Southeast Studios. Microphone Special Report. Religious Recording. Oak Ridge Boys. Sound in Australia
- 1984 April, Video Production & Post-Production. Video Production Supplement. Time Code Special. Jeff Baxter and Brian Setzer.
- 1984 May, Northeast Recording Studios. Studio Computers. NASA Sound. Robert Moog. Billy Joel and Jim Boyer. Roger Nichols.
- 1984 June, Remote Recording & Sound Reinforcement. George Benson's Studio. Computer Music. Pre-enders' Chrissie Hynde
- 1984 July, Southwest Studios, Recording Schools & Programs. Cassette Multitracks. Jobs in Recording. King Crimson. Booker T. Jones.
- 1984 August, Studio Design Special. Danny "Kootch" Kortchmar. Computerized Music Sound for the Olympics
- 1984 September, Southern California Listings. Film Sound "85". Digital Resource Guide. Interactive Disks
- 1984 October, Fall AES New Products. N.Y. Soundstages. Lindsey Buckingham. Optical Disk Update
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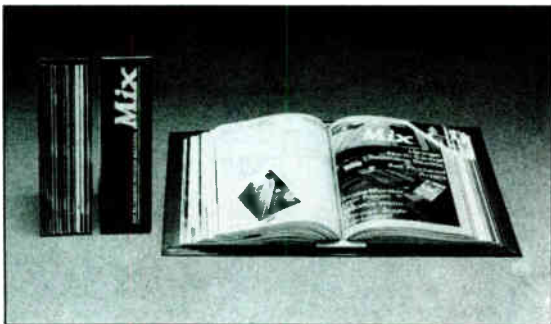
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*Triad Studios  
in Redmond, WA.*

There's also the computer interface with all kinds of equipment." Therefore, he says Leo's won't be selling certain types of instruments anymore—the acoustic guitar, for example. The hot instrument in '84 was the Kurzweil 250 synthesizer. "We sold eleven of them in the Bay area." Ulius reports that many of them were sold to musicians, including Huey Lewis.

Because much of what they sell is electronic and not freestanding, in May, Leo's installed a "one car garage 24 track studio," as Ulius calls it, to demonstrate equipment. As far as announcements for '85, Ulius says Leo's will have the new Sony/MCI digital two track machine in March.

California's capital city, Sacramento, has another 24 track studio since Moon Studios upgraded from 16 track. An MCI 24 track recorder and a 600 series console went into the redesigned control room, and this month owner George Whyler says he'll have his new Yamaha DX-7 synthesizer. These dramatic changes reflect a completely different direction for the studio. "We're looking for more commercial work, and we're doing more advertising," says Whyler.

Moving up the coast to the Seattle market: Telemation continues to upgrade their audio studios as a part of a large video facility. Studio A went from 16 to 24 tracks with modifications to the Neve 5116 console. The Q-Lock system for video now includes Automatic Dialog Replacement (ADR), and more renovation is planned for '85 in four track Studio B.

Studio manager Peter Lewis says there's no question about it, "We're married to video," and that means not only audio for commercials and industrials, but a lot of original orchestration for films and special programming. For example, Telemation is scoring the digital soundtrack for a series of shows about rock and roll. "Walk Through Rock" is not necessarily a broadcast entity. It will start as a traveling show that au-

diences pay to attend at pavillions and concert halls. Another programming project is "The Golden Link," a 6½ hour series about the history of the Olympics. Telemation shot video and recorded a



*R.O. Studios; Concord, California.*

soundtrack for an IBM interactive training disk, as well.

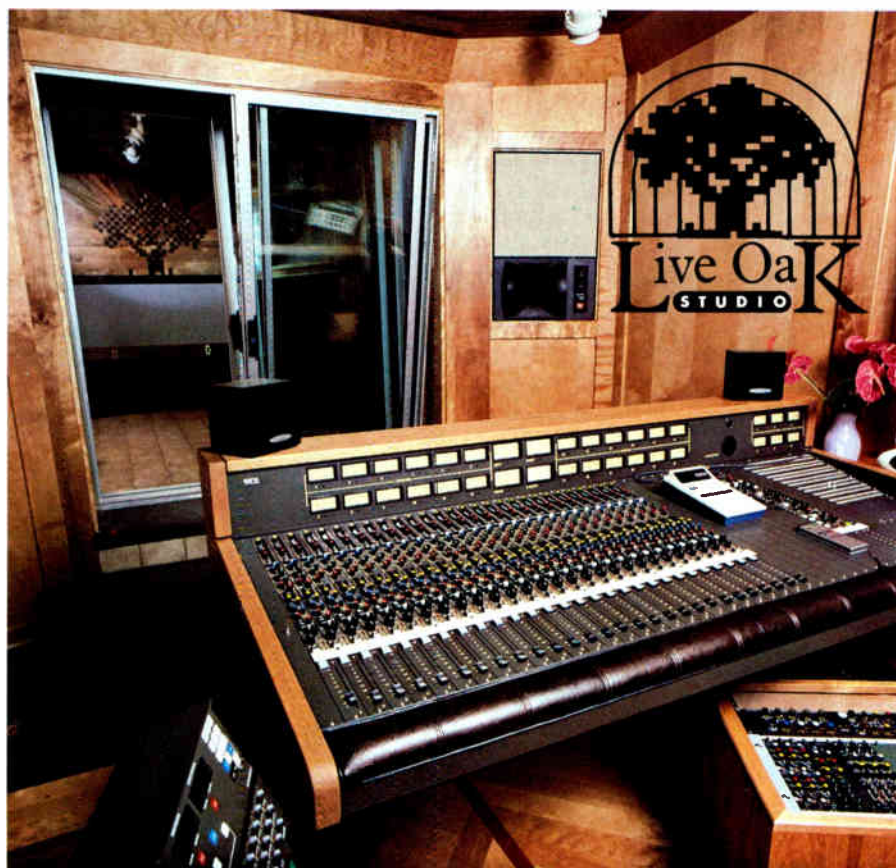
At Triad Studios in Seattle, Dan Foster says a couple of major studios were under, leaving more business for his two rooms. He also says his steady bookings in the last year could be because, "we've found that people are staying home so we've gotten a lot of projects that otherwise would have gone to LA."

Triad can handle more business now that they've upgraded their second studio to 24 tracks with an MCI 24 track recorder, an Otari two track, a Neotek Series III board and a Lexicon digital reverb. Foster says there's enough music happening in Seattle to give him 15 album projects in the past year, including an EP for EMI heavy metal band Queensryche. Co-owner Jim Loomis adds that jingle work keeps both rooms pretty busy.

In response to the Seattle shake-up, Steve Lawson Recording also expanded. Actually, their new third room used to be neighboring Summit Studio, and in July when Lawson took it over, some remodeling was done. The staff has grown to include more engineers, too. What has been fueling this growth? Ad budgets, says Steve Lawson. "1984 was the boom year for commercials, but in '85 I'm looking at a little softening." The low-rates-after-7pm policy attracts many bands doing demos, but Lawson says candidly, "we haven't seen any label work to speak of."

Bear Creek, located 20 minutes out of Seattle on a 10 acre horse farm, is an 11 year veteran of the regional market. Owner Manny Hadlock stresses that hers is a production company, not just a facility for hire. Her explanation for the stable business in '84 is repeat clients and complete control over end product.

—PAGE 138

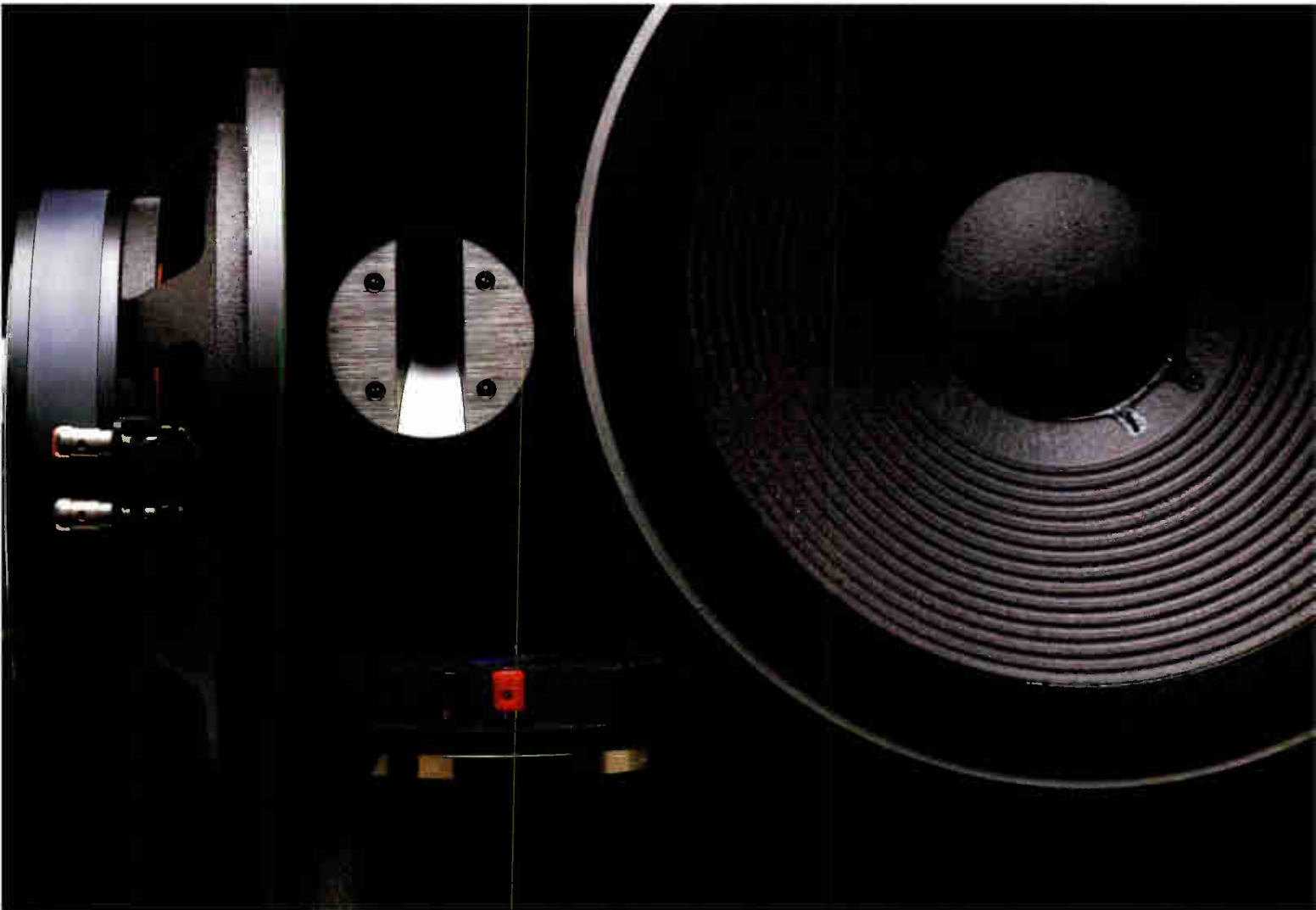


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 4542 49th S.W., Seattle, WA 98116  
 (206) 932-6348  
 Owner: Harlan Michael Weniger  
 Studio Manager: Harlan Michael Weniger

•• **ARCAL PRODUCTIONS**  
 2732 Bay Rd., Redwood City, CA 94063  
 (415) 369-7348  
 Owner: Arcal Inc  
 Studio Manager: Sal Viola

•• **ARMY STREET STUDIO/BSU PRODUCTIONS**  
*also REMOTE RECORDING*  
 P.O. Box 31425, San Francisco, CA 94131  
 (415) 821-6962  
 Owner: Im Keylor  
 Studio Manager: L. I. Gass



A.T.R. STUDIOS  
 Lafayette, CA

•• **A.T.R. STUDIOS**  
 P.O. Box 993, Lafayette, CA 94549  
 (415) 283-4094  
 Owners: R T A, Inc

Studio Manager: John and Duncan Rowe  
 Engineers: Duncan Rowe, John Rowe, Steve Arezzi, Peter Howe  
 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, Fisher cassette, Sanyo cassette.  
 Mixing Consoles: Sound Workshop Series 30 16x16  
 Monitor Amplifiers: Yamaha P2201, Yamaha P2050, Symetrix HA 10B, Spectra acoustic  
 Monitor Speakers: UREI time-aligned model 811A's; Yamaha NS 10's, Klipsch (studio playback).  
 Echo, Reverb, and Delay Systems: Echoplex II; DeltaLab DL-1; Korg digital delay  
 Other Outboard Equipment: UREI 1176 limiters (2), Symetrix noise gates (6)  
 Microphones: Neumann U-87, Sony C-55's, C-22; RCA DX-77, Neumann M 49, Shure 53, 57, 545, Sennheiser 441's, 421's, EV-RE20, DS 35  
 Instruments Available: Brambach baby grand, Junc 60 synthesizer, LinnDrum machine, guitars, bass, Scholz-Rockman, amps Studio tuned set of drums.  
 Rates: \$20 per hour

•• **AUDIO PRODUCTION STUDIO**  
 7404 Sand Lake Road, Anchorage, AK 99502  
 (907) 243-4115  
 Owner: Creative Productions, Inc  
 Studio Manager: Bruce Graham, Ginn Davin

•• **AUDIO RECORDING INC.**  
*also REMOTE RECORDING*  
 4718-38th Ave. N.E., Seattle, WA 98105  
 (206) 525-7372, 623-2030  
 Owner: Kearney W Barton  
 Studio Manager: Kearney W Barton

•• **AUDIO RECORDING STUDIO**  
 E. 9315 Trent, Spokane, WA 99206  
 (509) 928-9440  
 Owner: Gary Long  
 Studio Manager: Gary Long

•• **AUDIO-VISUAL ASSOCIATES**  
*also REMOTE RECORDING*  
 1515 Old Bayshore Highway, Burlingame, CA 94010  
 (415) 692-1271  
 Owner: Stephen White  
 Studio Manager: Ron Vierra

•• **AUDISSEY**  
*only REMOTE RECORDING*  
 1020 Auahi St., #6, Honolulu, HI 96814  
 (808) 521-6791  
 Owner: Garald Luke, Rick Parlee  
 Studio Manager: Rick Parlee

**•• BOBKAT PRODUCTIONS STUDIO**

also *REMOTE RECORDING*  
P.O. Box 5503, Berkeley, CA 94705  
(415) 548-9766

Owner: Bob Stohl, Kat Epple  
Studio Manager: Bob Stohl, Kat Epple  
Engineers: Bob Stohl, Kat Epple  
Dimensions of Studios: 11' x 18' x 12'  
Tape Recorders: Tascam 38-8 8-track; Teac 3340 4-track; Tascam 22-2 2-track; various cassette decks; Technics SV-100PCM (PCM), Synergy II 4 track digital memory recorder, Roland MS0700 8-track MIDI recorder

Mixing Consoles: SoundTracs 16/4/2S, Ashly Audio SM16 16/4/2; TEAC Model I B-2.  
Monitor Amplifiers: Lux 71-4A.

Monitor Speakers: EV Sentry 100A, Yamaha NS-4  
Echo, Reverb, and Delay Systems: Electron II ADM 1024 digital delay; Yamaha R1000 digital reverb; Roland Space Echo, various tape delays.

Other Outboard Equipment: 8 tracks of dbx noise reduction; Vocoder, parametric EQ-sustainer, MU-Tron III, stereo chorus, Tapco 2210 graphic EQ turntable  
Microphones: Sony, Beyer.

Instruments Available: Synergy II/GDS digital synthesizer interfaced MIDI and RS232 to KayPro 4 computer, Roland JX3P with PG3200 synth, SC16 track synth, Roland string synthesizer; Drumulator and Digi-Drums; Lyricon I woodwind synthesizer, MSQ 700 MIDI sequencer, flutes, bass flute, Shakuhachi, various woodwinds and percussion, S.C.I. model 64 MIDI sequencer and Commodore computer

Video Equipment & Services: Sony VO-2610 3/4-inch video recorder; VHS recorder; Sony Beta deck; IVC video enhancer, Sony monitor; digital video synthesizer available; Sany AVC 3250 camera; Quasar VK 700 camera; 7MW HeNe and other lasers available.

Rates: Call for recording, production, and video duping rates. (\$20/hr minimum)

**•• BOUNTY MUSIC**

also *REMOTE RECORDING*  
P.O. Box B, 98 Hana Highway, Paia, HI 96779  
(808) 579-9498

Owner: Paul Weinstein  
Studio Manager: Paul Weinstein

**•• BROADCAST PRODUCTIONS/**

**SONRISE RECORDING, INC.**  
also *REMOTE RECORDING*  
P.O. Box 369, Brookings, OR 97415 or  
P.O. Box 3191, Coos Bay, OR 97420  
(503) 469-5873

Owner: Chuck Carfrey  
Studio Manager: Gary Wise

**•• A BROWN SOUND**

23 Joseph Court, San Rafael, CA 94903  
(415) 479-2124

Owner: Robert Brown.  
Studio Manager: Robert Brown  
Engineers: Benny Vincent, Peter Penhollow, John Laverne  
Dimensions of Studios: (63) 20' x 24'; (59) 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 (customized) 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.  
Video Equipment & Services: VHS & 3/4-inch format. Production and editing.  
Rates: \$20/hr and up. Block time available

**•• CAPITOL CITY STUDIOS**

also *REMOTE RECORDING*  
911 East Fourth Avenue, Olympia, WA 98506  
(206) 352-9097

Owner: Allen P. Giles  
Studio Manager: Allen P. Giles

**•• CAVE RECORDING**

P.O. Box 3667, Santa Clara, CA 95055  
(408) 244-2283

Owner: Cave Recording  
Studio Manager: Brett Tyson

**•• CAVE STUDIOS**

136 E. 14th, Oakland, CA 94606  
(415) 763-1773

Owner: Jan Willson  
Studio Manager: Jan Willson

**•• CENTER FOR CONTEMPORARY MUSIC**

Mills College, 5000 MacArthur Blvd., Oakland, CA 94613  
(415) 430-2191

Owner: Mills College  
Studio Manager: David Rosenboom, director

**•• RICK CHAISSE PRODUCTIONS**

also *REMOTE RECORDING*  
19 Locke Way, Scotts Valley, CA 95066  
(408) 438-2331

Owner: Rick Chaisse  
Studio Manager: Rich Chaisse

**•• CHAPELWOOD PRODUCTIONS**

P.O. Box 672, Broomfield, CO 80020  
(303) 466-3619

Owner: Ken Chapelwood  
Studio Manager: Cliff Chapelwood

**•• COVENANT RECORDINGS, INC.**

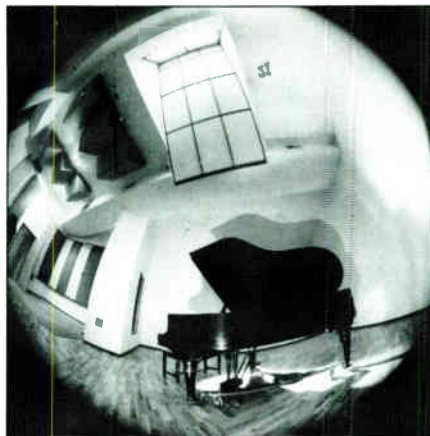
& CASSETTE DUPLICATION  
also *REMOTE RECORDING*  
1345 Major Street, Salt Lake City, UT 84115  
(801) 487-1096

Owner: Covenant Recordings, Inc  
Studio Manager: Dean Stubbs

**•• COZY DOG RECORDING STUDIO**

603 SE Morrison Rd., Vancouver, WA 98664  
(206) 694-1845

Owner: Tad Suckling  
Studio Manager: Tad Suckling



*CREATIVE FIRE RECORDING  
Ellensburg, WA*

**•• CREATIVE FIRE RECORDING**

607 West 3rd Ave., Ellensburg, WA 98926  
(509) 962-2820

Owner: Sam Albright  
Studio Manager: Steve Peha

**•• CREATIVE SOUND STUDIO**

602 Cree Dr., San Jose, CA 95123  
(408) 224-1777

Owner: Richard Dias  
Studio Manager: Ramah Dias

**•• DANGEROUS RHYTHM RECORDING STUDIOS**

3700 E. 12th St., Oakland, CA 94601  
(415) 261-9150

Owner: Matt Wallace, Laurie Nelson  
Studio Manager: Kevin Kvarme

**•• JAMES DANIELS PRODUCTIONS**

also *REMOTE RECORDING*  
P.O. Box 618, Palo Alto, CA 94301  
(415) 325-8574

Owner: Jim Daniels  
Studio Manager: Bruce Kaphan

**•• DITURI RECORDING**

307A W. 11th St., Tracy, CA 95376  
(209) 835-4994

Owner: Louie Dituri  
Studio Manager: Louie Dituri

**•• DOG FISH SOUND**

also *REMOTE RECORDING*  
Route 1, Box 83A, Newburg, OR 97132  
(503) 538-5638, (206) 828-7589

Owner: Drew Canulette, Norm Costa  
Studio Manager: Drew Canulette, Carol Howell  
Engineers: Ben Goldfarb, Drew Canulette

Dimensions of Studios: Main room: 19' x 21' x 11'; vocal booth 7' x 8' x 11.5'; drum booth 7' x 11' x 13'

Dimensions of Control Rooms: (Truck) 14' x 8' x 6'8"

Tape Recorders: Otari MX7800 8-track, Technics 1500 2-track; Akai (cassette) GXF 71 2-track; Sony (cassette); dbx 700 2 track.

Mixing Consoles: Sound Workshop Series 34 24x24x2x2; Sound Craftsmen series 200 16x4x2.

Monitor Amplifiers: UREI, Crown, BGW  
Monitor Speakers: JBL 4330, Rodgers LS 3A, Klipsch La Scala (studio).

Echo, Reverb, and Delay Systems: DeltaLab acoustic computer, live chamber, Yamaha RV-1000

Other Outboard Equipment: UREI LA-4, Symetrix CL-501, Bi-amp graphic EQ, Whirlwind 200 ft. 27 pair split snake.

Microphones: AKG C-414EB, 451EB, 452; E-V RE20, Sennheiser 421; Shure SM-57, Sony 33P, ECM-63; Neumann U-89

Instruments Available: Ives & Ponds baby grand piano, Oberheim OB-SX, Pearl drum kit

Video Equipment & Services: IVC 1/2-inch portable VCR  
Rates: On request.

**•• DOME STUDIOS**

1912 Gilmore Trail, 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 channel.

Monitor Speakers: JBL 4313, Auratones, Klipsch

Echo, Reverb, and Delay Systems: DL-2 Acoustic computer, AKG BX-5 reverb

Other Outboard Equipment: 8 channels dbx; 2 Furman Comp/Limiters; Orban 622B Parametric; Rane HC-6 headphoned amp, Rane RE27 and GE27 graphic equalizers.

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, Yamaha DX-7

Rates: Upon request.

**•• DUSTY ROADS STUDIO**

Rd. 204 #5886, Carpenter, WY 82054  
(307) 649-2288

Owner: Duane Morse, Ed Bundy  
Studio Manager: Duane Morse

**•• EMERALD SOUND**

1164 Lea Dr., Novato, CA 94947  
(415) 892-7120

Owner: Tony Crivello  
Studio Manager: Tony Crivello

**•• EMW STUDIO**

also *REMOTE RECORDING*  
76 Pasadena St., San Francisco, CA 94134  
(415) 334-0172

Owner: Joseph Enright, Tony Enright, Dan Manfredi, Chip Wagner.

Studio Manager: Joseph Enright

**•• FAIRHAVEN RECORDING STUDIO**

Western Washington University, Bellingham, WA 98225  
(206) 676-3681

Studio Manager: Richard Senechal

**•• FAST TRACK (RECORDING) STUDIO**

also *REMOTE RECORDING*  
1906 E. 115 Pl. N, Northglenn, CO 80233  
(303) 457-0730

Owner: Technical Sounds Inc.  
Studio Manager: Wayne Gerbranbt

**•• FOCUSED PRODUCTIONS, INC.**  
30 Berry St., San Francisco, CA 94107  
(415) 777-3108

Owner: Jeff Roth

Manager: 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 and film score recording to image, this 8 track studio (Otar) 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.

Focused specializes in video "sweetening" and is equipped with a ¾-inch VTR, BTX synchronizers and computer keyboard and automated mix console

**•• FORTE STUDIOS**

also **REMOTE RECORDING**  
12495 S.W. Summertest 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: Dave Knapp, Fred Sell

**•• FOUND SOUND**

512 N. 63rd, Seattle, WA 98107  
(206) 632-0607

Owner: Chip Jordan

Studio Manager: Chip Jordan, Craig Ross

**•• FOX RECORDING**

also **REMOTE RECORDING**  
123A Beth Dr., Felton, CA 95018  
(408) 335-5562

Owner: T. Fox and Associates

Studio Manager: Tom Fox

**•• FRED FOXX MUSIC CO./STUDIO IV**

also **REMOTE RECORDING**  
5 Elkwood Dr., San Francisco, CA 94080  
(415) 994-5908

Owner: F.H. Nesbitt, Jr.

Studio Manager: V.A. Nesbitt

**•• FREELANCE CHRISTIAN RECORDING**

37914 Shenandoah, Springfield, OR 97478  
(503) 726-9289

Owner: Guy Ritter

Studio Manager: Guy Ritter

**•• FREEWAY EIGHT TRACK**

2248 East 14th St., Oakland, CA 94606  
(415) 532-3700

Owner: Bernie Rivera, Billy Rivera

Studio Manager: Dave Humrick

**•• GENERATION ORGANIZATION**

also **REMOTE RECORDING**  
4840 Brookwood, Eugene OR 97405  
(503) 484-9087

Owner: Lew Thorne

Studio Manager: Lew Thorne

**•• GRAFFITI SOUND**

853 Valencia St., San Francisco, CA 94110  
(415) 550-0223

Owner: Joe Trujillo

**•• GRASS ROOTS RECORDING STUDIO**

also **REMOTE RECORDING**  
2737 NE 25th Ave., Portland, OR 97212  
(503) 281-5108

Owner: Michael O'Rourke

Studio Manager: Michael O'Rourke

**•• HACIENDA INTERNATIONAL MEDIA**

P.O. Box 632, Forestville, CA 95436  
(707) 887-1951

Owner: Jane J. Oliver, Phil Hirsch

Studio Manager: Phil Hirsch



**•• HANDS-ON RECORDING STUDIO**  
530 East Alameda Avenue, Denver, CO 80209  
(303) 698-1669  
Owner: John Burris, Lorne Baum  
Studio Manager: John Burris, Lorne Baum

**•• HANK'S BASEMENT AUDIO**  
5665 E. Colorado Ave., Denver, CO 80224  
(303) 756-8777  
Owner: H.B.A. Enterprises, Inc.  
Studio Manager: Hank Anderson

**•• HARBINGER N.W. PRODUCTIONS**  
(formerly Little Bird Productions)  
4416 SE Hwy 101, Lincoln City, OR 97367  
(503) 996-2575  
Owner: L.F. Caulkins  
Studio Manager: L.F. Caulkins

**•• HARVEST PRODUCTIONS**  
Route 3, Box 85, Northport, WA 99157  
(509) 732-6657  
Owner: Jim & Ronda Murphy  
Studio Manager: Jim Murphy

**•• HORIZON AUDIO RECORDING CO., INC. (H.A.R.C.)**  
also **REMOTE RECORDING**  
10297 Bethel Burley Rd. S.E., Port Orchard, WA 98366  
(206) 895-0404  
Owner: Kerry L. Pilling, president  
Studio Manager: Jay Kluth

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

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

**•• INLAND AUDIO VISUAL COMPANY**  
N. 2325 Monroe, Spokane, WA 99205  
(509) 328-0706  
Owner: Larry Ellingson  
Studio Manager: Bruce Hemingway  
Engineers: Bruce Hemingway, Larry Ellingson  
Dimensions of Studio: 13'½' x 18'  
Dimensions of Control Rooms: 9' x 13'½'  
Tape Recorders: Otari: MX5050B8HD 8 track, 2-Otari MX5050B2T 2-track, Tascam 34 4 track, Tascam 122 cassette 2 track  
Mixing Consoles: Sound Workshop 1280-8EQ 12x8x2  
Monitor Amplifiers: Yamaha P2050 power amp  
Monitor Speakers: Rogers LS35A  
Echo, Reverb, and Delay Systems: Sound Workshop 262 reverb, MXR 1000ms digital delay  
Other Outboard Equipment: Mutron BiPhase stereo phase-shifter, MXR flanger, Boss chorus  
Microphones: Shure SM7, (3) Shure SM 57, (4) Sennheiser MD421U, Sennheiser Shotgun system, (3) E.V PL76  
Instruments Available: Roland Juno-6, MC-202 microcomposers, S-100 module, Rhodes stage 88 piano, Hohner D-6 clavinet, MXR drum computer, Garfield Mindoc, ARP 2600, Odyssey  
Rates: 2- and 4-track recording, 2-proj programming, VHS editing at \$30.00 per hour. 8 track recording \$36.00 per hour, 3-6 proj. programming at \$45.00 per hour.

**Extras:** Music and sound effects libraries, local voice talent bank, in-house music composition and production. The synthesizer system allows a fully-automated "performance" of four monophonic synthesizer and digital drums after programming in leisure-time. An 18 projector AVL multi-image system is the largest within a 250-mile radius.  
**Direction:** Our audio recording facility exists to provide creative, high-quality approach to producing radio spots and soundtracks for our own multi-image productions, film and video programs and commercials, for agencies and producers.

**•• JADE PRODUCTIONS**  
P.O. Box 4803, Modesto, CA 95352  
(209) 578-3770  
Owner: Gina A. Rose  
Studio Manager: Alvin R. Rose

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

**•• JB RECORDINGS**  
6532 5th Ave. NW, Seattle, WA 98117  
(206) 783-6579  
Owner: Jim Bachman  
Studio Manager: Jim Bachman

**•• JOYFUL SOUND PRODUCTIONS**  
4737 W. 31st Ave., Denver, CO 80212  
(303) 477-1742  
Owner: James S. McBride  
Studio Manager: James S. McBride

**•• 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**  
Pacifica, CA  
(415) 355-6617

**•• KEZR STUDIOS**  
777 North First Street, Suite 700, San Jose, CA 95112  
(408) 287-5775  
Owner: Alta Advertising Inc.  
Studio Manager: Michael McGurk

**•• KOSTOV & ASSOCIATES/MULTI-MEDIA STUDIOS**  
221 First Ave. West, Suite 120, Seattle, WA 98119  
(206) 285-2797  
Owner: Michael M. Kostov  
Studio Manager: Heed O. West

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

**•• MADMAN STUDIOS**  
3268 Adeline St., Berkeley, CA 94703  
(415) 654-1564  
Owner: Bill Thompson  
Studio Manager: Bill Thompson  
Engineers: Bill Thompson, Robert Keller  
Dimensions of Studios: 12' x 18' (main room), 8' x 8' (drum), 4' x 8' (vocal booth)  
Dimensions of Control Rooms: 12' x 16'  
Tape Recorders: Otari MK III 8 track, Technics 1520RS 2 track, Sony ASP FX1010 cassette, TEAC 2440 4 track (tape slap)  
Mixing Consoles: Sound Workshop series 30 16x16  
Monitor Amplifiers: Sony, Crown  
Monitor Speakers: JBL 4311, Teledyne AR8b, Auratone.  
Echo, Reverb & Delay Systems: Master-Room XL 305, Tapco 4400, Furman RV 1, Lexicon PCM 41 ddl, DL-4, MXR flanger/doubler  
Other Outboard Equipment: Symetrix noise gates, (2) Orban 672A 9 band parametric EQs, Furman parametric, (2) dbx 161 comp/limiter, LA-3, I.A.-4 comp/limiters, dbx NR 8 tracks.  
Microphones: Neumann, AKG, Crown P2M, Sennheiser, Audio-Technica, EV, Beyers, Shure  
Instruments Available: Marshall & Wendell upright grand, Fender Rhodes, Micro Moog, Pro 1, Yamaha DX7, DX9, Sequen-



tal circuits 6-track DX, DMX drum machines with Commodore 64 computer and sequencer, Gibson and Yamaha guitars, various amps

**Rates:** \$20 per hour — block booking rates available

**Extras:** Complete drum machine and sequencer programming by in-house engineers. We specialize in sync to tape for multiple drum machines and synths. Recently completed projects have returned as many as 28 tracks (synced from tape direct to 2 track. Full production services include production (pre & post) arranging, performing, programming and engineering. Give a call and let's talk about what machines can do for you.

•• **MANTRA SOUND STUDIO**

P.O. Box 3072 Lihue, Kauai, HI 96760  
(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, and Delay Systems:** Roland RE-130 delay, Tapco 440 reverb, ADM 1024 DeltaLab digital delay

**Other Outboard Equipment:** Kepex, Gain Brain, UREI 1176 limiters, SAE parametric E.Q., 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 Micromoog, Roland Vocorder Plus, Oberheim OB1, Les Paul Custom Rickenbacker 4001, Aria 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 instruments

**Rates:** 8 track recording/mixing/playback \$30/hr, 2 4 track recording/mixing/playback \$20/hr

•• **MAXIMUM SOUND STUDIOS**

2555 17th St., Denver, CO 80211  
(303) 455-0611

Owner: Max Hannum

**Studio Manager:** Mark C. Peterson



*McCune Studios  
San Francisco, CA*

•• **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:** Haller DH200 (biamped)

**Monitor Speakers:** McCune SM-4B (Altec 604s with active x-over including time-correction and E.Q. circuitry), Auratones

**Echo, Reverb & Delay Systems:** AKG BX-10, Scamp S-24 Time Shape Module

**Other Outboard Equipment:** Scamp rack including compres-

# To save you time and money we've just spent over 546 hours training your next employee!

When money and time are tight, you can't afford to train an employee from scratch. Our graduates have spent a full year in an intensive study of Audio Engineering, Music Production, Studio Electronics, Music Business and Finance, Copyright Laws and Entertainment Contracts. They're young, knowledgeable, and—because they're well trained—effective from the start. Graduates and referrals among the Majors!

If you are in need of someone already possessing the basic knowledge and skills of the industry, we might just have the person to fit your situation.



So call or  
write us at:

**COLLEGE FOR RECORDING ARTS**  
665 Harrison Street, San Francisco, California 94107  
Phone: (415) 781-6306

**P.S. If you know a promising and talented person that you'd like to help along, why not let us train them for you!**

The school is accredited by the Accrediting Commission of the National Association of Trade and Technical Schools (NATTS), approved by the Calif. Superintendent of Public Instruction, approved for Veteran training, and is authorized under Federal law to enroll non-immigrant alien students. It is also endorsed by the National Academy for Recording Arts and Sciences Training Institute.

Circle #048 on Reader Service Card

## SAN FRANCISCO SOUND RECORDING

*We are pleased to announce the Spring, 1985 opening of our new audio facility.*

*We offer an Otari MTR90 MKII 16/24-track recorder, API console with computer-assisted mixdown, and a custom monitoring system of audiophile quality.*

*An extensive selection of outboard devices features an EMT digital reverb, Publison pitch-change/DDL, and everything you might expect from a high-end recording studio.*

*Our collection of AKG and Neumann tube microphones is unmatched in Northern California.*

*Beyond esoteric equipment, we bring you the expertise we have gained from more than eight years in the industry.*

*For a tour or more information, please call John Cuniberti, Studio Manager, at (415) 474-0377.*

**San Francisco Sound Recording**  
Bottom Floor, 245 Hyde Street  
San Francisco, CA 94102

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son/limiter, parametric EQ, DNF, 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:** 1/4" production-studio or location; 3/4" editing; duplicating 3/4", BETA, VHS, 16 mm and slide 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.

•• **MELODY LINE PRODUCTIONS**  
*also REMOTE RECORDING*  
 2662 Kolioloni Circle, Pukalani Momi, HI 96788  
 (808) 572-1640  
**Owner:** Tom Hall, Bob Bangerter  
**Studio Manager:** Tom Hall

•• **MIG SOUND**  
*also REMOTE RECORDING*  
 1986 Cottle Ave., San Jose, CA 95125  
 (408) 269-8375  
**Owner:** Chris Migle  
**Studio Manager:** Chris Migle

•• **NORTH BERKELEY RECORDING**  
 1534 Edith St., Berkeley, CA 94703  
 (415) 524-5003  
**Owner:** David Buehler  
**Studio Manager:** David Buehler

•• **NORTHWEST SOUNDTRACK RECORDING STUDIO**  
 P.O. Box 7822, Eugene, OR  
 (503) 683-8663  
**Owner:** Ed McManus  
**Studio Manager:** Ed 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  
**Engineers:** Paul Speer  
**Dimensions of Studio:** 12 x 20  
**Dimensions of Control Rooms:** 10 x 12  
**Tape Recorders:** MCI JH-110C 8-track, Otari 5050 2-track, Sony cassette 2-track  
**Mixing Consoles:** Biamp Bimix 120x16  
**Monitor Amplifiers:** Crown D150A  
**Monitor Speakers:** JBL L26, Auratone 5C  
**Echo, Reverb, and Delay Systems:** MXR digital reverb, Roland digital delay, Tapco reverb  
**Other Outboard Equipment:** Orban De esser, Symetrix parametric EQ, Symetrix 511 noise reduction system, Ashly compressors  
**Microphones:** Neumann U-87, AKG 414, EV RE-20, Sennheiser 421, 441  
**Instruments Available:** Synergy digital synthesizer, Prophet 5 synthesizer, full Simmons drum kit  
**Video Equipment & Services:** BTX Shadow system, Sony Beta Hi Fi VCR, audio/video interlock scoring to picture.  
**Rates:** \$35/hour audio recording, \$60/hour video sweetening

•• **ONION AUDIO**  
*also REMOTE RECORDING*  
 P.O. Box 286, Homewood, CA 95718  
 (916) 525-4183  
**Owner:** Hank Alrich  
**Studio Manager:** Hank Alrich

•• **ON THE ROCK**  
*also REMOTE RECORDING*  
 1727 Dotsero Ave., Loveland, CO 80537  
 (303) 669-0739  
**Owner:** Don Mattson Jr  
**Studio Manager:** Don Mattson Jr

•• **OTR STUDIOS**  
*also REMOTE RECORDING*  
 P.O. Box 874, Belmont, CA 94002  
 (415) 595-8475  
**Owner:** Robert Firpo, Cookie Marenco



**Studio Manager:** Cookie Marenco  
**Engineers:** Randy Sellgren, Cookie Marenco  
**Tape Recorders:** Otari Mark III 8 track, Otari 5050B 2 track, Sony PCM F-1 2-track  
**Mixing Consoles:** Soundcraft 200B 8 in/4 out, Sound Workshop series 20 12 in/8 out  
**Monitor Amplifiers:** Crown  
**Monitor Speakers:** Tannoy, Auratones  
**Echo, Reverb, and Delay Systems:** Lexicon 224X-I digital reverb, Lexicon Super Prime Time w/1 92, DeltaLab 1024, Mic-Mix XL 305  
**Other Outboard Equipment:** Dynamite noise gates  
**Instruments Available:** Steinway 7-foot piano, Hammond B-3 organ, Prophet 5, Linn II drums, Yamaha DX-7, Roland sequencer, Musser vibraphone, Hohner xylophone, Gretsch/Sonor drums, and more provided on request  
**Video Equipment & Services:** Song production, sound scores and effects for film video, multi-image, equipment rental  
**Rates:** Available upon request

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

•• **PARAMETRIC SOUND**  
 3019 Cowell Blvd., Davis, CA 95616  
 (916) 758-8183  
**Owner:** Bob Snieckus  
**Studio Manager:** Bob Snieckus

•• **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:** Vickie Horten

•• **PEEKABOO MOUNTAIN STUDIOS**  
 P.O. Box 28, Colfax, CA 95713  
 (916) 346-8203  
**Owner:** Jeff Hester, Gail Hester  
**Studio Manager:** Jeff Hester

•• **P & G SOUND STUDIO**  
*also REMOTE RECORDING*  
 584 Aluiso St., Santa Clara, CA 95050  
 (408) 554-9776  
**Owner:** Mr Goeltz  
**Studio Manager:** Sandy Tolosky

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

•• **PUMPHOUSE PRODUCTIONS**  
 14729 Midland Road, San Leandro, CA 94578  
 (415) 352-0622  
**Owner:** Daniel Gill  
**Studio Manager:** Daniel Gill

•• **RAINBOW RECORDING STUDIOS**  
*also REMOTE RECORDING*  
 2263 Spenard Road, Anchorage, AK 99503  
 (907) 277-1015  
**Owner:** King Thurber  
**Studio Manager:** Jim Shepard  
**Engineers:** Jim Shepard, King Thurber  
**Tape Recorders:** Otari Mill-8 8-track, Ampex ATR 102 2-track, Otari 5050 BII, MKIII 2-track  
**Mixing Consoles:** Neotek series I-E 16x8, Sound Workshop Loqex 8 12x8  
**Monitor Amplifiers:** Crown  
**Monitor Speakers:** E/V  
**Echo, Reverb, and Delay Systems:** Effetron, Ursa Major Siargate, special bathroom echo.  
**Other Outboard Equipment:** Compressors, noise reduction  
**Microphones:** Neumann U-87, EV-PL77 and more  
**Instruments Available:** AlphaSyntra digital synthesizer, SCI digital drumtraks, Rhodes, various amplifiers  
**Video Equipment & Services:** Affiliated with Nine Star Productions full service video house  
**Rates:** Competitive, special demo packages available

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

•• **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 Studio:** 12 1/2' x 15'; Drum Room: 9' x 9'  
**Dimensions of Control Rooms:** 12 1/2' 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:** Delta Lab 2048 Digital Delay, DeltaLab DL-2 Acousticcomputer stereo digital delay, Sound Workshop 242 stereo reverberation unit, Eventide 910 Harmonizer  
**Other Outboard Equipment:** MXR dual 15-band graphic equalizer, dbx 154 decilinear 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.

•• **RECEIVING STUDIOS**  
*only REMOTE RECORDING*  
 931 Pardee, Berkeley, CA 94710  
 (415) 548-8152  
**Owner:** JJ LaCrampe, Tumbleweed  
**Studio Manager:** JJ LaCrampe, Tumbleweed

•• **RECORD WEST**  
 Santa Rosa, CA 95401  
 (707) 585-7310  
**Owner:** Bruce Bond, Elvin Duncan  
**Studio Manager:** Bruce Bond, Elvin Duncan

•• **REELS ON WHEELS**  
*also REMOTE RECORDING*  
 959 Vetch Circle, Lafayette, CA 80026  
 (303) 666-9593  
**Owner:** John B. Arnold  
**Studio Manager:** John B. Arnold

•• **BILL RASE PRODUCTIONS**  
955 Venture Ct., Sacramento, CA 95825  
(916) 929-9181

•• **RENEGADE RECORDING**  
also **REMOTE RECORDING**  
2869 SE Franklin, Portland, OR 97202  
(503) 239-4911  
Owner: Stephen A. Rogers  
Studio Manager: Stephen A. Rogers

•• **RIVER RECORDING**  
also **REMOTE RECORDING**  
Portland, OR  
(503) 654-5186  
Owner: Steve Parker  
Studio Manager: Steve Parker

•• **RMS COMMUNICATIONS STUDIO 1**  
also **REMOTE RECORDING**  
118 Grand Ave., Laramie, WY 82070  
(307) 742-4474  
Owner: Kevin Haines, Doug Saum  
Studio Manager: Kevin Haines, Doug Saum

•• **ROCKY MOUNTAIN ARTISTS**  
also **REMOTE RECORDING**  
6851 Highway 73, Evergreen, CO 80439  
(303) 674-5294  
Owner: John J. Newkirk  
Studio Manager: Richard L. Pntekel

•• **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

•• **SALMON BAY PRODUCTIONS**  
also **REMOTE RECORDING**  
7025 23rd Ave. N.W., Seattle, WA 98117  
(206) 782-9182  
Owner: Glen A. Travis  
Studio Manager: Diane Travis

•• **S.B. PRODUCTIONS**  
also **REMOTE RECORDING**  
560 So. Hartz Ave., Suite 360, Danville, CA 94526  
(415) 820-2070  
Owner: Scott Boorey  
Studio Manager: Scott Boorey

•• **SEISMIC PRODUCTIONS**  
also **REMOTE RECORDING**  
San Francisco, CA  
(415) 566-8207  
Owner: Mike Joseph

•• **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 1/2 track master, TEAC 122B (2x speed) with dbx  
cassette  
Mixing Consoles: Souncraft 1S 20 5  
Monitor Amplifiers: BGW Sweet C  
Monitor Speakers: Mastering Lab 'Big Reds'  
Echo, Reverb, and Delay Systems: DeltaLab DL 2, Orban  
reverb  
Other Outboard Equipment: UREI & MXR EQ's, dbx comp/lim-  
iters, Symetrix comp/limiters, Orban 424A stereo comp/limiter,  
Orban 674A stereo EQ  
Microphones: Shure, EV, Sennheiser, Crown PZM's, Wharen-  
brock PZM's  
Instruments Available: Piano, drums, bass, Alembic guitar, pre  
CBS Fender amps  
Video Equipment & Services: Sony U-Matic 1/4" deck, deck,  
Panasonic camera, JVC 19" monitor, JVC stereo VHS  
Rates: \$25-\$45/hr

•• **SOUNDCAPSULE STUDIOS**  
also **REMOTE RECORDING**  
P.O. Box 1232, Nevada City, CA 95959  
(916) 265-4441  
Owner: Michael Loomis  
Studio Manager: Michael Loomis

•• **SOUND LAB (NOBS)**  
also **REMOTE RECORDING**  
118 E. Tennessee St., Fairfield, CA 94533  
(707) 425-3466  
Owner: the NOBS  
Studio Manager: Woody Buddy

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

•• **SOUND TRACKS**  
also **REMOTE RECORDING**  
P.O. Box 2735, Jackson, WY 83001  
(307) 733-4880  
Owner: Jeff McDonald  
Studio Manager: Jeff McDonald

•• **THE SOURCE**  
2423A Magnolia St., Oakland, CA 94607  
(415) 839-9591  
Owner: John Boley, Rich Pena, Dirk Landon  
Studio Manager: John Boley, Rich Pena, Dirk Landon

•• **SOUTH END PRODUCTIONS**  
840 E 3925 S., Greenbank, WA 98253  
(206) 321-6697  
Owner: Michael & Lisa Bade  
Studio Manager: Michael Bade

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

•• **STEP ONE STUDIOS**  
432 Church St., Garberville, CA 95940  
(707) 923-3388  
Owner: Jim Dangler  
Studio Manager: Jim Dangler

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

•• **"THE STUDIO" AT MODELIA**  
553 Mikioti Place, Wailea, Kihei, Maui, HI 96753  
(808) 879-2485  
Owner: Steve McGee, Ray Purcell, Moses Moon  
Studio Manager: Steve McGee

•• **STUDIO 8 RECORDING**  
P.O. Box 2787, Alameda, CA 94501  
(415) 652-4400 x434  
Owner: Victor Owens  
Studio Manager: Victor Owens

•• **STUDIO SEA**  
also **REMOTE RECORDING**  
418 Front St., Box 1078, Wheatland, CA 95692  
(916) 633-4277  
Owner: Curt Burrows, Robert Nicoletti, Lee Burrows  
Studio Manager: James Halner  
Engineers: James Halner, Terry Smith—maintenance  
Dimensions of Studios: 20' x 30' x 14'  
Dimensions of Control Rooms: 13' x 15'  
Tape Recorders: Otari MX 5050 Mark III 8 track, (2) Otari MX  
5050 II 8 track, TEAC 3340 4 track, TEAC A401C 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), JFL 4311B (studio)

—LISTING CONTINUED ON PAGE 90

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—FROM PAGE 89

**Echo, Reverb, and Delay Systems** DeltaLab Effectron ADM1024, Orban reverb 111B, Ibanez FD 1000

**Other Outboard Equipment:** Orban 424A compressor/limiter, de-esser, (2) Biamp EQ 270 A 1/2 Octave EQ; Biamp EQ 210 octave EQ; EXR Model SP-11; Roland guitar preamp, Orban 245E stereo synthesizer; Tascam MH40 headphone amp, Countryman direct boxes

**Microphones:** AKG, Sennheiser, Shure, EV Crown

**Instruments Available:** Korg Poly 800 synth, Yamaha electric grand, Drumulator, 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:** \$30.00 an hour, block rates available



**STUDIO SEA**  
Wheatland, CA

•• **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:** 8 x 12.

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

**Tape Recorders:** MCI 110-C 6 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, Auratones

**Echo, Reverb & Delay Systems:** MICMIX Master-Room B; Super C

**Other Outboard Equipment:** Valley People Dynamite, MXR graphic EQ's

**Microphones:** Neumann U-87's, Shure SM-5B's; AKG 414's, RCA 44 and 77

**Rates:** Audio \$50/hr

•• **SUMMIT STUDIOS**  
P.O. Box 554, Los Gatos, CA 95031  
(408) 353-3952

**Owner:** Joe Weed

**Studio Manager:** Joe Weed

•• **TANGLEWOOD RECORDING**  
P.O. Box 5996, Reno, NV 89513  
(702) 747-4444

**Owner:** Michael Eardley

**Studio Manager:** Michael Eardley

•• **TAPE SERVICE UNLIMITED**  
*also REMOTE RECORDING*  
3249 Grand Ave., Oakland, CA 94610  
(415) 834-6912

**Owner:** Walt Lee

**Studio Manager:** Walt Lee

•• **TDS PRODUCTIONS**  
P.O. Box 31983, Seattle, WA 98103  
(206) 284-2399

**Owner:** Tom Dyer

**Studio Manager:** Tom Dyer



•• **3-B PRODUCTIONS**  
*also REMOTE RECORDING*  
575 N. 7th, San Jose, CA 95116  
(408) 289-1383

**Owner:** Kevin Boone

**Studio Manager:** Gavenn Ross, Alan Woodie

•• **THOMPSON & THOMPSON CREATIVE SERVICES, INC**  
*also REMOTE RECORDING*  
2320 First Avenue, Seattle, WA 98121  
(206) 447-1971

**Owner:** Jerry & Dickie Thompson

**Studio Manager:** Jerry Thompson

•• **TRACK EIGHT PRODUCTIONS**  
2040 Dalton, Boise, ID 83704  
(208) 377-4396

**Owner:** Mike Mayovsky

**Studio Manager:** Mike Mayovsky

•• **TRULLION STUDIO**  
P.O. Box 23051, Sacramento, CA 95823  
(916) 391-9691

**Owner:** Kurt & Nancy Bischoff

**Studio Manager:** Kurt & Nancy Bischoff

•• **T.S.R. PRODUCTIONS**  
*also REMOTE RECORDING*  
3387 Marysville Blvd., Sacramento, CA 95838  
(916) 925-1972

**Owner:** Tank (TY) Roshdy

**Studio Manager:** Tank (TY) Roshdy

•• **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

•• **VERSATILE VIDEO INC.**  
151 Gibraltar Court, Sunnyvale, CA 94089  
(408) 734-5550

**Studio Manager:** Roy Moore

•• **VINEYARD STUDIO**  
P.O. Box 69522, Seattle, WA 98188  
(206) 630-3466

**Owner:** Roger B. Cox, Dale Stetson

**Studio Manager:** Dale Stetson

•• **WESTERN CINE SERVICE, INC.**  
312 South Pearl Street, Denver, CO 80209  
(303) 744-1017

**Owner:** John I. Newell, president

**Studio Manager:** Paul Emrich

•• **WESTMONT RECORDING COMPANY**  
6034 Shawn Ave. S.W., Olympia, WA 98502  
(206) 943-6328

**Owner:** Richard E. Quick

**Studio Manager:** Richard E. Quick

•• **BOB WILSON RECORDING SERVICES**  
*also REMOTE RECORDING*  
4057 Partridge Dr., San Jose, CA 95121  
(408) 274-4292

**Owner:** Bob Wilson

**Studio Manager:** Bob Wilson



**XANDOR RECORDING STUDIOS**  
Orinda, CA

•• **XANDOR RECORDING STUDIOS**  
*also REMOTE RECORDING*  
407 Camino Sobrante, Orinda, CA 94563  
(415) 254-9077

**Owner:** Bill Mitchell, Lee Pay

•• **ZOOM PRODUCTIONS**  
E 9211 Trent, Spokane, WA 99206  
(509) 926-2878

**Owner:** Zoom Productions

**Studio Manager:** Clayton Wood

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on page 159.

**MOVING?**

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# NORTHWEST STUDIOS

# 16 TRACK

**Monitor Speakers:** UREI time aligned model B13, Fisher  
**Echo, Reverb, and Delay Systems:** AKG BX20E1, Lexicon Prime Time model 94, 20 x 50 live chamber  
**Other Outboard Equipment:** (4) Roger Meyer noise gates, (2) Kepex, (2) Gain Brains, (2) API compressors, MXH phaser/longer, Aphex Aural Exciter 602R, UREI limiter 1176LN  
**Microphones:** AKG C 24 (2), C 61, C 414EB, D 1000M, Neumann M 269, (2) Neumann M 269, (2) KM 54 (tube), U 67, U 87, Sony C 500, Sennheiser 421, Shure SM 56 (2), Evre 15 (2)  
**Instruments Available:** Fender Stratocaster, Fender Duo-Sonic, Ovation, Music Man Sabre, Guild, Fender Precision fretless bass, Gibson Grabber and Hipper basses, Fender Rhodes, Yamaha CS 5, Yamaha studio grand, Ludwig drums  
**Video Equipment & Services:** JVC 2650 L, " stereo video, JVC G253 camera  
**Rates:** Call for information  
**Extras:** Dental mastent and live digital recording, multi-camera w/special effects generator and "witcher on 4" 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 2 1/2 blocks to 244. We're on the left next to Luther Burbank Park, working hard to make the best sounding recordings possible.

••• **AVID PRODUCTIONS**  
*also REMOTE RECORDING*  
 235 E. 3rd Ave., #214, San Mateo, CA 94401  
 (415) 347-3417  
 Owner: Henry Billiao  
 Studio Manager: Chris Craig

••• **BAY SOUND REPRODUCTION**  
 5 Yorkshire Drive, Oakland, CA 94618  
 (415) 655-4885  
 Owner: Glenn Oey, Gene Mick  
 Studio Manager: Gene Mick  
 Engineers: Glenn Oey  
 Dimensions of Studios: 30 x 14  
 Dimensions of Control Rooms: 16 x 14  
 Tape Recorders: 3M 79 16 track, Otari MX 5050 2 8 track, Sony TCD9M, Denon DR330 cassette  
 Mixing Consoles: Soundcraft Series II, 16x16  
 Monitor Amplifiers: Acoustal TNT 200, Haller DH200, Nakamichi 620, McIntosh 2105  
 Monitor Speakers: Ed Long TA 4 Time Align, JBL 4311, Aura tones  
**Echo, Reverb, and Delay Systems:** Lexicon 200 (updated) DDL reverb, MIC MIX Master Room Super C column reverb, Deltalab DL 2 Acoustic Computer, Deltalab Super Time Time 512 DDL, Eventide Harmonizer & Instant Phaser  
**Other Outboard Equipment:** (2) UREI 1A 4s, 11/16 dbx 160 compressor limiters, ADH Scamp rack F 400, S04 S 2 4 F100 (2) S01, EXB Exciter, dbx noise reduction, SAE 1800 parametric EQ, (2) UREI 539 1/2 graphic EQ, UREI 545 octave EQ, Klark Teknik octave EQ, Ivis spectrum analyzer, Paterson strobe tuner, Valley People Dyna mites  
**Microphones:** AKG, Beyer, E.V., Neumann, Sennheiser, Shure, Crown PZM, Countryman, Tube Cube and Uni Syn direct boxes  
**Instruments Available:** Yamaha C 5 conservatory grand piano 6'6", Fender Precision bass, Gibson Les Paul 1958 EMG pickups, Zildjian & Paiste cymbals, Holo-toms, various percussion instruments, Martin 000 18 acoustic guitar, Mesa Boogie amp Moog Prodigy, Synclairs, Sonor Sculpture drums, Yamaha recording series drums, Oberheim DX digital drums, Roland Jazz Chorus amps  
**Rates:** Please call for rates. Block booking rates are available.

••• **ROBERT BERKE SOUND**  
 50 Mendell, #11, San Francisco, CA 94124  
 (415) 285-8800  
 Owner: Robert & Nancy Berke  
 Studio Manager: Mark Escott  
 Engineers: Mark Escott, Rich Ford, Chris Miloslavich  
 Dimensions of Studios: Studio A 18 x 15, Studio B 7 x 12  
 Dimensions of Control Rooms: A 13 x 19, B 15 x 21  
 Tape Recorders: Otari MTR90 16 track, (4) Otari MTR10 2 track, Otari MTR10 4 track, (4) Otari 5050 MKIII 1/2 inch 4 track, Otari 5050 MKIII 2 track, Otari 5050 MKIII 8 track  
 Mixing Consoles: Audiotronics (CHA) 110 8 16x18, Audiotronics (CRB) 700 16x16  
 Monitor Amplifiers: Bryston  
 Monitor Speakers: JBL 4430, Auratones  
**Echo, Reverb, and Delay Systems:** Master Room reverb, Lexicon 200 digital reverb, Eventide 949 harmonizer  
**Other Outboard Equipment:** Dynallex noise reduction, dbx noise reduction, Otari limiters, filters, equalizers and de-essers, Symetrix telephone interface, UREI filter set  
**Microphones:** Neumann, Shure, Electro Voice  
**Video Equipment & Services:** Video audio synchronization includes BTX Soltouch system with 2 Shadow synchronizers, BTX cypher time code system that event control: all non-synchronized records, Sony BVU 800 VTRs, Sony 5800 3/4 inch VTRs, Mitsubishi 1/2 inch VHS VCR, 3M sync generator, full video patching and switching facilities  
 —LISTING CONTINUED ON PAGE 94



**ASTRAL SOUNDS RECORDING**  
 San Jose, CA

••• **ASTRAL SOUNDS RECORDING**  
 482 Reynolds Circle, San Jose, CA 95112  
 (408) 294-5153  
 Owner: Randy Musumeci, Bill Hare  
 Studio Manager: Bill Hare  
 Engineers: Jeff Tracy, Tom Harmon, Hector Toro, Bill Hare  
 Dimensions of Studios: 28x18x12, 28x20x18, 12x7x8  
 Dimensions of Control Rooms: 18 x 12 x 12  
 Tape Recorders: 3M M56 16 track, Otari MKIII/2 2 track, Teac CX 315 cassette  
 Mixing Consoles: Quad-4/Capitol Records Unique 20x16x2  
 Monitor Amplifiers: ESS 500 Watt, Haller DH 220 (headphone)  
 Monitor Speakers: JBL 4413B  
**Echo, Reverb, and Delay Systems:** AKG reverb, MXH and Ibanez digital delay  
**Other Outboard Equipment:** UREI 546, Symetrix SE400 Moog parametric EQ, Tapco Graphic EQ, Symetrix, Haeco, MXR compressors, Symetrix 5/22 expander, limiter, gate, duckers  
**Microphones:** AKG, Audio Technica, Beyer, E.V., Sennheiser, Sony, Shure  
**Instruments Available:** Mason & Hamlin grand piano, Hammond B 3 w/Leslie, Rhodes Suitcase, Slingerland mahogany drum set, string bass  
**Rates:** Call for rates  
**Extras:** Experienced musicians available. Big isolation booth. Extremely large patchbay. 800 patch points. Lead sheets available. Excellent pressing packages. Real time cassette duplication. Large private rehearsal hall. Free coffee and tea. Microwave refrigerator/coke machine  
**Direction:** To provide a professional and inspiring atmosphere. To be sensitive to the artists particular needs. We are friendly but always efficient. We have and will continue to upgrade our equipment and facilities. Over 6 years of business has taught us to keep our minds open. Give us a call.

••• **AUDIO VISIONS**  
*also REMOTE RECORDING*  
 313 Brokaw Rd., Santa Clara, CA 95050  
 (408) 988-2048  
 Owner: Leo Anthony Graziani  
 Studio Manager: Leo Anthony Graziani

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

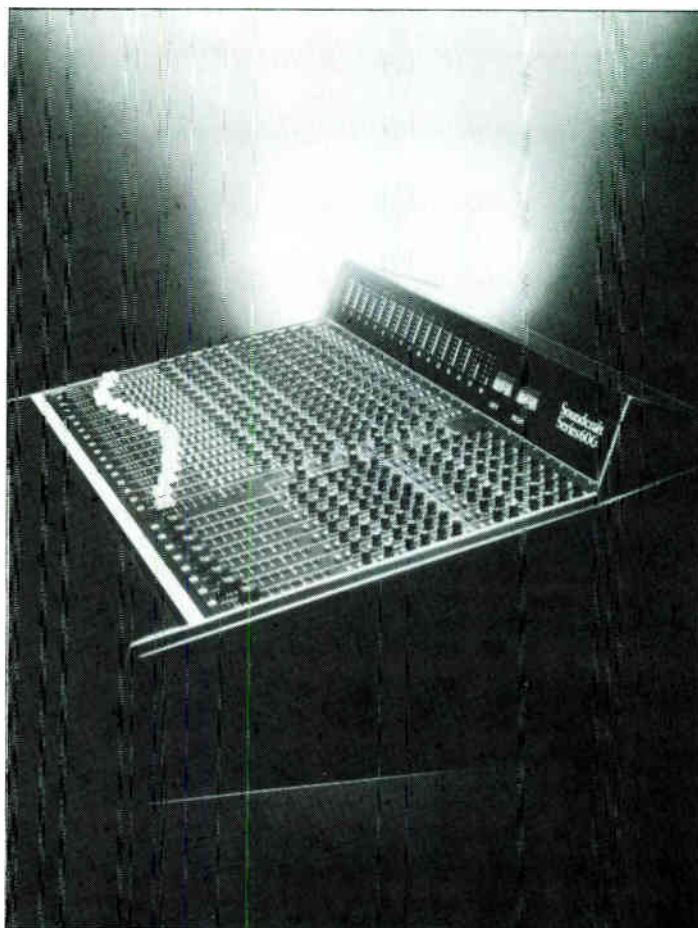


**AVATAR SOUND RECORDING**  
 Santa Rosa

••• **AVATAR SOUND RECORDING**  
*also REMOTE RECORDING*  
 244 South A St., Santa Rosa, CA 95401  
 (707) 576-0586  
 Owner: Gary Glover, Lisa Glover, Don Kruse  
 Studio Manager: Scott Eddinger  
 Engineers: Don Kruse, Lee Stuck, Ricky Lee Lynd, Independents welcome  
 Dimensions of Studios: 25 x 22 x 14  
 Dimensions of Control Rooms: 21 x 22 x 12  
 Tape Recorders: 3M M-56 16 track, Scully 280 B 2 track, Otari MX5050B 2 track, (3) Hitachi O-7500 and AKAI GX cassette decks, Sony PCM digital 2 track  
 Mixing Consoles: API 2016  
 Monitor Amplifiers: McIntosh 2300/2105, Crown DC 300, Yamaha EM 300 (headphone mixing)

# The Next Generation from Soundcraft...

Whether your need is for a high quality recording console that can grow with you, or a professional reinforcement console with eight sub-groups and up to 32 inputs, the new generation of consoles from Soundcraft will make you very happy. Both consoles feature Soundcraft's famous 4 band E.Q. and ultra smooth faders. The Series 600 Recording Console is available in 16, 24 and 32 input mainframe (the 16 mainframe has 24 line inputs available in mixdown). The styling is all new, and the consoles are more compact than their predecessors. The all modular construction is of the quality you've come to expect from Soundcraft, and the price tag is very reasonable. Sixteen inputs start at just \$6,950.



## Appropriate Technology at a Surprising Price.



To find out more about the new generation of consoles from Soundcraft call our **Audio Hotline** at 415-457-6533 or write:



802 Fourth Street,  
San Rafael, CA 94901 (415) 457-7600

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—FROM PAGE 92

Rates: Please call for rates

**Extras:** A separate music audition room with 4 and 8 track mixing capability, houses a large music and sound effects library. Also available to clients: lounge, kitchen area, conference room.

**Direction:** Robert Berke Sound is an audio postproduction facility specializing in audio/video synchronization, A/V and commercial sound production. The two state-of-the-art control rooms and studios feature an innovative design by Randy Sparks of Sonic Landscapes/Architectural Acoustics; both rooms are acoustically identical and exhibit excellent frequency response and diffusion without the use of room equalizers.



ROBERT BERKE SOUND  
San Francisco, CA

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



••• CALYPSO RECORDING STUDIO  
41 M Hamilton Dr., Novato, CA 94947  
(415) 883-4768  
Owner: Michael Verchiani  
Studio Manager: Michael Verchiani

••• CORASOUND RECORDING  
San Rafael, CA 94903  
(415) 472-3745

••• CMI RECORDS  
also REMOTE RECORDING  
10125 227th Ave Ct. E, Buckley, WA 98321  
(206) 862-1877  
Owner: Tom Thrasher  
Studio Manager: Tom Thrasher

••• COUPE STUDIOS  
2539 Pearl St., Boulder, CO 80301  
(303) 447-0551  
Owner: Scott Roche  
Studio Manager: Lyn Poyler

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



DRAGON STUDIOS  
Redwood City, CA

••• DRAGON STUDIOS  
100 5th Ave., Redwood City, CA 94063  
(415) 325-5575  
Owner: Charles Albert  
Studio Manager: Sally Albert  
Engineers: Charles Albert, Amadeo Barnos  
Dimensions of Studios: 22 x 30 including 18 x 8 drum booth,  
12 x 18 iso booth.  
Dimensions of Control Rooms: 18 x 14  
Tape Recorders: Ampex MM1100 16 with VSO, remote; Ampex  
440B servo 2 track; Pioneer RTU-11 4 or 2 track, Sony TC-K81  
cassette; TEAC 124 cassette, sync; Technics (3) M205 cassette.  
Mixing Consoles: Sound Workshop Series 30 20/16.  
Monitor Amplifiers: SweetC, Pioneer  
Monitor Speakers: JBL 4311, Auratone, Sweet C.

**Echo, Reverb, and Delay Systems:** Lexicon PCM41 DDL, Delta-  
Lab Electron ADM 256 DDL, MXR 01 digital reverb, Master-  
Room XL121 reverb, ADA STD-1 stereo tapped delay, Roland  
RE 201 Space Echo.

**Other Outboard Equipment:** (2) UREI 1176LN comp/limiter;  
Symetrix CL-100 comp/limiter/de-esser, Symetrix SG-200 gate,  
2 channel, dbx 155 N/R, Tascam Model 1 mixer, PB-64 bay,  
Roland CR-78, Countryman direct box (2)

**Microphones:** Neumann U-89, KM-84 (3), Sennheiser 421 (3);  
E-V RE-20, Sony ECM-33F; Beyers M500 (2), Soundstar (2);  
Shure SM 57, AKG 1000; ATM 41, etc.

**Instruments Available:** Baldwin grand piano, Rhodes, Prophet  
synth, Hammond organ, Gretsch recording drums with Ludwig  
snare, Zildjian, Paiste, Les Paul custom '60, Strat, Santa Cruz  
acoustic, Sweet C Dynapactor amps, various percussion and  
more.

**Video Equipment & Services:** Call for details.

**Rates:** \$20 to \$30 an hour with engineer, discounts for block time  
and independent engineers—call.

**Extras:** Spacious lounge, real-time cassette duplication,  
production, arrangement and session musicians available.  
Parking, easy access, walk to restaurants, centrally located.

**Direction:** Dragon was founded by professional musicians and  
engineers with years of experience on both sides of the board.  
Whether you're a beginner or veteran—we've been there, and we  
can work with you. We treat every project with the care of a major  
label recording, and we treat your budget like our own. For better  
product for less money, call us. At Dragon Studios, the bottom line  
is music.

••• DAVE WELLHAUSEN STUDIOS  
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 Studios: 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-1102 track, Otari  
MX-5050 2 track; Otari MX 5050B Mark II; Pioneer RT 707, (6)  
Tascam 122 cassettes; Revox A-77 2 track; (2) Aiwa 6900  
cassettes.

Mixing Consoles: Studio A: Audiotronics (modified) #501 26/24,  
Studio B: Yamaha RM-1608.

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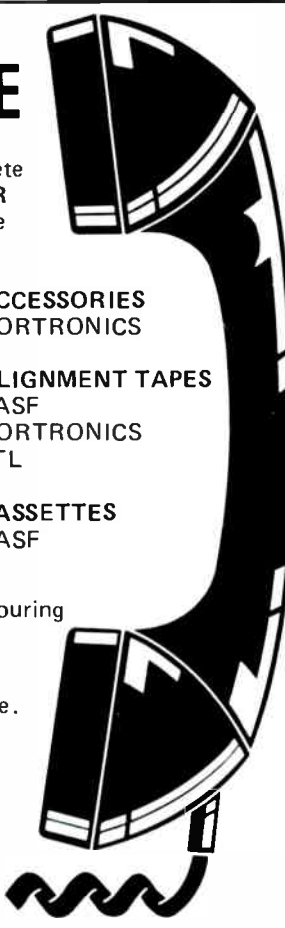
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Phone: (818) 994-6602 / Telex: 754239



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**Monitor Amplifiers:** BGW 250, AB precedent series 600, Symetrx A220.

**Monitor Speakers:** (2) Ed Long's MDM4's, Auratones, Biamp third octave room equalization, Yamaha NS-10Ms.

**Echo, Reverb, and Delay Systems:** Lexicon 224 digital reverb, Parasound III reverb, Lexicon Prime Time digital delay, Marshall Time Modulator analog delay, DeltaLab ADM 1024, ADM 64

**Other Outboard Equipment:** SAE, Soundcraftsmen and Bamp EQ's; UREI LA4 compressors; Conn Strobotuner, UREI 1176 limiters; ADR Vocal Stresser; Symetrx noise gates; Symetrx DeEsser; ADR spectrum analyzer, Valley People Dynamite, Apex Aural Exciter.

**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, 460B; 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.

\*\*\* EASTERN WASHINGTON UNIVERSITY STUDIOS

also REMOTE RECORDING

Fine Arts Complex, EWU, Cheney, WA 99004  
(509) 359-6390

\*\*\* EMERYVILLE RECORDING CO.

1331 61st St., Emeryville, CA 94608  
(415) 655-9490

Owner: Randy Hood  
Studio Manager: Randy Hood

\*\*\* FREEWAY RECORDING, INC.

also REMOTE RECORDING

2248 E. 14th St., Oakland, CA 94606  
(415) 532-3700

Owner: Bernie Rivera, Billy Rivera  
Studio Manager: Lynn Branden

Engineers: Dave Humnck, Jamie Bridges, Bernie Rivera, Mike Hersh

**Dimensions of Studios:** Studio A: 16 trk 46x37x12, Studio B: 8 trk 22x32x16

**Dimensions of Control Rooms:** Studio A: 24x15x10 (Lede type); Studio B: 15x17x10'

**Tape Recorders:** Studio A: 3M M56 16 track; (2) 3M M64 15-30 & 7 1/2-15 2 track; Pioneer RT909 1/4 track, Pioneer CT-900; Nakamichi 550 cassette. Studio B: TEAC 80-8 w/dbx 8 track; Tascam 25-2 w/dbx 2 track; Sony TC850 2 track; TEAC 33405 4 track.

**Mixing Consoles:** Studio A: RCA 8900 24x16. Studio B: Carvin 1608 16x8x2; Yamaha PM 700 12x4.

**Monitor Amplifiers:** (A) Crown PSA-2 BGW 750 McIntosh 2300 & 2100; (B) Crown DC300A & 150A, BGW 150 & 100.

**Monitor Speakers:** Studio A: Custom 604E w/time aligned X-over and sub-woofer Yamaha NS-10 bookshelf. Studio B: JBL Mod. 4502 tri-amped, ESS Targa bookshelf, Auratones.

**Echo, Reverb, and Delay Systems:** Lexicon PCM-60 Lexicon Prime Time, Orban 106-c, Furman RV-1 Loft 440, Roland 501.

**Other Outboard Equipment:** Studio A: dbx 210 noise reduction 16 channel, ADR vocal stresser, dbx 160 & 162 compressors, UREI 1176 limiters (2 ea.), RCA CL20 compressors (6 ea.), UREI 539 & 527A 1/2 octave EQ, Vari-Band parametric EQ (2 ea.) Studio B: SAE 180 stereo parametric, SAE 2700B 1/2 octave EQ, Parasound 120 EQ, TEAC Model 1 mixer dbx DX-8 noise reduction, TEAC 124 Syncassette, Teac V-30 cassette (5 ea.), Thompson Vocal Eliminator VE-1.

**Microphones:** Over 70 mikes including: Neumann U87 (3); U47 (tube), Sony ECM51, Sony C37 (tube), Sennheiser 441 (2), 421 (2), 413, 409; Electro Voice RE20, 1751, RE15, RE11, 535A, Shure SM33 (ribbon) SM53, SM56-57-58, AKG D202, D20, PZM, Beyer M69N, Beyer Soundstar, Nakamichi 300.

**Instruments Available:** In-house music store sales, rentals include: Yamaha DX7, Fender DYNO MY Rhodes, Hammond B-3 w/Leslie 122, Oberheim DX drum machine, Baldwin 5 foot-6 grand piano, clavinet, ARP 2600, ARP Omni, ARP string ensemble, Genco celeste, Deagan tuned sleigh bells, Martin D-28, Yamaha CP-70 Electric Grand piano, and more.

**Rates:** Call for quote. Discount for block bookings.  
**Extras:** This year's improvements include: The redesign (live end dead end), construction and completion of Studio A control room, complete with custom built time aligned monitors. 2) The construction of a sound/ video stage dressing room (12x38x10'). 3) Purchase of an 18-foot International CargoStar truck w/liftgate for local cartage, road work or for our concert sound system.

**Direction:** We at Freeway see music production as our primary

goal. Each service offered (16 track-8track rec. —sales & rentals, rehearsal rooms, concert P.A., cartage, storage) is designed to aid the musician/producer in accomplishing his musical desires in the studio, on stage, or in the rehearsal room. As we celebrate our 11th year 'n business we extend our sincere thanks to our customers who made their musical progress at Freeway.

\*\*\* GOLDEN STATE RECORDERS, INC.

also REMOTE RECORDING

665 Harrison Street, San Francisco, CA 94107  
(415) 781-6306

Owner: Leo de Gar Kulka, president  
Studio Manager: Kenneth K. Lee, Jr.

\*\*\* HACIENDA INTERNATIONAL MEDIA

P.O. Box 632, Forestville, CA 95436  
(707) 887-1951

Owner: Phil Hirsch, Jane J. Oliver

Engineers: Phil Hirsch

**Dimensions of Studios:** 15 x 15

**Dimensions of Control Rooms:** 15 x 9

**Tape Recorders:** Fostex B-16, Technics 2 track, Onkyo cassette

**Mixing Consoles:** Allen & Heath 16x16

**Monitor Amplifiers:** BGW

**Monitor Speakers:** JBL 4311, Fostex monitors

**Echo, Reverb, and Delay Systems:** Ibanez, Fostex, Soundworkshop, MXR

**Other Outboard Equipment:** Furman stereo parametric EQ, Jeff Brown noise gate, UREI compressor, MXR distortion, Boss chorus

**Microphones:** Sennheiser, AKG, Shure, EV

**Instruments Available:** Fender Jazz bass, Gurion acoustic guitar, Ovation electric guitar, Roland JX-3P synthesizer, Drumulator, piano, five string banjo

**Rates:** \$15.00 hour with engineer and all the above.

\*\*\* JOE HOFFMANN STUDIOS

also REMOTE RECORDING

P.O. Box 840, Occidental, CA 95465  
(707) 874-2278

Owner: Joe and Barbara Hoffmann  
Studio Manager: Barbara Hoffmann



JOE HOFFMANN STUDIOS  
Occidental, CA

Engineers: Joe Hoffman, Randy Quen, Steve Peterson, Warren

Harris, Stan Lawson

**Dimensions of Studios:** Main room 23 x 26 skewed; Drum/isolation booth 10 x 14 skewed

**Dimensions of Control Rooms:** 16 x 21 skewed

**Tape Recorders:** Otari MTR90 16/24, Otari MX5050 MKIII-8 8 track, TEAC 33405 4 track; (2) Otari MX5050B 2 track. Aka: GX F71 cassette; (5) TEAC cassettes for R.T. dupes

**Mixing Consoles:** Neolek Series II 28x24 mainframe 20x24

Studiomaster 16x8x2, TEAC Model 3 8x4x2/8x2

**Monitor Amplifiers:** Carver M 1.5t, JBL 660, Rane HC-6 (head-phones)

**Monitor Speakers:** KEF Model 105 Series II phase coherent Yamaha NS 10s, Auratones

**Echo, Reverb, and Delay Systems:** Platesound plate reverb; Roland SDE 1000-4 program digital delay, MICMIX XL-305 reverb, DeltaLab D-2 Acousticcomputer, multiple tape delay, Lexicon 224 (rental)

**Other Outboard Equipment:** Symetrx 522 (5 function zero);

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KLIPSCH KSM-1\* PICTURED ABOVE

# KLIPSCH® Presents A Whole New Slant On Stage Monitoring

No longer will a musician have to strain to hear his performance over the sound of the P.A. stack.

At least not when he's using the new KLIPSCH KSM® or its big brother, the KLIPSCH KSM-1®.

Both these slant monitors have exceptionally hot midrange sensitivity and a response curve that allows them to cut-through any P.A. stack and to virtually eliminate bass masking – that annoying loss of detail that occurs in music mixes with heavy bass information.

Both have a multiangle cabinet configuration that gives you tremendous versatility in placement for shallow or deep stage.

Simply stated, these new KLIPSCH monitors let you hear yourself perform. Clearly.



Introducing the new KLIPSCH KSM (left) and KSM-1 slant monitors.

## Which Is For You?

The real difference between these new monitors is in the bottom end. The KSM-1 has a larger (15") woofer and gives you a little deeper bandwidth tracking it ideal for monitoring kick drums, keyboards, and other instruments requiring extended bass response. In most applications, however, the low-end of the KSM is more than adequate.

## Hear For Yourself

For a hot demonstration of the new KLIPSCH KSM and KSM-1 slant monitors, look in the Yellow Pages for your nearest KLIPSCH Professional Products dealer. He'll have the products and the pamphlets to help you make the best decision.

Compare these new monitors to any others of any price and you'll see what a great value KLIPSCH offers.

Get with the new slant on monitors. With KLIPSCH.

 **klipsch**®

A Legend In Sound.™

P.O. Box 688 • Hope, Arkansas 71801

for independents Production consultation available. Please call for our special real-time cassette duplication rates.  
**Extras:** Private lessons in production and engineering are available Referrals for top studio musicians  
**Direction:** We are happy to announce that we've moved to a thoroughly professional, soundproof studio featuring three recording rooms and a large, comfortable control room We're confident you'll find these great sounding rooms a pleasure to work in, and our all new selection of equipment makes Melon a better deal than ever. 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!) Come see and hear for yourself Call for an appointment to inspect our facilities and plan your project

••• **PETER MILLER RECORDING STUDIO**  
 P.O. Box 11013, San Francisco, CA 94101  
 (415) 567-7040  
 Owner: Peter Miller  
 Studio Manager: Peter Miller

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

••• **MUSICAL IMAGE PRODUCT**  
 3013 E. Monte Vista, Denair, CA 95316  
 (209) 632-8415  
 Owner: Gary L. Shriver  
 Studio Manager: Gary L. Shriver

••• **MUSIC ART RECORDING STUDIO**  
 5944 Freedom Blvd., Aptos, CA 95003  
 (408) 688-8435  
 Owner: Ken Capitanich  
 Studio Manager: Ken Capitanich  
 Engineers: Ken Capitanich, Will Holt  
 Dimensions of Studios: 14 x 18  
 Dimensions of Control Rooms: 14 x 15  
 Tape Recorders: Ampex MM1100 16 track; Tascam 80-8 w/dbx 8 track, Ampex 440-C 2 track, Otari MX 5050 2 track  
 Mixing Consoles: Tangent (modified) 3216 16x16  
 Monitor Amplifiers: Crown DC 300A, D150-A, (2) DC75  
 Monitor Speakers: UREI 811; MDM 4; JBL 4313 B; Auratone.  
**Echo, Reverb, and Delay Systems:** Lexicon Prime Time; Eventide Harmonizer; Ecoplate II; Lexicon 200; MICMIX XL 305; S-24 Time Shape Module.  
**Other Outboard Equipment:** (2) ADR expander gates; (3) comp/limiter, (2) ADR parametric EQ, Aphex Exciter, MXR phaser; (3) ADR 502 mike preamp.  
**Microphones:** Neumann, AKG, Sennheiser, Sony, Shure, E-V, Beyer, Neumann tube U67.  
**Instruments Available:** Chickering 6-foot-6 grand piano, Hammond B-3.  
**Rates:** 16 track \$40/hour; 8 track \$25/hour.

••• **RAY NAKAMOTO PRODUCTIONS**  
 1030 48th St., Sacramento, CA 95819  
 (916) 451-3400  
 Owner: Ray Nakamoto, Marni Webb  
 Studio Manager: Ray Nakamoto

••• **NO-BULL STUDIOS**  
 also REMOTE RECORDING  
 44875 Industrial Dr. #G, Fremont, CA 94538  
 (415) 490-2015  
 Owner: No-Bull Records  
 Studio Manager: Tom Wiggins

••• **OCEAN BREEZE RECORDING**  
 also REMOTE RECORDING  
 2021 Bluebell Dr., Santa Rosa, CA 95401  
 (707) 527-8131  
 Owner: Ben Rothenberg, Bob Williams  
 Studio Manager: Ben Rothenberg

••• **OUTBACK STUDIOS**  
 489½ Cavour St., N. Oakland, CA 94618  
 (415) 655-2110  
 Owner: Wilson Dyer  
 Studio Manager: Nancy Dyer  
 Engineers: Wilson Dyer  
 Dimensions of Studios: 23 x 20 x 12.  
 Dimensions of Control Rooms: 23 x 10 x 12.  
 Tape Recorders: Ampex MM-1200 16 track, Otari MX5050B 2 track, Pioneer RT-701 2 track; (10) TEAC CX-210 Real Time cassette duplication system, MCI JH 110 2 track.



**Mixing Consoles:** Sound Workshop Series 30 20 in by 16 out  
**Monitor Amplifiers:** Hafler 500, BGW 250C, Biamp TC-60, TEAC Model 1 headphone amps (2)  
**Monitor Speakers:** JBL 4311, 4301, Auratone, AR 8B  
**Echo, Reverb, and Delay Systems:** Lexicon Prime-Time DDL Master-Room XL-305, MXR flanger/doubler, Yamaha E-1010 delay, Lexicon 200 digital reverberator  
**Other Outboard Equipment:** ADR vocal stressor, dbx limiters, Symetrix signal gates, Furman parametrics, Biamp graphics  
**Microphones:** AKG C-61 (tube), 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:** Mesa Boogie, Roland Juno 106/MIDI system; 1948 Kranich & Bach baby grand, Gibson ES 335, J-45; Fender Strat, Deluxe amps; Gretsch drums w/ Yamaha wood snare  
**Rates:** Block rates as low as \$30/hr w/eng. Call for real time cassette duplication prices

••• **PARADISE STUDIOS**  
 also REMOTE RECORDING  
 3761 Espiranza, Sacramento, CA 95825  
 (916) 484-7859  
 Owner: Arne Peterson  
 Studio Manager: Kirt Shearer

••• **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 ½ track, Akai GX-630D stereo ¼ 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 linder  
**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

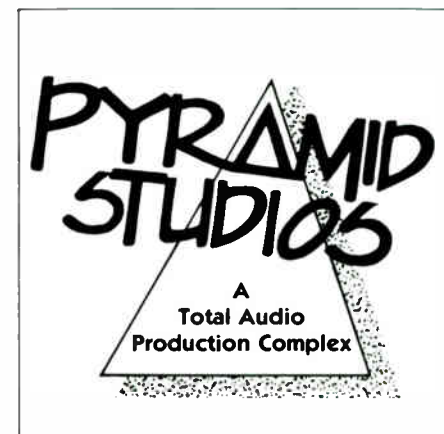
••• **PYRAMID RECORDING STUDIOS**  
 1020 35th Ave., Sacramento, CA 95822  
 (916) 424-8772  
 Owner: Charles Carter  
 Studio Manager: Jeff Carter

••• **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 Neutro (ind & maint), other independents  
 Dimensions of Studios: Main studio 18 x 20 x 8½; Iso & Vocal Room: 10 x 10 x 8; Dubbing Booth: 7½ x 10 x 9  
 Dimensions of Control Rooms: 11½ 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, ½ inch 8 track; TEAC A440 ¼ inch ½ track 2

channel stereo, custom Ampex A300 ¼ inch ½ 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 804X1s, 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 PQ3s, SAE 2900 parametric EQ stereo, (2) dbx 160 compressor/limiters, Fender instrument amplifiers, more  
**Microphones:** Neumann U-87, Sennheiser 441s, 421s, E-V RE-11, Shure SM 56, Beyer M260s, 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 ½/¼ 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.

••• **RAIN RECORDING**  
 also REMOTE RECORDING  
 P.O. Box 297, Mountain View, HI 96771  
 (808) 968-6042, 968-6346

Owner: Ken Chikasuye  
 Studio Manager: Ean Chikasuye  
 Engineers: Ken Chikasuye  
 Dimensions of Studios: 32 x 40 w/14 ft ceiling  
 Dimensions of Control Rooms: 14 x 12  
 Tape Recorders: MCI JH 24 16 16 track, Tascam 70 2 track; Otari 5050 BII 2 track, TEAC 3340 S 4 track, Technics RSM 85 MKIII cassette; Nakamichi 500 cassette  
**Mixing Consoles:** Allen & Heath System 8 modified 24x16x8x2, (5532 & 5534) 40 inputs  
**Monitor Amplifiers:** Crown DC 300 A, Crown DC 300, D 60  
**Monitor Speakers:** JBL 4411, Custom JBL, Altec, Auratone  
**Echo, Reverb, and Delay Systems:** MICMIX XL305, DeltaLab DL2, 1024 Effectron II, ADA 1280, Ibanez HD 1000, XL 3500 plate  
**Other Outboard Equipment:** dbx 160X, (2) UREI LA4, MXR dual limiter, Orban 622 B, Roland Dimension D, Furman bandpass filter, ADA flanger, Sescam & Countryman direct boxes, Symetrix noise gates, Access distribution amps, Rane SM 26 splitter mixer, EXR Stereo Projector, EXR Projector, direct box, Technics SH 8065 dual 31 band graphic, Simmons digital ClapTrap, Edcor stereo headphone amp.  
**Microphones:** (2) Neumann U87, (2) Shure SM 58, (5) SM 57, (1) SM 81, (3) Altec 626 A, (2) Sennheiser MD421, PZM 30 GPG, PZM 31 S, AKG 109, D1000  
**Instruments Available:** Hammond C-3, Acoustic upright, Mesa Boogie guitar amps, various guitars, bases, most synth's available through Music Exchange, Hilo, HI  
**Video Equipment & Services:** VHS & U-Matic documentation services



PYRAMID RECORDING STUDIOS  
 Sacramento, CA

••• **REAL TO REEL RECORDING STUDIO**  
 1135 Mill St., Eugene, OR 97401  
 (503) 485-5977  
 Owner: Cliff Nagler  
 Studio Manager: Cliff Nagler



**REDWOOD CREEK RECORDING**  
 Blue Lake, CA

••• **REDWOOD CREEK RECORDING**  
 (formerly *SOLAR TRACKS*)  
 Star Route, Blue Lake, CA 95525  
 (707) 668-4244  
 Owner: Bert Pectol, J.A. Dixon

Engineer: Bert Pectol  
 Dimensions of Studios: 30 x 20, isolation booth 10 x 10  
 Dimensions of Control Rooms: 10 x 18½'  
 Tape Recorders: TEAC 85-16; Ampex 351 ½ track; Sony ½ track; Technics and Sanyo cassettes  
 Mixing Consoles: TEAC 24 input 12 subs 24 directs 2 stereo fold backs, 1 mono, pre or post for live more echo sends on 16 channels only.  
 Monitor Amplifiers: BGW, Technics

Monitor Speakers: JBL 4311 custom built Philips  
 Outboard Equipment: UREI (2) ½ octave EQ's; MXR DDL; Roland 501 Space Echo, MXR flanger, MXR 10 band EQ's; Furman reverb; dbx compressor, more new toys by January 1, 1985.

Microphones: Neumann, Sony, Sennheiser, Beyer, Shure, AKG  
 Instruments Available: 1911 Knabe grand piano; Hammond M3 organ and Leslie, Synthesizers by Oberheim; ARP, Eika, Les Paul bass; 6-12 guitars

Rates: \$35/hour, block time cuts rate  
 Direction: Bert has 10 years of engineering experience. This includes 15 albums; 25/45's; and sound track credits for movie, TV, radio, and theater (Dell Arte) Bring your RV and vacation while you record in our beautiful natural setting. No charge for RV hook-up. Enjoy private swimming in famous redwood creek or fishing. Lounge provides satellite TV, coffee plus 30 x 20' outdoor deck and barbeque.

••• **REX RECORDING CO.**  
 also *REMOTE RECORDING*  
 1931 SE Morrison, Portland, OR 97214  
 (503) 238-4525  
 Owner: Sunny Day Productions Inc.  
 Studio Manager: Rhiner P. Johnson

••• **SENSA RECORDING STUDIO**  
 1016 Morse Ave. #16, Sunnyvale, CA 94089  
 (408) 734-2438  
 Owner: Sensa Corp.

Studio Manager: Doug Hopping  
 Engineers: Doug Hopping, Jason Hubbard, Steve Mancini, Kevin Gilbert, Independents.  
 Dimensions of Studios: Main studio 15 x 18; 2 iso booths: 8 x 10, 8 x 6  
 Dimensions of Control Rooms: 12 x 15  
 Tape Recorders: Ampex MM-1000 16 track; Otari MX 5050 2 track; Pioneer RT 701 ¼ track; JVC KD-D4 cassette.  
 Mixing Consoles: Amek Matchless 26x24x8x2; Roland CPE-800 Compu-editor (16 track automation) 15x15 (w/one track SMPTE time code), (2) Ampex MX-10s (vintage tube mixers) 4x2.  
 Monitor Amplifiers: Haller DH 500KE, BGW 250D, BGW 75A.  
 Monitor Speakers: MDM-4 rear field monitors; Yamaha NS-10's, Auratones.



**SENSA RECORDING STUDIO**  
 Sunnyvale, CA

Echo, Reverb, and Delay Systems: Ecoplate III stereo reverb, Eventide 910 Harmonizer, DeltaLab Effectron II DDL, Ibanez DM-1000 DDL, Loft 440 analog delay, MXR flanger doubler, Lexicon 20G digital reverb

Other Outboard Equipment: UREI 1176 LN compressor/limiter UREI LA-4 compressor/limiter, Symetrix, 522 dynamic processor (2), Symetrix SG 200 dual noise gates, MXR stereo 15 band graphic equalizer.

Microphones: Neumann, Sennheiser, Sony, Shure, Electro-Voice, Countryman, Crown, PZM

Instruments Available: Packard 6-foot grand piano (built 1918).  
 Rates: \$40/hour One hour set up time free for session with drum set up. Discounts for block time.

Extras: Ask for references. Ask around about Sensa and you'll hear words like "honesty," "craftsmanship," and "value." Repeat business keeps us going and we're going strong. Our biggest "extra" is a deep musical feeling, technical prowess, and ability to work with those creative folks called musicians.

Direction: Sensa is five years old now and has matured with the South Bay music scene. From garage bands to the theme music for syndicated television shows, we love it all. In the last year we have added a lot of new equipment and we're gearing up for our next five years.

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

••• **S.M.I. STUDIOS (DBA: SOLANO MUSIC IND.)**  
 1700 W. Texas, Fairfield, CA 94533  
 (707) 422-8772  
 Owner: Craig J. Meros  
 Studio Manager: Les P. Grubb

••• **SOUND & VISION**  
 904 Irving Street, Suite 233, San Francisco, CA 94122  
 (415) 665-2750  
 Owner: Neal Breitbarth, Michael Molenda  
 Studio Manager: Michael Molenda  
 Engineers: Neal Breitbarth, Michael Molenda  
 Dimensions of Control Rooms: 20 x 20  
 Tape Recorders: Fostex B16 16 tracks; TEAC 3340 4 track; Tascam 20-2 2 track; TEAC cassette 2 track.  
 Mixing Consoles: Tascam M520 20/8.  
 Monitor Amplifiers: Carvin, JVC.

Monitor Speakers: Yamaha NS200, Carvin 860, Auratones.  
 Echo, Reverb, and Delay Systems: Lexicon PCM60 digital reverb, Furman RV-1 reverb, DOD spring reverb, Lexicon PCM42 delay, Ibanez HD1000 Harmonics delay.

Other Outboard Equipment: dbx 164 stereo compressor, Slew-art ADB1 direct boxes.

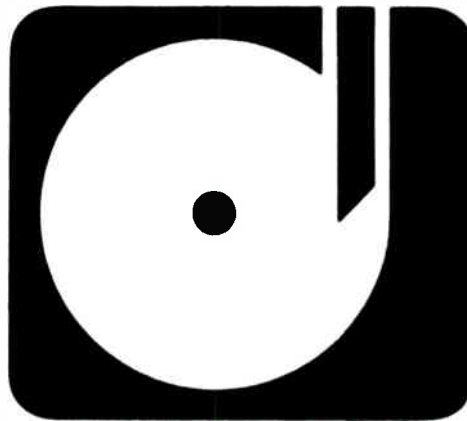
Microphones: Shure SM58, Audio-Technica AT818.  
 Instruments Available: Rhodes Chroma, Yamaha PF15, Korg 800, Yamaha DX7, Simmons SDS8, DX drum machine, Scholz Rockman x100, Ovation acoustic/elect., ESP custom Telecaster, Tokai Strat, Roland Cube 40, Cube 60, Mesa-Boogie, Mark II, Ludwig Coliseum snare.

Video Equipment & Services: One camera live-shoot in studio, lip-synced to client's tape. Color camera and monitor: VHS format.

—LISTING CONTINUED ON PAGE 100

## THE MASTERING LAB

AN INDUSTRY LEADER IN DISK MASTERING  
 SINCE 1967



**213-466-8589**  
 LOS ANGELES

Circle #056 on Reader Service Card

—FROM PAGE 99

**Rates:** Book Rate: \$30 per hour.

**Extras:** Full-production services and consultant aid from tape to press. That means everything from pre-production and post-production to publicity and distribution. We can even develop a conceptual video script from your song or direct a live video shoot. In-house producer Neal Breitbarth has produced numerous demos and a Billboard "recommended" mini-LP with charted FM airplay. Michael Molenda wrote the libretto for the acclaimed rock theater drama "Streetbeat" and has scored several local plays. **Direction:** Modern sounds with modern methods. The control room IS the studio. Instruments are taken direct with state-of-the-art signal processing equipment while you relax and monitor through our speaker systems, instead of being restricted with headphones. A specially-designed isolation booth services "live" sounds. Since all equipment is in-house, the client need only walk through the door to begin recording. And since we are set up for direct recording, minimal time is wasted "getting sounds." Welcome to the new age!

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

••• **THE SOUND SERVICE**  
330 Townsend St., San Francisco, CA 94107  
(415) 433-3674  
Owner: David Dobkin, Steven Pinsky  
Studio Manager: David Dobkin  
Engineers: Kim Aubry, Steven Pinsky, Steven Shapiro, Jennifer Ware.

**Dimensions of Studios:** A: 21 x 13 B: 13 x 10  
**Dimensions of Control Rooms:** A: 21 x 17 B: 13 x 12  
**Tape Recorders:** Ampex MM1100 16 tracks; Ampex AG 440 4/2 (2); MCI JH 100 4/2 (2); Magnatech film recorder 2000 16mm-1/2; Nagra IV-S 2 track, Nagra IV-L 1 track (2). Various cassette decks. Sony, Yamaha, Technics, Teac Sony PCM F-1 2 track  
**Mixing Consoles:** Neotek Series II 28/24, Quantum 8P 8x4; Quantum 8A 8x4  
**Monitor Amplifiers:** Bryston, Yamaha.  
**Monitor Speakers:** JBL 4430, JBL 4401, JBL 4311  
**Echo, Reverb, and Delay Systems:** Ecoplate I, Tapco spring 4400.  
**Other Outboard Equipment:** Dolby 361 (2), UREI LA 4 (2); UREI 1176N, UREI 565 filter set (2), Aphex Aural Exciter, UREI graphics equalizer 527-12; Haller pre-amp.  
**Microphones:** Neumann U-87; AKG EB 414C, Schoeps: complete line cassette services, Sony ECM-50, Tram 16 & 32; E-V RE16 & 635A.  
**Instruments Available:** Piano, Drumulator, Emulator II, Roland JX3P, assorted ethnic instruments  
**Video Equipment & Services:** MCI J11 110-2 layback machine Sony BVU 800, JVC CR-8200 U, Sony monitors, Q-lock 310 Complete audio editing and mixing for video Laybacks from PCM digital masters to one-inch video our specialty  
**Rates:** Call for rates.

••• **STAR TRAK RECORDING INC.**  
also **REMOTE RECORDING**  
19351 23rd Ave., N.W., Seattle, WA 98177  
(206) 542-1041 or 745-1427  
Owner: Bob Lang, Rick Eaks  
Studio Manager: Rick Eaks, Scott Spain

••• **STARTSONG**  
also **REMOTE RECORDING**  
3218 E. LaSalle, Colorado Springs, CO 80909  
(303) 634-2045  
Studio Manager: Tom Gregor

••• **STARWEST PRODUCTIONS**  
also **REMOTE RECORDING**  
5900 SW Rhododendron Dr., Port Orchard, WA 98366  
(206) 674-2609  
Owner: Alex Raphael, Sam Raphael  
Studio Manager: Alex Raphael

••• **SUN WEST RECORDING**  
P.O. Box 14224, Bldg. 101 West Wing  
Spokane Industrial Park, Spokane, WA 99214  
(509) 924-7573  
Owner: Bob Asbury  
Studio Manager: Bob Asbury

••• **SURREAL STUDIOS**  
355 West Potter Drive, Anchorage, AK 99502  
(907) 562-3754  
Owner: Kurt Riemann  
Engineers: Kurt Riemann, Jack Hill



**Dimensions of Studios:** 20 x 30 includes live and dead 10 x 10 booths  
**Dimensions of Control Rooms:** 18 x 23 with 12 expansion ceiling  
**Tape Recorders:** MCI JH 16-16 16 tracks, MCI JH 110B 2 track, Tascam (3) 122 cassette two track.  
**Mixing Consoles:** MCI 618 18/18  
**Monitor Amplifiers:** UREI, Audionics  
**Monitor Speakers:** Westlake BBSM12, Tannoy SRM12B, Auratone, David  
**Echo, Reverb, and Delay Systems:** Lexicon Super Prime Time, 200 digital reverb, Prime Time, PCM 41, Eventide Harmonizer, Flanger, Master-Room XL 500 reverb  
**Other Outboard Equipment:** Moog phaser, Roland vocoder, EXR exciter, Omnipressor, Orban 424A stereo compressor, Symetrix CL 100 comp/limiter, Ashly SC 50 compressor, Symetrix SG-200, MXR flanger doubler, Symetrix SE 400 stereo parametric, Moog parametric, Orban stereo EQ  
**Microphones:** Neumann U-87 (2), U-47, KM 84, AKG 414, 452, 202, D12E, HE10 (2), SM 57, PE66, 315 ribbon, SM 53, PZM (2), Sony C37, HE11  
**Instruments Available:** Tama drums with Zildjans, baby grand  
**Video Equipment & Services:** Trinitron monitor  
**Rates:** Call for project quotes, (lockout etc.)  
**Extras:** Electronic music custom work for film and theater by Kurt Riemann. Specializing in classical electronic orchestral interpretations. Album production and cover work for artists. Digital and analog synthesis  
**Direction:** Surreal Studios is Alaska's most complete recording facility. We have just moved into our new Jeff Cooper facility and have a full lounge with kitchen



**SURREAL STUDIOS**  
Anchorage, AK

••• **T & B AUDIOLABS**  
3018 22nd St., San Francisco, CA 94110  
(415) 821-3065  
Owner: J. Schlesinger, M. Kelley  
Studio Manager: Maryann Moore  
Engineers: Gregory Jones. Independents available and welcome  
**Dimensions of Studios:** 500 sq. ft.  
**Tape Recorders:** MCI JH-114 16 track; Technics RS-M253X cassette, Otari MX-5050 MKIII 2 track, Ampex 440-B 2 track.  
**Mixing Consoles:** Neotek Series II 20 in x 16 out.  
**Monitor Amplifiers:** Haller D-500 and 200.  
**Monitor Speakers:** MDM TA-2A, Tannoy "Super Red" SRM 10, Auratone  
**Echo, Reverb, and Delay Systems:** Lexicon 200 digital reverb, Master Room XL-305, Lexicon Prime Time, DeltaLab Effectron 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; Valley People Dyna-mites  
**Microphones:** Telefunken U-47 tube type, Neumann U-87, AKG, Countryman, Sennheiser.  
**Instruments Available:** Kawai baby grand, Ludwig drums and a variety of synthesizers  
**Video Equipment & Services:** Post-production audio sweetening for video/film. Credits include MTV logos.  
**Rates:** Please call for rates.

••• **TIOGA RECORDING STUDIO**  
P.O. Box 205, Allegany, OR 97407  
(503) 267-2330  
Owner: Spook Flanagan  
Studio Manager: Spook Flanagan

••• **T.J. RECORDING STUDIO, INC.**  
also **REMOTE RECORDING**  
2718 East 96th Street, Tacoma, WA 98445  
(206) 537-0123  
Owner: T.J. Landon  
Studio Manager: Beverly Koch

••• **TU-REEL STUDIOS**  
10106 Foxboro Circle, San Ramon, CA 94583  
(415) 828-3648  
Owner: Earle Younger  
Studio Manager: Earle Younger

••• **VERSATILE VIDEO INC.**  
also **REMOTE VIDEO PRODUCTION**  
151 Gibraltar Court, Sunnyvale, CA 94809  
(408) 734-5550  
Owner: N.K. Terteling  
Studio Manager: Roy Moore

••• **DAVE WELLHAUSEN STUDIOS**  
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 Studios:** 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; Otari MX 5050B Mark II; Pioneer RT 707, (6) Tascam 122 cassettes, Revox A-77 2 track; (2) Aiwa 6900 cassettes.

**Mixing Consoles:** Studio A: Audtronic (modified) #501 26/24, Studio B: Yamaha RM-1608.  
**Monitor Amplifiers:** BGW 250, AB precedent series 600, Symetrix A220.  
**Monitor Speakers:** (2) Ed Long's MDM4's, Auratones, Biamp third octave room equalization, Yamaha 10M's.  
**Echo, Reverb, and Delay Systems:** Lexicon 224 digital reverb, Parasound III reverb, Lexicon Prime Time digital delay, Marshall Time Modulator analog delay, DeltaLab ADM 1024, ADM 64.  
**Other Outboard Equipment:** SAE, Soundcraftsmen and Biamp EQ's; UREI LA4 compressors; Conn Strobotuner; UREI 1176 limiters; ADR Vocal Stresser; Symetrix noise gates; Symetrix DeEsser; ADR spectrum analyzer, Valley People Dynamite, Aphex Aural Exciter.  
**Microphones:** AKG D12; Neumann U-87's; E-V RE-20s, RE-15s; Shure SM-58s, SM-56s, 566s; AKG D-50s, C-451s, D-202, 460B; Sony 33Ps, C36 Ps, ECM 989s; Beyers 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.

Looking for education?  
See the **Mix Bookshelf**  
on page 159.

# THAT BRITISH SOUND



**ACES TR-24:** 2" 24 track Recorder/Reproducer **\$19,950.**  
(2" 16trk., pre-wired 24trk. available)

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



**ITAM #1610:** 1" 16 track Recorder/Reproducer **\$11,950.**  
(1" 8trk., pre-wired available)



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

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

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

**EAST COAST DEALER:**

**AUDIOTEK**

182-35 Jamaica Avenue  
Hollis, New York 11423  
(212) 526-1456

**WEST COAST DEALER:**

**PROFESSIONAL  
AUDIO SERVICES  
AND  
SUPPLY CO.**

99 East Magnolia, Suite 215  
Burbank, CA 91502  
(818) 843-6320

Circle #057 on Reader Service Card

**NORTHWEST**



**24 TRACK**

**STUDIOS**



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 Dyna-Mites (4), EXR II & IV psychoacoustic exciters, Kepex, Pultec tube EQ's, UREI LA2A's, LA3A & LA4; RCA tube limiters (4); Inovonics 201 compressor/limiters; Eventide Flanger & Omnipressor; ADL Vocal Stressor; Mutron Bi-Phase; Biamp 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), (2) KM-253 Tube, (2) SM-69 Tube, 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; Alte/AKG tube mics, Countryman and much more.

**Instruments Available:** Chickering "Masterpiece" 7' grand piano, LinnDrum, Prophet, AHP, Emu & EMS synthesizers; Gibson, Fender, Martin & Rickenbacker guitars and basses; Marshall, Hiwatt, Fender, Vox & Gibson Amps; Yamaha DX-7, Oberheim, 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, 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 Defenders, Bo Diddley, Bill Gibson (Huey Lewis & the News), Bill Summers, Emu, Fever, Hot Ice, Humans, Kingston Trio, Pete Escovedo, Population B, Tsunami, Vis-a-Vis, and so many more. The difference is in the Ayre!



**Audio Vision**  
COMPUTERIZED SOUND RECORDING

**AUDIO VISION STUDIOS**  
Lindon, UT

\*\*\*\* AUDIO VISION STUDIOS  
74 East Center, Lindon, UT 84062  
(801) 785-0077

Owner: Sam A. Foster, Susan Foster

Studio Manager: Sam A. Foster

Engineers: Dave Mendenhall, Brian Chatter, Greg Hansen, Sam Foster

Dimensions of Studios: A: 40 x 25 x 20 with 3 iso rooms; B: 12 x 15 x 8 with 1 iso booth.

Dimensions of Control Rooms: A: 19 x 17; B: 15 x 14

Tape Recorders: Stephens 821 B 24 track, MCI JH 110 B 2 track, Sony TCK 777 cassette decks.

Mixing Consoles: International Consoles ICC 3000 w/Automated faders. Specially modified to interface our "computerized effects system. 24 channels built in gating-limiting.

Monitor Amplifiers: Crown w/UREI 539 EQs.

Monitor Speakers: UREI 813s, Yamaha NS 10, Auratones.

Echo, Reverb, and Delay Systems: Quantec QRS (\*modified for computer), Lexicon 224, Steiner Plates (2), Lexicon Super

Prime Time (\*modified for computer), DL 2 Acoustcomputer, DeltaLab 1024, Cooper Time Cube

Other Outboard Equipment: Eventide Harmonizer 949, Simmons SDS-7 (\*modified for computer), ADR UOC Stressor, Aphex Rack (compressor gates), Dyna-Mites (6), Eventide Flanger, WMS Flanger, Symetrix Parametric EQ, Crown EQ Z, Pultec EQs (3), RSS Stereo Phasor, UREI and MXR Graphic EQs.

Microphones: AKG Neumann, Shure, Sennheiser, Sony, RCA, E-V.

Instruments Available: Yamaha 74" grand piano, Simmons SDS-7. Production room full of drum machines and keyboards.

Rates: Call studio manager.

Extras: We have the most sophisticated, computerized mixing system we have yet encountered. Much of our system has been customized to allow pre-programmed changes of acoustical environments, drum kits, dynamic changes, etc. during recording or mixdown.

\*\*\*\* AUTHENTIC SOUND LOCATION RECORDING  
also REMOTE RECORDING

30 Princess Ct., Sausalito, CA 94965

(415) 331-2889

Owner: John Overton

\*\*\*\* AVALANCHE STUDIOS INC.  
also REMOTE RECORDING

10650 Irma Dr., Suite 27, Northglenn, CO 80233

(303) 452-0498

Owner: Harry Warman, Steve Forgy

Studio Manager: Linda Warman



**AYRE STUDIOS**  
San Jose, 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 Studios: 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 Aligns, JBL 4311's, Little David's, B&W LM-1s, Visonik, Auratones

Echo, Reverb, and Delay Systems: EMT stereo plate, live



**THE BANQUET SOUND STUDIOS**  
Santa Rosa, CA

\*\*\*\* THE BANQUET SOUND STUDIOS  
(FORMERLY BEGGAR'S BANQUET)

540 B East Todd Road, Santa Rosa, CA 95407

(707) 585-1325

Owner: Warren Dennis

Studio Manager: Janet Stark-Knick

Engineers: Warren Dennis, Mark Lyon, Janet Stark-Knick, Denis Hulett. Independents welcome.

Dimensions of Studios: 24 x 25, 680 sq. ft. main studio. Also 12 x 9 isolation booth, fully floated, and 13 x 6 isolation booth

Dimensions of Control Rooms: 16 x 18, 300 sq. ft., designed utilizing LEDE principles

Tape Recorders: MCI JH 16/24 w/Autolocator III, 24 (also 16T headblock); MCI JH 110A w/remote, 2 track; Otari 5050B w/remote, 2 track; (3) Aiwa cassettes (1) F-990, (2) 6900's, 2 track.

Mixing Consoles: Amek "Angela," 28 x 24 x 24, with 62 input returns for mixdown, parametric equalization on 28 inputs, 4 stereo subgroups, 6 auxiliary sends/returns.

Monitor Amplifiers: (2) Nikko Alpha 1's, 350W/side, Phase Linear 700, SAE Mark III, Crown D-60 (headphones), Symetrix HA-10 (headphones)

Monitor Speakers: JBL 4430's, Bi-radials, bi-amped, UREI Soni pulse calibrated, JBL L-100's, Advent 2002's, Auratones. Headphones: AKG K140's & K240's, Sony DR53's, Sennheiser HD 414's.

Echo, Reverb, and Delay Systems: Lexicon 200 digital reverb, Studio Technologies Ecoplate III, Lexicon Prime Time, Lexicon Prime Time II, Eventide Harmonizer H-949 with de-glitch mod, Effectron 1024, Effectron 256.

Other Outboard Equipment: (3) UREI LA-4 compressor/limiters, Aphex Aural Exciter, (4) Valley People Dyna-Mites (multi-function signal processors), dbx 150 noise reduction, Sony direct drive turnable w/Stanton cartridge, Countryman active direct boxes, Symetrix passive direct boxes

Microphones: Full array of AKG, Sennheiser, Neumann, Sony,



Beyer, Crown PZM, Electro-Voice and Shure microphones.  
**Instruments Available:** Yamaha CF 9-foot concert grand piano, Yamaha DX-7 synthesizer, Gleeman Pentaphonic digital synthesizer, Fender Rhodes, Wurliizer Leslie, LinnDrum, Sequential Circuits Prophet T-8 synthesizer, Gibson Les Paul, Gibson Ripper Bass, Fender Strat with EMG pickups, Mesa Boogie amp, Marshall amp (full stack), Yamaha G-50 amp, Marshall & Fender cabinets, studio drum kit (complete), Gretsch, with Pearl 8-inch snare, Peterson strobe tuner, misc guitar effects, percussion instruments  
**Rates:** We have the best rates available in the entire Bay Area for comparably equipped facilities. Rate cards and brochures available on request. Special block and nite-owl rates offered.  
**Extras:** Fine personnel who offer production assistance and musicianship in addition to engineering expertise. Good coffee, indoor basketball, discount accommodations for our clients who travel, and "Reel Sounds," our quarterly newsletter. Pre-production room available for programming drum machine and synthesizers.  
**Direction:** The Banquet Sound Studio continues to expand its horizons on all fronts. With equipment additions including a Yamaha CF 9-foot concert grand, a Yamaha DX-7 digital synthesizer, Lexicon Digital Reverb, MCI 2-track, Prime Time II, LinnDrum, to the growing list of client success stories to a quarterly newsletter, and on and on. In a nutshell, THIS studio is THE exciting place to create your next project!

◆◆◆ BAYVIEW STUDIO

1368 So. 49th St., Richmond, CA 94804  
 (415) 237-4066

**Owner:** Stephen Suda, Robert Hall  
**Engineers:** Tom Anderson, Jack Crymes  
**Dimensions of Studios:** Studio A: 45 x 20 x 16; Studio B: 19 x 16 x 16  
**Dimensions of Control Rooms:** 14 x 18 x 8  
**Tape Recorders:** Studer A-800 24 track, Ampex ATR 102 2 track; Studer A-80 MKII RC 2 track  
**Mixing Consoles:** Soundcraft TS-24 40/24  
**Monitor Amplifiers:** Halter 500's  
**Monitor Speakers:** John Meyer 833, Yamaha NS-10, JBL 4311, Auratone 5C, Ed Long MDM-4  
**Echo, Reverb, and Delay Systems:** (2) EMT 140 stereo plates, Lexicon 224-X w/LARC  
**Other Outboard Equipment:** Eventide 949 Harmonizer, Lexicon Prime Time II, (3) UREI 1176, (2) UREI LA-4A, Teletronix LA-2A, dbx 161, (2) Valley People Dyna-Mites, (2) UREI #555 Bandpass filters, (2) Pultec MEQ-5, 8 Dolby 361  
**Microphones:** AKG 414EB, 414EB-P48, AGK 451, AKG 460, AKG C-422 stereo, Neumann U-87, Neumann KM-84, Neumann U-47 Fet, Crown PZM, Electro-Voice RE-20, Shure SM 57, Shure SM-7, Sennheiser 421, 441, Neumann M-49B, PML DC-73, Countryman Iso-max, Sony ECM-50, Countryman direct boxes.  
**Instruments Available:** Yamaha C-7 acoustic piano, Gretsch and Yamaha "R" series & Simmons drums available by arrangement. Vintage Fender basses and guitars, Martin guitars, Gretsch guitars, old Fender amps, Ampeg B-15 bass amps also available by arrangement.  
**Rates:** Please call for rates



BEAR CREEK STUDIO  
 Woodinville, WA

◆◆◆ 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, Steve Henke  
**Dimensions of Studios:** 30 x 40 x 12  
**Dimensions of Control Rooms:** 20 x 17  
**Tape Recorders:** MCI JH-24/16 w/Autolocator 24/16 track., Ampex ATR 100 1/2-inch 2 track, Ampex ATR 100 1/4-inch 2 track, Revox cassette

**Mixing Consoles:** Trident/TSM 32x24x24.  
**Monitor Amplifiers:** Crown, Custom Eico, BGW, McIntosh  
**Monitor Speakers:** Custom Altec, Yamaha NS-10 M, JBL 4333, Auratone  
**Echo, Reverb, and Delay Systems:** Lexicon 224 digital reverb, Ecoplate MR 2, Lexicon Prime Time, AMS 15-80s, MXR and Spectra digital delays, Scamp analog delay.  
**Other Outboard Equipment:** UREI LA2, LA3, 1176s, Parametric EQ, Trident stereo limiter, Gain brains, Kepex, Scamp rack  
**Microphones:** Telefunken U-47s, AKG C-24, Neumann, AKG, PZM, Sony, Shure, Sennheiser, Beyer, RCA  
**Instruments Available:** Yamaha DX 7, Oberheim DMX, Prophet 5 with sequencer, alphaSyntra, Steinway B 7-foot grand, Ludwig drums  
**Video Equipment & Services:** Proton 6000 monitor, JVC H2200 cassette, video sync to 24 track  
**Rates:** Call for rates



BEAR WEST STUDIOS  
 San Francisco, CA

◆◆◆ BEAR WEST STUDIOS

915 Howard St., San Francisco, CA 94103  
 (415) 543-2125

**Owner:** Ross J Winetsky  
**Studio Manager:** Ross J Winetsky  
**Engineers:** Mark Needham, Vance Frost, Mark Sewasac, James Johnson, Amy Atchison, Kim Brandt, 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 track; Tascam 85-16 16 track; MCI 110A 2 track; (2) Ampex 350 2 track, Ampex AG350 2 track.  
**Mixing Consoles:** A: Sound Workshop Series 34 28 input B: Tascam MS20 20 input  
**Monitor Amplifiers:** McIntosh, BGW, SAE, White  
**Monitor Speakers:** JBL 4332, 1413, L100, Auratones  
**Echo, Reverb, and Delay Systems:** DeltaLab delays, Roland delay, Lexicon digital reverb, live chamber, multi-track, MICMIX, MXR DDL, MXR Doubler, flanger, Yamaha analog delay  
**Other Outboard Equipment:** UREI 1176 limiters, dbx compressors, (4) API 550 EQs, API 550 EQ, Furman parametrics, Symetrix noise gates.  
**Microphones:** Neumann U-67, U-87, (2) KM 54's, Shure SM-7, Shure, AKG, Sennheiser, Beyer, EV  
**Instruments Available:** Yamaha C3 grand piano, Hammond C3 organ w/Leslie, Drumulator, Prophet 5  
**Rates:** Call for rates.

◆◆◆ BONNEVILLE MEDIA COMMUNICATIONS

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

**Owner:** Bonneville International Corporation  
**Studio Manager:** Dave Michelsen

◆◆◆ CARIBOU RANCH

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

**Owner:** James William Guercio  
**Studio Manager:** Sandy Tomes, Rich 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:** 1/4" 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.



COLORADO SOUND RECORDING  
 Westminster, CO

◆◆◆ COLORADO SOUND RECORDING

3100 W. 71st Ave., Westminster, CO 80030  
 (303) 430-8811

**Owner:** Kevin Clock  
**Studio Manager:** Kevin Clock, officer manager Renee Regnier  
**Engineers:** Kevin Clock, Monte Robertson  
**Dimensions of Studios:** 600 sq. ft., live room 550 sq. ft.  
**Dimensions of Control Rooms:** 450 sq. ft.  
**Tape Recorders:** Ampex 1200 MM1200 24, 16 track, Ampex ATR104 1/4 1/2", 2, 4 track; 3M M79 2 track; Technics 1500 2 track.  
**Mixing Consoles:** Trident TSM 24/24/2  
**Monitor Amplifiers:** UREI 6300, Yamaha P2050, BGW, Crown, Peavey  
**Monitor Speakers:** UREI 813A, JBL 4311, Yamaha NS10, Auratones  
**Echo, Reverb, and Delay Systems:** AMS RMX 16 digital reverb, Lexicon 224, Ecoplate, Lexicon Prime Time, (2) DeltaLab 1024, MXR digital delay.  
**Other Outboard Equipment:** Ursa Space Station, Dyna-mite Valley People, Dynallex noise reduction, (2) UREI LA3A, (2) UREI 1176, UREI LA4, (2) White 4400, Furman parametric, Symetrix noise gate, Omnicraft noise gates, Aphex Aural Exciter, Harmonizer 910, EXR Exciter.  
**Microphones:** Neumann U-47 tube, (2) Neumann U-47 Fet, (3) Neumann U-87, (2) U-89, (2) KM 84, KM 86, (4) AKG 414, (3) 451; (2) Sennheiser 421, (2) 441, (2) Shure SM81, (3) SM57; Wright microphone  
**Instruments Available:** Chickening Grand Piano, Fender Rhodes, Oberheim DMX drum machine, Dragon drum set, Fender guitar amps, Synthesizer rentals on request.  
**Rates:** 24 track 75/hour, \$800/day.

◆◆◆ COLOR ZONE PRODUCTIONS

P.O. Box 1911, Novato, CA 94947  
 (415) 892-8027

**Owner:** Peter Gillford  
**Studio Manager:** Elissa Alford  
**Engineers:** Peter Gillford, various independents.  
**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.

—LISTING CONTINUED ON PAGE 104

—FROM PAGE 103

**Mixing Consoles:** Soundcraft 1600 prod series  
**Monitor Amplifiers:** AB series 900, Biamp TC/60  
**Monitor Speakers:** UREI 811A, JBL 4311B, Ed Long TA-2 near field, Auratones  
**Echo, Reverb, and Delay Systems:** Lexicon 224X w/Larc, Orban 11B reverb, (3) DeltaLab Effectrons  
**Other Outboard Equipment:** Valley People Dyna-mite, Orban gated comp/limited 424A, Orban 622B parametric EQ, Aphex Aural Exciter, Aphex Compeller, Apple IIe with MIDI capability, MXR flanger/doubler, dbx 161 compressors  
**Microphones:** Sennheiser 421, 441, AKG C414, 452EB, B330BT, Sony ECM56F, 23F, Beyer 600, Neumann U87  
**Instruments Available:** Simmons SDS7, Roland GR-700 guitar synth, Yamaha DX 7, Emulator II, Rhodes 73 key piano, Chroma synthesizer, E-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



**COLOR ZONE PRODUCTIONS**  
 Novato, CA

•••• COMMERCIAL RECORDING HAWAII  
 333 Cooke St., Honolulu, HI 96813  
 (808) 536-5439

**Owner:** Commercial Recording, Inc  
**Studio Manager:** Donn V Tyler

•••• 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:** Analog 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 Digital Sony PCM F-1, 2 track

**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, Lexicon 200 digital reverb, MXR DDL, Electron 1024, Harmonizer (Eventide), Roland 301 Space Echo

**Other Outboard Equipment:** LA-2A, (4) LA-3A, 1176, (6) Gain Brains, (10) Kepex, Orban de esser, MXR auto flanger & auto phaser, UREI Digital Metronome, Roland vocoder, (2) Aphex B, MXR stereo chorus, Lexicon 1200 Audio Time Compressor, Dynalox D2B noise reduction

**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, Beyer M 500, EV 666, RE55, RE11, etc

**Instruments Available:** Baldwin baby grand, Rhodes, Prophet-5, OB-Xa & DSX sequencer, DMX drum machine, Yamaha DX 7, Moog Sonic 5, G 50, Yamaha GTR AMA, Gibson ES-335

**Video Equipment & Services:** ¼" VTR & Hitachi SK-80 camera, Arriflex SR-2 16 mm camera, Sound Stage 50' x 60' x 16' with lighting, Nagra 4 L, Sony Betamax, Panasonic VHS, complete film and video production

**Rates:** 24 track \$90/hr., 8 track \$75/hr., mono or 2 track \$65/hr



**COUGAR RUN MUSIC STUDIOS, LTD.**  
 Reno/Lake Tahoe, NV

•••• COUGAR RUN MUSIC STUDIOS, LTD.  
 P.O. Box 7418, Reno/Lake Tahoe, NV 89450  
 (702) 832-7711

**Owner:** Cougar Run, Inc

**Studio Manager:** Jody Everett Peterson

**Engineers:** David Holtman, Jody Peterson, Jor Holloman (chief engineer)

**Dimensions of Studios:** 18 x 30 (540 sq ft) Lakeside Associates Design

**Dimensions of Control Rooms:** 25 x 26 (650 sq ft) Lakeside Associates Design

**Tape Recorders:** Analog Studer A800III 24 track, MCI JH114 24 track, Ampex ATR102 (transformerless) ½" and ¼" 2 track, (2) Studer A710 cassette, Digital Mitsubishi X80A 2 track, Sony PCM F 1 (NTSC + 4) 2 track

**Mixing Consoles:** Neve 8108 w/ Neem 40/32 (48 mainframe), MCI 528B 28/24 (Aphex VCA's)

**Monitor Amplifiers:** (4) Yamaha 2002's, (1) UREI 6500, Crown, K&W

**Monitor Speakers:** Lakeside LM 1A (biamped), UREI 813 (PB), Auratone T-6, Yamaha NS10M

**Echo, Reverb, and Delay Systems:** Lexicon 224XL, AMS 16, Ecoplate I (7 foot), EMT 140ST (tube), Live stereo ambience room Lex con Super Prime Time, Eventide 949, AMS DMX-1580 (6½ sec) (4) Roland SD 3000

**Other Outboard Equipment:** BTX Softouch SMPTE system, 8 special self selective headphone stations with a variety of headphones, 12 Aphex CX 1 (Compex gate), 8 Aphex F-2 EQ, GML Parametric EQ, Aphex 11s, Aphex B, Aphex Compeller UREI LA2A, UREI LA3A, UREI 1176LN, dbx 165, ADR Vocal Stressor

**Microphones:** Tube U-67, (2) U 47, (2) U-48, AKG "The Tube" C12, (2) C 61, (4) Sanken CU 41, (2) B&K 40C3, (2) B&K 4004, Milab DC-63, VP-50, (6) Shure SM-57, (4) E-V RE-20, (4) MD 421, (8) AKG 414 P48, UREI Active direct boxes, Axe line level direct boxes

**Instruments Available:** Yamaha DX 7, Oberheim XD-1 module, Europa SRC SMPTE clock, Yamaha C 5 piano w/ Forte MIDI, LinnDrum, Simmons SDS 7 and SDS 6, IBM PC and musical software, Marshall 50 watt 4 12, Yamaha & Boogie 1-12", Yamaha 1 15 bass amp, Leslie 147, Roland JX3-P, Emulator II, Yamaha drums

**Video Equipment & Services:** Sony BVU 800D ½", Beta and VHS ½" SMPTE (BTX Softouch), Sony 25 inch Profel monitor, (6) Sony 19" Trinitron, (Camrac Inc. 1-inch video services available locally)

**Rates:** Please call (available daily, weekly, monthly)

**Extras:** This is a private three-acre estate overlooking Lake Tahoe. There is a year round swimming pool, hot tub, and creek. Convenient to Reno, South Lake Tahoe, North Shore Lake Tahoe, world class ski resorts and world class hotel/casinos. Also, close

access to Reno International Airport and Truckee Tahoe Airport (Excellent L.A. and S.F.O. rental connections) (Oh Yes, 24 hour maintenance)

•••• 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, Otari MTR 10 2 track, 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 ½ octave EQ, dbx noise reduction, Orban/Parasound stereo matrix, Orban Model 526A de-esser, Inovonics 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-Q 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, AKG 414

**Instruments Available:** Steinway grand piano, Hammond B-3 organ w/ Leslie, Oberheim eight voice synthesizer w/sequencer, Alembic bass cabinet, Oberheim studio amplifier, Fender Vibro verb amplifier w/BL 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, Oberheim DMX drum machine

**Rates:** 24 track \$60/hr., 8 track \$50/hr. (Block booking rates available)

•••• 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



**DIFFERENT FUR RECORDING**  
 San Francisco, CA

•••• DIFFERENT FUR RECORDING  
 3470-19th St., San Francisco, CA 94110  
 (415) 864-1967

**Owner:** Howard Johnston, Susan Skaqqs

**Studio Manager:** Susan Skaqqs

**Engineers:** Howard Johnston, chief engineer, Tom Paddock, chief systems engineer, Kim Foscatto, Wally Sound Independents Stacy Baird, David Blossom

**Dimensions of Studios:** 25 x 35 x 12 plus iso booths

**Dimensions of Control Rooms:** 17 x 21 x 12

—LISTING CONTINUED ON PAGE 106

# SOUND GENESIS & SCOTCH TAPE BEST SELECTION, BEST PRICE



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# BEAR WEST STUDIOS

We've just remodeled our 24- and 16-track rooms and installed new gear, consoles and all. Lots of outboard.

Now... we're the hottest place in town. Give us a call and let's talk!

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San Francisco, CA  
415-543-2125

Circle #059 on Reader Service Card

## The art of shaping sound.

SONEX is a high-performance acoustical foam that upgrades your studio inexpensively. Ideal for a temporary isolation booth, it can also eliminate slap echo and harsh resonances in the main room or silence noisy tape equipment in the control booth. Write for our color brochure today.



### Alpha Audio

2049 West Broad St.  
Richmond, VA 23220 (804) 358-3852

Circle #060 on Reader Service Card



—FROM PAGE 104

**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 demo rates

**Extras:** Copying facilities, sauna, shower, lounge w/kitchen, color TV.

**Direction:** Custom service in a state of the art studio designed by John Storyk 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 Windham Hill, Concord Jazz, George Winston, Patrick Gleeson, James Taylor, Walt Disney Corp., Gene Clark, David Grisman

#### •••• DORADO RECORDING

P.O. Box 2445, Berkeley, CA 94702  
(415) 652-1076

Owner: Glen Andres Frendel  
Studio Manager: Glen Andres Frendel



PHIL EDWARDS RECORDING (PER)  
San Francisco, CA

#### •••• PHIL EDWARDS RECORDING (PER)

also REMOTE RECORDING  
1338 Mission St., San Francisco, CA 94103  
(415) 861-4439

Owner: Phil Edwards  
Studio Manager: Phil Edwards  
Engineers: Phil Edwards, Phil DeLance, Ron Davis  
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 16 track, (2) 3M M79 24 track, (2) Ampex AG 440C 2 track; (1) MCI 110B 2 track.

**Mixing Consoles:** Remote Truck: API/De Medio 4024 40/24. Mixdown A: API 1604 16/8. Mixdown B: Langevin 1004 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

**Other Outboard Equipment:** UREI 1176LN and LA 3A limiters; Orban 621B parametric EQ, 516E de-esser; Adams-Smith 605B three machine synchronizer; 36 channels Dolby type "A" noise reduction. ITC 3 deck cart machine, various Sony and Aiwa cassette machines.

**Microphones:** Neumann U-87's, U-47's, KM84's, AKG 414's, 451's. Shure SM 56's, SM 58's, SM 53's, SM 85's, SM 87's. Electro-Voice RE 15's, 1761's. Sennheiser 451's. Sony ECM 22p's. RCA 77DX's. Countryman FET 85 direct boxes.

**Video Equipment & Services:** Sony KX 1901 video monitor, Sony Trinicon 2200 color camera, Sweetening for video.

**Rates:** Mobile II: 24 track recording \$2,000/day and up. Studio A: \$50 and up. Studio B: \$50 and up.

**Extras:** Mobil II has a 21x8x8 body with air suspension, air conditioning and lift gate. API equipped 40 input, 24 output, 24 monitor main console with additional API 1604 auxiliary console available. Dual 24 and 16 track recording possible with Adams-Smith synchronizer. Redundant power supplies. Over 70 onboard mikes to choose from. 46 pair snakes, 27 pair splits. (7) UREI limiters available.

**Direction:** Complete packages for record production, video and radio broadcast taping, film and commercial production. Simultaneous record and broadcast packaging a specialty. Experienced three-man crew. Credits include Concord Jazz, Walter and Edwin Hawkins, live broadcasts for KLAZ, KKKO, Tokyo Broadcasting, Swedish Radio video shoots for KPX, NPR. Call for rates and brochure.



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: Studio Manager: Fane Opperman, Traffic manager Vivienne Brown

Engineers: Fane Opperman, Vince Sanchez, Corie Opperman, Pete Carlson.

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 2 track; Sony and Aiwa cassette decks

**Mixing Consoles:** MCI JH-636 transformerless, 32 in x 24 out, w/automation

**Monitor Amplifiers:** Yamahas, Crown, Biamp.

**Monitor Speakers:** Tannoy Berkeleys, JBL 4311's, Altec A7's, Auratones and MDM-4 near field monitors.

**Echo, Reverb, and Delay Systems:** Lexicon 244 digital reverb, Ursa Major Space Station digital reverb, Orban 111B reverb, Eventide Harmonizer and DDL, DeltaLab DL4 digital delay, DeltaLab DL2 Acousticomputer digital delay, DeltaLab Effectron 1034 digital delay, MXR Pitch Transposer, Ibanez analog delay and multi-flanger.

**Other Outboard Equipment:** 34 channels dbx noise reduction, EXR Exciter; dbx 160 compressors, UREI 1176 limiters, Symetrix CL100 compressor/de-essers; Omni-craft, Symetrix and dbx noise gates; White, MXR and UREI 1/3 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, Polymoog, Micromoog, Roland Sequencer, Wurlitzer 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

**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. A restaurant/bar is next door. The studio has a redwood geodesic dome 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. Recent clients include: Eddie and the Tide, Pat Simmons Band, Lacy J. Dalton, George Winston, Bob Brozman, Haile Maskell, and Northwind

\*\*\*\* FANTASY STUDIOS

10th & Parker St., Berkeley, CA 94710  
(415) 549-2500 or 486-2038

Owner: Fantasy Records

Studio Manager: Nina (Urban) Bombardier, Roy Segal

Engineers: Danny Kopelson, Stephen Hart, Dave Luke, Tom Size

Dimensions of Studios: A 30 x 50; B 20 x 27; C 27 x 35, D 30 x 50

**Tape Recorders:** Analog Ampex 1200 16/24 track; Studer A800 24 track, Ampex ATH100 2 track, MCI 110C 4/8 track; Digital: Mitsubishi digital X-80 2 track, Mitsubishi digital X-80A 2 track; Mitsubishi X-800 32 track digital recorder

**Mixing Consoles:** Neve 8108, 56 in x 48 out, Neve 8108, 32 in x 24 out, DeMedio custom 24 in x 24 out, Quad 8, 20 in x 16 out.

**Monitor Amplifiers:** Crown and McIntosh

**Monitor Speakers:** Sierra-Hidley, UREI Time Aligned, 604 w/Masterlab crossovers.

**Echo, Reverb, and Delay Systems:** Live chambers, EMT 140's, Ecoplate, EMT 250 digital, Lexicon 200, Dyna-Mite Gates.

**Other Outboard Equipment:** Eventide Harmonizer, delay, chorus, phaser, Kepex, Scamp rack, Bel DDL, etc.

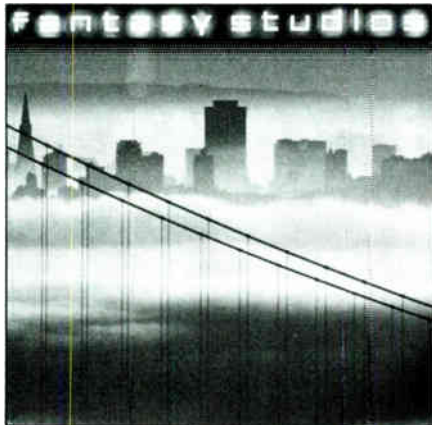
**Microphones:** 164 mikes—ribbon, dynamic, condenser and PZM

**Instruments Available:** Keyboards and guitar amps

**Video Equipment & Services:** Video sweetening, video

transfers 1/4-inch to VHS or Beta 1/2-inch, SMPTE code, window dubs, etc., Q-Lock synch, 3 machine lockup to 3/4" Umatic video, JVC 8200 and BVU 8000.

**Rates:** Call Nina, Andrea or Roy.



FANTASY STUDIOS  
Berkeley, CA

\*\*\*\* FTM STUDIOS

also REMOTE RECORDING

1111 S. Pierce, Denver, CO 80215  
(303) 922-3330

Owner: John/Diane Sundberg

Studio Manager: John Sundberg



FTM STUDIOS  
Denver, CO

Engineers: John Sundberg, Jim Iltis, Michael Pheifer, Jeff Shuey  
Dimensions of Studios: A: 2200 sq. ft. w/5 isos; B: 1500 sq. ft. w/4 isos.

Dimensions of Control Rooms: A: 550 sq. ft.; B: 450 sq. ft.; C: 350 sq. ft., 150 sq. ft. production room

**Tape Recorders:** (2) Soundcraft 760 24 track, Tascam 90-16 16 track, Otari MTR 10 1/2-inch 2 track; (2) Otari Mark III B 2 track.

**Mixing Consoles:** (2) Soundcraft 2400 48 in/24 out, 52 in/24 out, (1) Tascam 24 in/16 out

**Monitor Amplifiers:** Crown Delta Omega, (8) Haller 500's, Crown 300D, Crown 150D.

**Monitor Speakers:** UREI 813B, Tannoy 3000, Tannoy 12F, Yamaha SP10, Auratones, E-V 500, E.V. 100

**Echo, Reverb, and Delay Systems:** EMT 140, Audi-ence Plate, Lexicon 200, AKG BX-10, (2) Scamp stereo, (2) Lexicon Prime Time II, Lexicon Prime Time, (3) DeltaLab, Yamaha 1000

**Other Outboard Equipment:** DeltaLab-5; MXR Pitch Transpos-

## USED RECORDING EQUIPMENT FOR SALE

### MICROPHONES

All AKG and Neumann Tube Type Microphones are available.

This month's special sale:

AKG C28 Tube Microphone Complete System \$500

Also in stock: SONY, RCA, SCHOEPS, etc.

### EQUALIZERS

API 550	\$300
ITI Para	300
Melcor	85
MAP	225
Orban Para Graphic	500
Scamp Rack W/EQ, Gates, ADT	
White 3400	175

Pultecs, Lang: Call for Prices and Availability.

### CONSOLES

Trident B (discrete) 30/16/16	\$15,000
API 20/8/16	
Electrodyne 24/8/16	
MCI 636 28 inputs with Automation	34,000
Harrison 3232 B/C Clean Automated	34,000
Neve 10 X 2 Kelso	5,000
Pultec 4 X 1 Mixer	200

Call about HELIOS, NEVE, TRIDENT, etc.

### AMPS

MacIntosh 2105	\$425
Citation 12	100
Symetrics Headphone Amp	250
MacIntosh MA 230	250

### TAPE RECORDERS

Scully 280-1	\$1,000
3M M64 4-Trk.	2,000
3M M64 2-Trk. (7 1/2 /15)	1,300
Ampex (play only)	350

Call about multitracks.

### OUTBOARD GEAR

Marshall Modulator	\$600
Roland Phaser	300
API 525 Limiters	250
DeltaLab DDL 1	300
Alison Gain Brains	140

Call about ORANGE COUNTY EQ's, MXR DDL, MXR PACKAGE, etc.

### CROSSOVERS

Crown	\$275
BGW	400
Mastering Lab	200

### MISCELLANEOUS

Shure Phono Pre Amp • Langvin AM16 Mic Pre Amps (11) \$100 per unit • UA 610 input modules with EQ (tubes) \$300 the best mic pre amp • API Faders • Pye Limiters • Decca Stereo Tube Limiter • Neve input Modules 1057/1060 \$200 • Pultec HLF3C • API 24 channel monitor section • API 512 Modules (25) \$150 per unit • RCA BA 6A Tube Limiter \$325 • API Mic Pre Amps, Line Amps & Buss Amps • UA 1108 Pre Amp • API VU Meters • Sennheiser Mic Power Supply • Alison LX 100 • MCI 16 Trk. (play head only) • Neumann 66 Lathe with 68 cutter head complete with all solid state computer and amplifiers • Ampex 8 Trk. head assembly • 3M 8 Trk. 1" heads (3).

### REVERB

EMT 140 plate	
MICMIX MasterRoom	\$700
AKG BX10	850

We Will Entertain Any Reasonable Offer on ANYTHING!!  
Make Me An Offer I Can't UNDERSTAND.... PLEASE!

**Dan Alexander Audio • Box 9830 • Berkeley, CA 94709 • 415/527-1411**

—FROM PAGE 107

er; Gatelex, Scamp, (4) limiter/compressors, (4) Expander gates, (4) Noise Gates; Automatic Panner, (2) Parametric EQ; (4) Symetrix 501 limiters, (4) Biamp Limiter, (3) dbx 161, dbx 162, (2) Aphex, Orban Stereo Parametric EQ, (3) Orban de-esser  
**Microphones:** AKG C 24, 422, 414, Neumann U 87, KM 86, KM 84, Shure SM 81, SM 85, SM 57, E-V RE20, RE15, RE10, RE16, RE11, Countryman pressure zone  
**Instruments Available:** Kawai 7' Grand Piano, Kawai U550, Oberheim OBX, DMX, DSX, Kurzweil with sample to disk, Rhodes, Korg C-3 organ, ARP Odyssey  
**Video Equipment & Services:** NEC 25" high-resolution color monitors  
**Rates:** A \$65 with engineer, B \$35 with engineer, C \$15



**Microphones:** Neumann U87, U47, U87, M49, M269, KM54 & KM56, AKG C12, C12A, C24 stereo, also Sennheiser, Sony, Beyer, RCA, Countryman PZM etc., etc.  
**Instruments Available:** Steirway 9 foot concert grand piano, Ampeg B18 drums and other instruments by arrangement  
**Rates:** \$25 to \$125 per hour.  
**Extras:** Peel's coffee in our game room/lounge, pool table, video games, three blocks from 3ART, really swell staff!  
**Direction:** Rock, Punk, Jazz, Reggae, Funk, Country & Gospel — we do it all! We think you will find our equipment and rates very competitive with the best the Bay Area has to offer.

•••• GILLE'S RECORDING STUDIO  
*also REMOTE RECORDING*  
 P.O. Box 3525, Bellevue, WA 98009  
 (206) 455-3111  
**Owner:** Gilles J.C. Rivet  
**Studio Manager:** Gilles J.C. Rivet

•••• HAPPY TRACKS RECORDING  
 P.O. Box 398, Belmont, CA 94002  
 (415) 595-4666  
**Owner:** John Harbold  
**Studio Manager:** Doug Dayson, Doug McVay


•••• HARMONIX PRODUCTION MUSIC  
 1340 S.W. Dollar St., West Linn, OR 97068  
 (503) 655-9102  
**Owner:** Harmonix Production Music  
**Studio Manager:** Larry Schaeffer

•••• HGS  
 3655 Chuckwagon Way, Placerville, CA 95667  
 (916) 626-1999  
**Studio Manager:** Jim Lang

•••• HYDE STREET STUDIOS  
 245 Hyde Street, San Francisco, CA 94102  
 (415) 441-8934  
**Owner:** Dan Alexander, Tom Sharples, Michael Ward  
**Studio Manager:** John Cumberti, Mary Willis  
**Engineers:** John Cumberti, Richard Van Dorn, Mark Wallner, Ricky Lee Lynd, Les Sluck, Garry Creiman, Joe Tarantino  
**Dimensions of Studios:** A 19 x 39, C 33 x 21, D: 31 x 18  
**Dimensions of Control Rooms:** A 18 x 19, C 15 x 15, D 18 x 15  
**Tape Recorders:** (2) Otari MTR 90 II's 24/16 track, Otari 1/2-inch MTR 12 2 track, Otari 1/4-inch MTR 10 2 track, (2) Otari MX 5050 II's 2 track, (4) Sony TCK 555 cassettes  
**Mixing Consoles:** Trident Modified 'B' range 40 & 24, A P 1 24 & 24  
**Monitor Amplifiers:** Phase Linear, Crown, McIntosh, SAE, Hultner  
**Monitor Speakers:** UREI 813, JBL 4333, 4313, Visonik 6000, Yamaha NS10, Auratones  
**Echo, Reverb, and Delay Systems:** Eventide SP2016 digital reverb, Lexicon 200 digital reverb, 3 live echo chambers, FMT plate reverb, Lexicon and DeltaLab digital relays, Eventide 949 Harmonizer  
**Other Outboard Equipment:** EQ's Pultec, ITI, ADR, Sontex, Lang, Limiters: Teletronix, Fairchild, UREI, Valley People, Aphex II



HYDE STREET STUDIOS  
 San Francisco, CA



# Audio Vision

COMPUTERIZED SOUND RECORDING

74 e. center, linton, ut. 84062      (801) 785-0077



QUANTEC QRS • LEXICON 224 • LEXICON SUPER PRIME TIME  
 SIMMONS SDS-7 • ADR VOCAL STRESSER • TUBE MICS • PULTEC  
 EQ'S • APHEX RACK • UREI 813'S • STEPHENS • MCI • ALLISON  
 AUTOMATION • YAMAHA NS-10'S • EVENTIDE HARMONIZER 949  
 VALLEY PEOPLE DYNA-MITES • SYMETRIX • EFFECTRON • CROWN  
 EVENTIDE FLANGER • SONY CASSETTE DECKS • RSS PHASER • WMS  
 FLANGER • DRUM COMPUTER • YAMAHA C3 GRAND PIANO

**74 e. center, linton, ut 84062      801-785-0077**



INDEPENDENT SOUND  
 San Francisco, CA

•••• INDEPENDENT SOUND  
 San Francisco, CA 94115  
 (415) 929-8085  
**Owner:** Peter and Mary Bultett  
**Studio Manager:** Peter and Mary Bultett  
**Engineers:** Peter Bultett  
**Dimensions of Studios:** 13 x 12  
**Dimensions of Control Rooms:** 17 x 12  
**Tape Recorders:** Otari MTR-90 II 24 track, Otari MTR-12 2 track, Otari 5050 B 2 track; TEAC 124 B cassette  
**Mixing Consoles:** Sound Workshop Series 34 w/automation 32-24  
**Monitor Amplifiers:** BGW 750 A-B Systems 205  
**Monitor Speakers:** JBL 4313 MDM 4, Yamaha NS10, Auratones  
**Echo, Reverb, and Delay Systems:** Lexicon 224XL, Lexicon Prime Time, Eventide H949 Harmonizer, Echotron 4096 4 second delay  
**Other Outboard Equipment:** Scamp rack including compressor, limiters, expander/gates, parametric auto pan, Orban "para graphic" EQ  
**Microphones:** Neumann U87, AKG 414  
**Instruments Available:** Kurzweil digital synthesizer, Yamaha DX7, Yamaha CS80, Linclun machine, Sequential Circuits Pro-One  
**Video Equipment & Services:** The bulk of our work is video oriented. We're experienced in writing commercial spots and mixing for television. We have a JVC 1/2 inch video and 1/4 inch video deck, a Sony PVM 1910 monitor with a full synchronizer coming soon.  
 —LISTING CONTINUED ON PAGE 110

Circle #062 on Reader Service Card

# AMPEX

## Ampex 456 Grand Master<sup>®</sup> Studio Mastering Tape

*More studios master their hit albums on Ampex Grand Master™ than on all other tapes combined. In Northern California, more and more studios depend on Leo's Professional Audio for their Ampex tape and recording supplies.*

**LARGE  
LOCAL STOCK  
PANCAKE TO  
2 INCH**



***leo's audio  
and music  
technologies***

*Anticipating the needs of musicians  
and audio professionals since 1956.*

5447 TELEGRAPH AVE. • OAKLAND • CA • 94609 (415) 652-1553

—FROM PAGE 108

**Rates:** \$125/hour includes everything in this listing. No surprises. Excellent block rates available.

**Extras:** This studio is used extensively by the owners. So they know how to get great sounds fast. If you're doing synthesized dance/pop music—this is the studio that was built for it. And if you haven't heard of Kurzweil, you haven't heard what state-of-the-art synthesis is all about.

**Direction:** This studio is used primarily for overdubs and mixing. Do your basic tracks at another studio. A few hours here will fill those tracks out beyond your wildest dreams! If you've got a complicated mix, we've got a simple automation system that does all the work for you! Projects include: California Milk, MTV, Santa Cruz Clothes, KPLR, Ketchum Advertising, and many dance artists.

◆◆◆ INFINITE STUDIOS

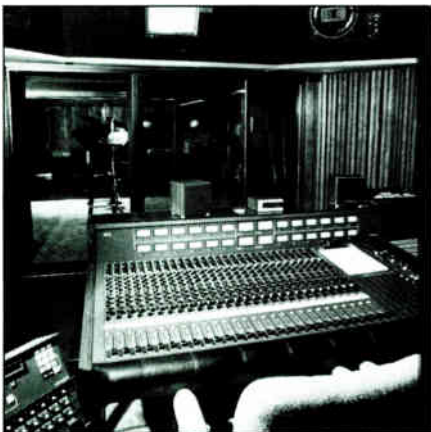
P.O. Box 1709, Alameda, CA 94501  
(415) 521-0321

Owner: Michael Denten  
Studio Manager: Michael Denten

◆◆◆ LAHAINA SOUND RECORDING STUDIO

Lahaina, Maui, HI 96761  
(808) 667-2587

Owner: George Benson  
Studio Manager: Amos Daniels



STEVE LAWSON PRODUCTIONS  
Seattle, WA

◆◆◆ STEVE LAWSON PRODUCTIONS

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

Owner: Steve Lawson Productions, Inc.  
Studio Manager: Steve Lawson  
Engineers: Bob Israel, Steve Lawson, Jim Wilson, Terry Dete, Vince Werner, Dave Raynor  
Dimensions of Studios: A: 27 x 16½; B: 13 x 14; C: 50 x 14  
Dimensions of Control Rooms: A: 17 x 13; B: 12 x 13; C: 16 x 11

**Tape Recorders:** (2) MCI JH24 24 track, MCI JH 110C 8 track; (3) MCI JH 110C 24; (3) Otari 5050 2 track.

**Mixing Consoles:** A: MCI 636 Automated 28x24, B: Tangent 3216 12x8; C: MCI 636 Automated 28x24

**Monitor Amplifiers:** UREI, BGW, Crown, Hafler  
**Monitor Speakers:** JBL 4430s, JBL 4311s, UREI Time Aligns, MDM 4s, Auratones, Yamaha NS-10s

**Echo, Reverb, and Delay Systems:** Eventide Harmonizer 949, Lexicon 224X w/LARC, AMS Reverb, Lexicon Prime Time, Prime Time 2, (3) PCM 42s.

**Other Outboard Equipment:** (2) UREI 1176s, UREI 1178, Symmetrix 501s, Gain Brains, Kepex, Scamp racks with assorted modules, Symmetrix Hybrid telephone interface, Orban de-esser

**Microphones:** (3) Neumann U-87, (4) AKG 414s, (4) AKG 451s, (2) Neumann KM 84s, (2) Shure SM5Bs, (2) Shure SM 58, (2) Sennheiser 441s, (5) Sennheiser 421s, (2) AKG D12s, (4) Shure SM 57s, (2) Shure SM 56s.

**Instruments Available:** (2) Yamaha 7'4" grand pianos, Tama Superstar drum kit with power-toms.

**Video Equipment & Services:** Audio Kinetics Q lock synchronizer, Sony BVU 800, MCI 1-inch layback machine for laying audio directly to 1-inch videotape.

**Rates:** Call for information.

**Extras:** Our equipment and rooms are state-of-the-art, but it is our people that makes us shine. We work on many different types of projects from Heavy Metal to light banter, LP projects, multi-image soundtracks, radio and TV commercials, and audio sweetening of video projects. We also offer high quality high-speed reel to reel and cassette dubs in mono and stereo. Call for rates.



**Direction:** Our great rooms and comfortable atmosphere attract superb engineers. Our commercial work has been recognized by the world's largest awards including Clio, IBA, Andys, One show & Best in the West. Our music production has won critical acclaim. And best of all, our clients come back. Again, and again. Give us a call. We'd love to give you a tour.



LIVE OAK STUDIO  
Berkeley, CA

◆◆◆ LIVE OAK STUDIO

1300 Arch St., Berkeley, CA 94708  
(415) 540-0177

Owner: Jim and Priscilla Gardiner  
Studio Manager: Priscilla Gardiner

Engineers: Dale Everingham  
Dimensions of Studios: 350 sq. ft.

Dimensions of Control Rooms: 275 sq. ft.  
Tape Recorders: MCI JH 24-24/16 with auto Locator III; Otari MTR 10-2 ¼" or ½"; Sony PCM F-1 2 tracks

Mixing Consoles: MCI 636-automated ready 28 in/24 out  
Monitor Amplifiers: Bristons 3B, 4B; Yamaha P 2100

Monitor Speakers: JBL Bi-Radial with Crossover; JBL 52-30 A, JBL 40-301s; Auratones, MDM TA 2s, MDM TA 3s

**Echo, Reverb, and Delay Systems:** Lexicon 224 XL, Prime Time II, Super Prime Time.

Other Outboard Equipment: UREI LA 2A, LA 3A, 4B, UREI 1176, Spectra Sonic 610 full Scamp Rack, Vocal Stressor by Audio Design and Research

Microphones: Full Selection  
Instruments Available: Kurzweil 250, the "System" by Oberheim, Yamaha DX-7

Video Equipment & Services: SMPTE interlock music/video.  
Rates: Upon request

◆◆◆ 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, Hafler 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, Valley People Dyna-mite.

**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 STUDIO

37532 Sycamore St., Bldg. 1-C, Newark, CA 94560  
(415) 794-2992

Owner: Will Mullins  
Studio Manager: Louise Singleton



MOON RECORDING INC.  
Sacramento, CA

◆◆◆ MOON RECORDING INC.

156 Otto Circle, Sacramento, CA 95822  
(916) 392-5640

Owner: George Whyler  
Studio Manager: George Whyler

Engineers: David Houston, Steve "Mr. Motion" Holsapple  
Dimensions of Studios: 22 by 34

Dimensions of Control Rooms: 17 by 18  
Tape Recorders: MCI JH-24 24 track, Tascam 80-8 8 track; Otari MTR-10 2 track

Mixing Consoles: MCI JH-636 Automated 28/24  
Monitor Amplifiers: UREI 6300, Crown, McIntosh.

Monitor Speakers: UREI 813B, Electro-Voice Sentry 100A, Auratone 5C.

**Echo, Reverb, and Delay Systems:** Ecoplate III reverb, Lexicon Prime Time III delay, Eventide Harmonizer delay.

**Other Outboard Equipment:** UREI LA-3As; dbx 160s; Orban 424 Comp/Lim/De-esser; Valley People Kepex II, Gain Brain, Maxi Qs; Aphex Aural Exciter; Ashly noise gates; Thompson Vocal Eliminator; Sony PCM-701 digital processor; UREI 537 ½ octave equalizers; Technics SL 1200 turntable; Technics cassette decks (5)

Microphones: Neumann, Electro-Voice, Sony, Sennheiser; Shure

**Instruments Available:** Yamaha C7 grand piano; Baldwin electric harpsichord; ARP Omni; ARP 2600; Minimoog; sound effects library

**Rates:** Please call for rates.

◆◆◆ MOUNTAIN EARS RECORDING

1939 Pearl St., Boulder, CO 80302  
(303) 444-3277

Owner: Boulder Network Inc.  
Studio Manager: Fred "Muff" Davis

◆◆◆ MOUNTAIN MEADOW RECORDING

570 26th St. #1, Ogden, UT 84401  
(801) 394-3217

Owner: Ronald D. Watkins  
Studio Manager: Ronald D. 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, Hank Parry, all independents welcome.  
**Dimensions of Studios:** Studio 20 x 12, overdub room.  
**Dimensions of Control Rooms:** 10 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 console 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, dbx 160X comp, digital reverb, 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, script for Passion Play, "Eureka Springs Ark," K.C. Laboratories, K.M.S. Hair Products.



**MOUNTAIN MOBILE RECORDING**  
Tullake, CA

•••• M.S. PRODUCTIONS  
P.O. Box 24182, San Francisco, CA 94124  
(415) 282-4806  
Owner: Melvyn Seals

•••• MUSIC ANNEX INC.  
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, Keith Hatschek, Jim Dean, David Porter, Richard Rose, Wes Weaver, Roger Wiersema, chief engineer.  
**Dimensions of Studios:** A: 35 x 28, 10 x 8 iso booth; B: 13 x 11; C: 20 x 30, 10 x 12 iso booth; D: 40 x 42  
**Dimensions of Control Rooms:** A: 25 x 22; B: 23 x 18; C: 28 x 22; D: 16 x 10 (video).  
**Tape Recorders:** (2) MCI JH-114 16/24 tracks; (3) MCI 1/2" & 1/4" JH-110 A/B 2 track; (5) Ampex 440 1/4" 440B 2 track; (1) Otari MK-III 8 track.  
**Mixing Consoles:** Neve 8036 24x8x24, Amek 2500 28x24x24; Amek TAC 16x8x8.  
**Monitor Amplifiers:** BGW, Crown, Yamaha, A/B systems.  
**Monitor Speakers:** A: UREI 813; B: JBL 4333A; C: UREI 811 & Augsburger sub woofer system; D: JBL 4311.  
**Echo, Reverb, and Delay Systems:** EMT 240, Lexicon 224 4.4 version, MXR 01 digital reverb.

**Other Outboard Equipment:** UREI 1176, 1178 limiters; In-ovonics limiters; ADR and Neve compressor limiters; ADR Vocal Stressor; ADR stereo EQ; ADR Scamp Racks with EQ, gates, DDL, Pan modules Eventide Harmonizer, phaser/flanger; Lexicon Prime Time, Roger Meyer noise gates, SMPTE-based automation in all studios.  
**Microphones:** AKG Neumann, E-V, Beyer, Sennheiser, Sony, Calrec, Shure, Countryman & Crown PZMs, Countryman FET directs.  
**Instruments Available:** Yamaha C-7 & C-3 conservatory pianos, Ampeg bass amp, alphaSyntauri digital synthesizer, various snare drums and percussion equipment.  
**Video Equipment & Services:** Complete sound stage with hard cyc 600 amp lighting grid with hot patch, Asala & Comrac color critical monitors, dressing rooms, two Sony 3/4" U-matics, Ampex BC-3 studio camera.  
**Rates:** \$45 to \$125, call for quotes, day rates  
**Extras:** TV lounge, kitchen, parking for 40 cars. Cassette duplication with the state-of-the-art Otari DP-80 480 ips system. Real-time cassette copies on (5) Tascam 122 decks. Studio C audio control room may be used with soundstage studio D.  
**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 DeGrass, Todd Rundgren, Blue Oyster Cult, Black Sabbath, Richie Cole, Donna Fargo, Steven Halpern, Holly Near and The Toons



**MUSIC ANNEX RECORDING STUDIO**  
Menlo Park, CA

•••• THE MUSIC SOURCE  
615 E. Pike, Seattle, WA 98122  
(206) 323-6847  
Owner: Jim Wolle  
**Studio Manager:** Dave Raynor  
**Engineers:** Jim Wolle, Dave Raynor, Adam Creighton  
**Tape Recorders:** Sony MCI JH-124 24 track; Sony MCI JH-110 2 and 4 track, MCI JH-110 2 track, NAD cassette; Aiwa cassette, (2) Revox A77s reel to reel  
**Mixing Consoles:** MCI JH 600 series 28/24  
**Monitor Amplifiers:** UREI 6500; Phase Linear 400; Crown D60; BGW; Symetrix headphone amplifier  
**Monitor Speakers:** JBL 4430s; JBL L 100s, Yamaha NS 10, Auratones.  
**Echo, Reverb, and Delay Systems:** Lexicon 224X, Lexicon PCM 41, Lexicon Prime Time; AKG BX 10, Eventide Harmonizer H910.  
**Other Outboard Equipment:** Scamp Racks with gates, (2) Spectrasonics limiters, (2) Symetrix peak limiters with side chains; Aphex Aural Exciter, Adams-Smith synchronizer; Roland time code generator, Blamp graphic equalizer, dbx limiter 162, DMX drummer, Roland Vocorder.  
**Microphones:** Neumann U-87, U-67 tube mike; AEG 414, 451; Electro-Voice RE-20; Shure 57s; Sennheiser MD421, AKG D12E.  
**Instruments Available:** DMX drummer; Emulator with sequential interface, Simmons drums, 9' Kawai grand piano, Oberheim OBX with DSX sequencer, Kurzweil; Yamaha DX-7; Thunder Rhodes; Kramer bass; drum sets available  
**Video Equipment & Services:** Sony 3/4" video cassette recorder  
**Rates:** Available upon request

•••• OASIS RECORDING STUDIO  
395 Sussex St., San Francisco, CA 94131  
(415) 587-3564  
Owner: Greg Goodwin  
**Engineers:** Greg Goodwin, Brian Hauck, Wayne Lewis, Michael Cohn.

—LISTING CONTINUED ON PAGE 112

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—FROM PAGE 111

**Dimensions of Studios:** 16 x 32, 10 x 12 iso booth for piano  
**Dimensions of Control Rooms:** 12 x 16  
**Tape Recorders:** Otari MTR 90 24/16 track with autolocator, Tascam 80-8 8 track; Otari MTR 10 2 track, Revox A77 2 track; TEAC C-3 cassette; (3) Sony TC FX2 cassettes  
**Mixing Consoles:** Soundcraft Series 2400 24x16x24  
**Monitor Amplifiers:** Yamaha, BGW, Symetrix  
**Monitor Speakers:** JBL 4311's acoustically balanced, E-V Sentry 100A's, Auratone  
**Echo, Reverb, and Delay Systems:** By the time of this listing we will have purchased a high quality digital reverb (Lexicon, AMS, Quantec or Klark-Teknik) Master-Room XL-305, Loft 450 delay, Loft 440 delay, Roland SRE 555 chorus/echo tape delay, Auratone Exciter.  
**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 Dyna-Mite compressor/expander/noise gate (2 channel)  
**Microphones:** We have a full selection of condensers, dynamics and ribbon mikes including Neumann, Sennheiser, AKG, Beyer, E-V, Sony, Shure, Audio-Technica  
**Instruments Available:** Kawai grand piano, Octave synthesizer, Gallien Krueger 112SC (boogie type amp), timbales and various percussion, custom Gibson Les Paul Jr., Gibson ES-335, Martin D-18 (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:** In our sixth year of operation, providing a fully equip-

ped 16 track studio. Album projects, singles, demos in a comfortable, relaxed but professional atmosphere. Currently upgrading our facility to 24 tracks (Jan 1985), we will still be handling 16 track and smaller projects as well. Please call for an appointment to see and hear our facility.

•••• OCEAN AUDIO  
 P.O. Box 747, Stinson Beach, CA 94970  
 (415) 868-0763  
 Owner: Tim Tomke  
 Studio Manager: B.J. Meines



ONE PASS FILM AND VIDEO  
 San Francisco, CA

•••• ONE PASS FILM AND VIDEO  
 also REMOTE RECORDING  
 One China Basin Bldg., San Francisco, CA 94107  
 (415) 777-5777  
 Owner: A One Pass Company  
 Studio Manager: Client Services  
**Dimensions of Studios:** 30 x 20  
**Dimensions of Control Rooms:** 20 x 20  
**Tape Recorders:** Otari MTR 9011 24 track, Otari MTR 12 2, 4 track, MCI 8 track  
**Mixing Consoles:** Harrison 3232C 32/32, Audiotronics 710 24/16; Sound Workshop Series 3 12/6  
**Monitor Amplifiers:** BGW, McIntosh Tube  
**Monitor Speakers:** MDM 4, JBL 4311, Auratone  
**Echo, Reverb, and Delay Systems:** Lexicon  
**Other Outboard Equipment:** Adams Smith synchronizers, parametric EQ, gates, limiters, de essers  
**Microphones:** AKG, E-V, Shure, Sony  
**Video Equipment & Services:** Full service video, 45' mobile truck with 10 cam, GVE 1680, DVE, 2 on-line edit suites, 1-inch, 3/4-inch, Rank Cintel Telecine; Montage off-line, 3/4-inch CMX off-line; ADO; Still Storer; CMX 600 lite pen edit, Dubner Computer Animation  
**Rates:** Send for rate card or call client services

•••• OSMOND STUDIO  
 1420 East 800 North, Orem, UT 84057  
 (801) 224-4444  
 Owner: Paul Jensen  
 Studio Manager: Mike Jex  
 Engineers: Blaine Stewart, Ron Miller  
**Dimensions of Studios:** 1 35 x 60, 2 105 x 155,  
 3 15 x 35  
**Dimensions of Control Rooms:** 1 30 x 20, 2 20 x 15, 3 20 x 18  
**Tape Recorders:** Studer A-800 24 track, MCI JH 24 24 track, Ampex ATR-100 2 & 4 track, 3M M79 24 & 2 track  
**Mixing Consoles:** Neve 8108 56/48; MCI JH-538 38/32, Audiotronics 501 26/24  
**Monitor Amplifiers:** Crown PSA 2, Crown D150, Yamaha P-2200, Yamaha P-2100  
**Monitor Speakers:** UREI 813B, E-V Sentry III, E-V Sentry 500s, E-V Sentry 100s, Auratone  
**Echo, Reverb, and Delay Systems:** Lexicon 224X, AKG BX-20 (2), AKG BX-10, Lexicon Prime Time, DeltaLab DL-2 (4)  
**Other Outboard Equipment:** Eventide Harmonizer, UREI 1176 limiters (6), Scamp w/EQ, Pan effects, ADT, limiters, noise gates, 96 tracks of Dolby, Adams-Smith synchronizer, Q-lock synchronizer, Orban parametric EQ, ADH Vocal Stresser, Teletronix LA-3A limiter, White 4001 EQ (6), UREI EQ (4)  
**Microphones:** Neumann U-47s, U 87s, KM 84s, KM 86s; Sennheiser 421s, FM 80; AKG 414s & 451s, Shure SM-57s, SM-59s; Sony ECM-50s; Beyer M500, E-V RE-18s, CO 85s, CS-15Es, CH 15s, CO-15s, RE-20s, RE-16s, RE-15s, DS-35s  
**Instruments Available:** Yamaha C7 concert grand  
**Video Equipment & Services:** Stage rental, four cameras, Panacam Reflex, 1-inch editing, Rank Cintel film-to-tape  
**Rates:** Upon request

# 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.

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•••• PATCHBAY STUDIOS  
 also REMOTE RECORDING  
 2111 Francisco Blvd. #7, San Rafael, CA 94901  
 (415) 459-2331

Owner: Patchwork Productions Inc /Bay Remote Recording

Studio Manager: Ted Bloyd

Engineers: Gordon Elliott, Ron Elliott, independents

Dimensions of Studios: A 21 x 24 x 14'2", iso booth 10 x 11,

B (voice over) 17 x 13 x 9'2"

Dimensions of Control Rooms: 16'2 x 18'2 x 12

Tape Recorders: (2) Akai GXC-570D, Sony PCM F-1, MCI JH24/16 w/Autolocator 24/16 track, MCI JH110 2 track, TEAC 80-B w/DX-8 8 track, TEAC A-800 cassette, TEAC A334DS 4 track

Mixing Consoles: Soundcraft Series 3 32x16x16, TEAC Model 5 5EX 16 in x 16 out, Soundcraft I-S 20x2x2.

Monitor Amplifiers: BGW 750's, 250's

Monitor Speakers: Meyer SoundLabs 83B, JBL 4315, 4310, LE14C, 4311, Auratones

Echo, Reverb, and Delay Systems: Ursa Major Star Gate, DeltaLab 1024, AKG BX-10/11, Sound Workshop 262 stereo, Furman R V1's, Lexicon Prime Time, Ambient areas

Other Outboard Equipment: (2) Roland Compu-Editor, Orban 674A stereo parametric EQ, Rockman II, (4) dbx 165, (2) LA-2A, Compex stereo limiter, Ashly parametric EQ, dbx 163, Systech flanger, Systech dual phase shifter, 32 channels dbx noise reduction, Jensen direct boxes, Countryman phase shifter

Microphones: Neumann SM69 stereo, AKG (2) C451E, (2) 414EB, (7) C-61, (2) CK28, 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, REC 77DX, Sennheiser (8) 421, (2) 441, Shure (2) SM56, (2) Sony C500, Wahrenbrock PZM (2)

Instruments Available: 1929 Steinway 7' grand piano, vintage guitars (Fender, Gibson), classic tube amps, variety of keyboards  
 Video Equipment & Services: Fully equipped, multi-cam video truck available Color video demos

Rates: Call for details

•••• THE PLANT STUDIOS  
 2200 Bridgeway, Sausalito, CA 94965  
 (415) 332-6100

Owner: Stanley Jacox

Studio Manager: Jim Gaines

Engineers: Jim Gaines, Jeffrey Norman, Wayne Lewis Robert Missbach, Mark Slagle

Dimensions of Studios: A 705 sq ft with iso booth, B 735 sq ft with two iso booths, C 420 sq ft with two iso booths

Dimensions of Control Rooms: A 375 sq ft., B 375 sq ft., C 140 sq ft.

Tape Recorders: A Studer A-80 VU MKIII 24 track, B Studer A-80 VU MKIII 24 track, C Studer A 80 VU MKIII 24 track

Mixing Consoles: A Trident with Melquist automation TSM 80 with auto 40/24/72, B Trident with Melquist automation TSM 80 w/auto 40/24/72, C Trident series 80B 32/24/56

Monitor Amplifiers: Haller 500, 200, John Meyer, Phase Linear 400 various Crowns, 150, 300

Monitor Speakers: Sierra Westlake Hidleys, (all 3 studios), Yamaha NS10 (all 3), Auratone, MDM 4, JBL 4311, John Meyer, Altec 604s

Echo, Reverb, and Delay Systems: AMS digital reverb, (2) Lexicon 224s, (4) EMT 140s, Roland 3000s, 2000s, Eventide 910s, B E L digital delay (4 secs), DeltaLab DL2, DL4, Live Chamber, Marshall Time Modulator, Elettions, Lexicon Prime Times

Other Outboard Equipment: UREI 1176, 1176 LN, LA2, LA3, LA4, LA2A, Pultecs (low, mid, high), Dyna-Mite noise gates, Lang PEQ 2, UREI bandpass, filters, parametric, Orban 622 parametric, RCA BA6A limiter, Fairchild 670 limiter, Eventide flanger, phasor Harmonizer (w/keyboard), EXR Exciter, MXR Auto Phasor, MXR auto flanger, Roland Stereo Chorus, Kepexes, Gain Brains, Orban "De Sibilance," Eventide 1745 DDL—anything upon request

Microphones: We have an excellent selection of Shures, AKG, Neumann, Telefunken, Sony, E-V, including classic tube mikes

Instruments Available: A Steinway 7' grand, (2) Yamaha 7' grand, Kurzweil computer keyboard, DX-7s, LinnDrum, Drumulator, CP70, anything upon request

Video Equipment & Services: Studio interface ready, have screens, MIDI etc., fully ready

Rates: Call for rates Contact John Lawrence

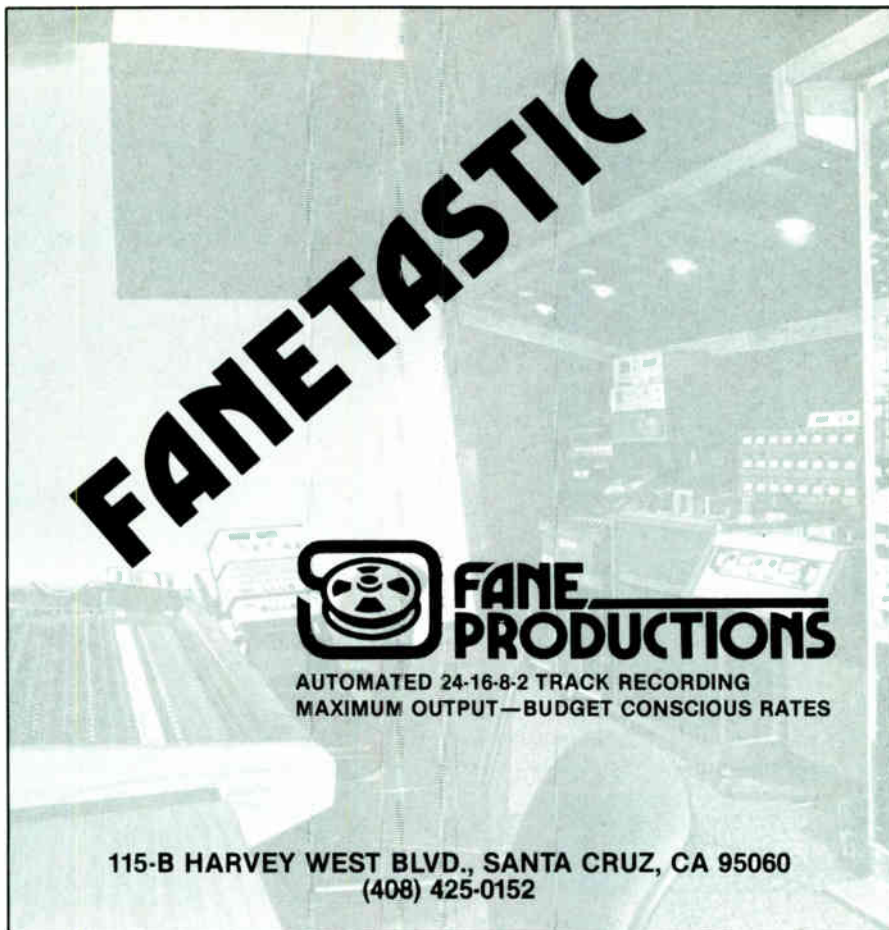
Extras: The Plant Studios maintain a five bedroom house (sleeps ten people comfortably) with full kitchen and jacuzzi. A two room producers cottage with kitchen is also available

Direction: The Plant Studios represent world class state-of-the-art recording in a beautifully creative environment as exemplified by our truly international clientele list

•••• POSITIVE VIDEO—SAN CARLOS  
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 (415) 595-4041

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Studio Manager: John Pivrotto, operations manager



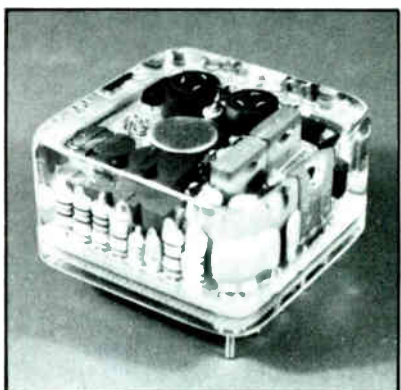
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**PRAIRIE SUN RECORDING STUDIO**  
Cotati, CA

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

•••• **KELLY QUAN RECORDING**  
also **REMOTE RECORDING**  
55 White Street, San Francisco, 94109  
(415) 771-6716  
Owner: Kelly Quan  
Studio Manager: Marie Davalos

•••• **RECIPROCAL RECORDING**  
3401 17th Ave. W. Seattle, WA 98119  
(206) 324-7622  
Owner: Chris Hanzsek, Tina Casale  
Studio Manager: Tina Casale

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

•••• **RHYTHMIC RIVER PRODUCTIONS**  
250 H Napoleon St., San Francisco, CA 94124  
(415) 285-3348  
Owner: Robert L. Richman  
Studio Manager: Robert L. Richman  
Engineers: Gary Mankin, Matt Wallace, Kirk Schreil, Joe Tarantino, Pat Malorey.  
Dimensions of Studios: 48 x 36 (large live room)  
Dimensions of Control Rooms: 13 x 17  
Tape Recorders: MCI JH-114 24 and 16 track; 3M M-56 16 track; MCI JH-110 2 track; Otari 5050 B 2 track.  
Mixing Consoles: MCI JH-636 automated 28x24.  
Monitor Amplifiers: Phase Linear A60, Crown DC 300A.  
Monitor Speakers: UREI 811A, JBL 4301, Yamaha NS-10 M, JBL 4313, Auratones.  
Echo, Reverb, and Delay Systems: Lexicon 200 digital reverb; AKG BX-102E spring reverb; DeltaLab DL-4 digital delays; Room Reverb, Lexicon PCM 42 digital delay.  
Other Outboard Equipment: DeltaLab DL-5, Harmonizer, Dyna-Mite gate/limiters, UREI LA-4 compressor/limiters, Symetrix compressor/limiters, Orban Parametric EQ, Klark-Teknik equalizers.

Microphones: AKG 414-EB; Sony C-48; Sony ECM-22P; Sennheiser 421, 441, 416; Electro-Voice RE-20, PLE0; AKG 460B; Shure SM-81, SM-85, SM 58, SM 57; and a full complement of other standard microphones.  
Instruments Available: Roland JP-6 synthesizers; Sequential Circuits Prophet 5; Pro I Emu Modular synthesizer; Rhodes electric pianos, Dyno My Pianos.  
Rates: Available upon request.



**R.O. STUDIOS**  
Concord, CA

•••• **R.O. STUDIOS**  
3359 Walnut Ave., Concord, CA 94519  
(415) 676-7237  
Owner: The Henry Bros.  
Studio Manager: Ralph F. Henry Jr.  
Engineers: Rick Henry, independents welcome.  
Dimensions of Studio: 25 x 15, 20 x 15'  
Dimensions of Control Rooms: 16 x 15'  
Tape Recorders: Otari MTR-9011 24 track; Otari MTR-1D 2 track; Denon DR-M3 cassette.  
Mixing Consoles: Sound Workshop Series 40 26/24 w/ VCA's 24 channel hi-resolution metering—soon to be fully automated.  
Monitor Amplifiers: Hafler DH-500; BGW 750-B; McIntosh 2105.  
Monitor Speakers: UREI 811s; Meyer 833s; Yamaha NS-10s, Auratones, KEF listening speakers.  
Echo, Reverb, and Delay Systems: Lexicon 224XL digital reverb; Eventide 949 Harmonizer; (2) Korg SD-3000 digital delays.  
Other Outboard Equipment: (2) UREI 1176LN peak limiters; (2) Dyna-Mite 430s; (1) UREI LA-4 limiter, any outboard equipment available upon request.  
Microphones: Neumann, AKG, Sony, Sennheiser, Shure, E-V, all of the best. Any mike available upon request.  
Instruments Available: Yamaha grand piano, Yamaha DX-7 Synthesizer, Roland Juno-60 synthesizer, LinDrum, Roland MSQ-700 digital keyboard recorder. All keyboards sync with LinDrum. Leslie cabinet, Marshall amp, Fender Pre-CRS jazz bass.  
Rates: Call for rates. Block rates available.  
Extras: Swimming pool, shower and kitchen facilities. Game and listening room. 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!"

•••• **ROSEWOOD RECORDING CO.**  
2288 W. 300 N., Provo, UT 84601  
Owner: Guy & Kristen Randle  
Studio Manager: Kristen Randle

•••• **RUSSIAN HILL RECORDING/  
RUSSIAN HILL FILM-TO-TAPE**  
1520 Pacific Avenue, San Francisco, CA 94109  
(415) 474-4520  
Owner: Bob Shotland, Jack Leahy  
Studio Manager: Gaynell Toler Rogers  
Engineers: Jack Leahy, Richard Greene, Sam Lehmer, Marnie Moore, Jeff Kliment, Gary Clayton, Donna Gentile.  
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; (2) MCI JH-24/JH-114 24/16 track; MCI JH-110B 2 track; Technics 1506 1/4 track.  
Mixing Consoles: A: Helios 52 in/24 out; B: Nectek series III 26 in/24 out.  
Monitor Amplifiers: Yamaha P-2200s, 2050, McIntosh 2105s.  
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

—LISTING CONTINUED ON PAGE 116

# MIDEM EQUIPMENT '85

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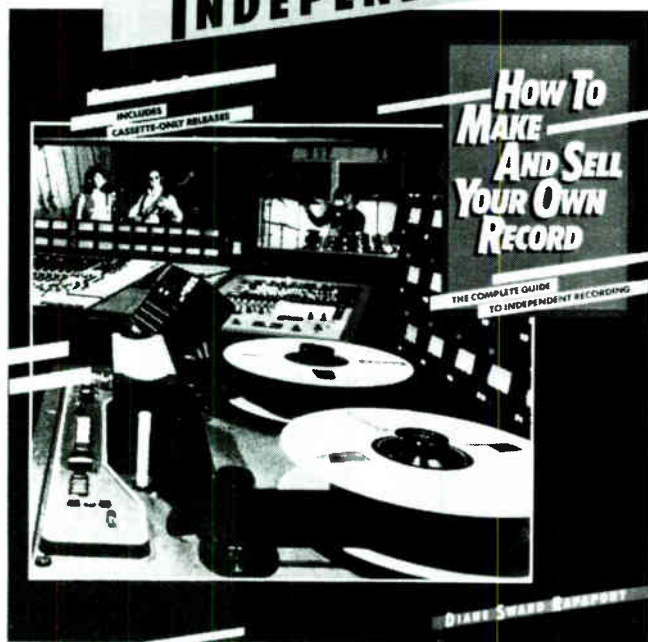
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—FROM PAGE 114

stereo plate, Lexicon Prime Time, Scamp ADT, 949 Harmonizer. Other Outboard Equipment: Eventide H-949 Harmonizer, Scamp system, vocal stressor, UREI 1176LN, ADR compressors, Valley People Dyna-mite, digital metronome, Symetrix gate, anything and everything  
Microphones: Full complement Neumann, AKG, Sennheiser, Shure, RCA, E.V. etc.  
Instruments Available: Steinway and Yamaha grand pianos.  
Video Equipment & Services: Film-to-tape services 35 and 16mm to any format with all code options available. KEM k-800 6 plate with scanners can synchronize through Q-lock to all video and audio recorders. 3/4-inch including BVU 800s, JVC 8250, 6650, 6600, 6400 Beta and VHS all formats including Beta Hi-Fi, Q-Locks feature all optical software (ADR, SFX VAPP) monitors (Sony) 26", 14", 10 foot Novabeam complete film/video post Rates: Brochure on request  
Extras: Kitchen, parking, courier, off street loading, convenient to restaurants, shopping.  
Direction: Russian Hill Recording provides state-of-the-art services in all phases of audio recording from records to commercials, media production of all kinds, television and feature films. Recent credits include Cleo Lane, Stephen Grapelli, Levi's, Apple, Cotton Club, Mean Season, Ewok Movie, Ordeal by Innocence, Mishima, Partners in Crime and the David Brubeck Quartet

•••• SANGRE STUDIOS  
9844 Business Park Dr., Sacramento, CA 95827  
(916) 361-3652  
Owner: Sangre Productions

•••• SEA-WEST STUDIOS/HAWAII  
P.O. Box 729, Hauula, Oahu, HI 96717  
(808) 293-1800, TELEX: 7431761 SWEST  
Owner: Sea-West Recording Corp.  
Studio Manager: Donna Alexa Keeler

•••• SKAGGS TELECOMMUNICATIONS SERVICE  
5181 Amelia Earhart Dr., 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 dba. The Sound Column Companies  
Studio Manager: Jim Anglesey

•••• 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 Souler  
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 34, 32 channels with ARMS  
Monitor Amplifiers: Bryston 4B and 2B, AB Systems Design 1200, Haller 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: Lexicon 224XL, Eoplate 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 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 Dynalex noise reduction, Aphex Aural Exciter, UREI digital metronome.  
Microphones: Neumann U-87, U-89, KM-86, AKG 414 (2), AKG 451 EB (5), AKG S01, 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 74" grand piano, misc. synthesizers, guitars and amps. Peterson strobe tuner model 400.  
Rates: \$40/hr and up All rates include everything listed above

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



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

•••• 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, Chris 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 1/8 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: Neumann U-87, U-47; E-V CS-15, RE-50, RE-16; AKG C-451E, D1000E, D190, D200, Shure SM-54, Sennheiser B15, Tram lavaliere.  
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, 3/4" 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 postproduction



STARLIGHT SOUND  
Richmond, CA

•••• STARLIGHT SOUND  
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, Norman Kerner.

Karl Derfler, Gary Mankin, Matt Wallace, Bill Thompson, Jamie Bridges. Maintenance engineer, John Clavin. Staff assistant, Mark Meyers.  
Dimensions of Studios: 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 MX505B 2 track, Tascam 122s cass. decks, Technics turntable.  
Mixing Consoles: Harrison 4032, 40 input 32 buss out w/ Allison 65K Automaton.  
Monitor Amplifiers: Bryston, Hafler, Crown, Biamp, Marantz.  
Monitor Speakers: UREI 813 Time Aligned, JBL 4313, Yamaha NS-10M, Tannoy Super Red 12, Auratones.  
Echo, Reverb, and Delay Systems: Lexicon 224X and PCM 60 digital reverbs, Master-Room XL305, DeltaLab DL-4 and Effectron digital delays, Eventide Harmonizer H910, MXR Doubler.  
Other Outboard Equipment: UREI LA4 & 1176 comp/lms, Audioarts parametric and Biamp graphic EQ, Symetrix & Kepex gates/processors, Valley People Dyna-Mites, EXR Exciter, Eventide FL201 Flanger, MXR Flanger.  
Microphones: Neumann tubes and condensers, AKG, Beyer, Crown-PZM, E-V, Shure, RCA Ribbon, etc.  
Instruments Available: Yamaha C7 74" conservatory grand piano, LinnDrum digital drum machine, Simmons drums, Yamaha DX-7 synth, Prophet synth, 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 and Services: Available upon request.  
Rates: Please call for rate schedule and off hour specials.  
Direction: Starlight Sound—offering you all the quality features you expect from a premium 24 track recording facility, with a warm and relaxing ambience. There's no higher quality 24 track studio in the Bay Area at anywhere near our rates.

•••• STARSOUND AUDIO, INC.  
2679 Oddie Blvd., Reno, NV 89512  
(800) 354-7252  
Owner: Scott Bergstrom  
Studio Manager: Mark Ishikawa  
Engineers: Mark Ishikawa, Scott Bergstrom, Marty Acliff, Dave Jensen, 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: Studer A-80 24 track, Tascam 52 2 track, Tascam 32 2 track, Tascam cassette 122 2 track  
Mixing Consoles: AMEK Angela 28/24, RSS mixdown computer CPE-800.  
Monitor Amplifiers: Crown PSA2, Crown DC-300, Yamaha PC2002  
Monitor Speakers: JBL 4333, 4411, Auratone T6, 5C.  
Echo, Reverb, and Delay Systems: Lexicon 200, 8 foot plate, PCM 60, Roland SDE 3000, 1000, DeltaLab, Korg 3000.  
Other Outboard Equipment: dbx de-esser, compressors gates, parametrics, Roland phaser, flanger, dimension D, Aphex, compeller  
Microphones: AKG 414, 460, 451, 330; Sennheiser 441s, 421s, 431, 409, 402, 211; E-V PL 20, RE-20, 15, 18; Shure SM 56s, 57s, 81s; PZMs; Countryman 101s.  
Instruments Available: Steinway upright, Guilbransen grand, Chroma, Memorymoog, Yamaha DX9, DX7, Gleano Pentaphonic, Oberheim OB-8, DSX, DMX, OBSX; Large set Fibes drums, set of Simmons drums, Linn, and many more  
Video Equipment & Services: Reference VHS only.  
Rates: \$65/hour 24 track; \$55/hour 8-hour block special project rates per week.  
Extras: Over 2,000 instruments available in Starsound Audio/Bizarre guitar complex Studer and Amek installed new August 84. T.E.F analysis available to clients. Studio is in Reno, 45 minutes from Lake Tahoe, endless recreation potential.  
Direction: State-of-the-art production facility with a very low key/high tech staff; This "no excuses" studio is perfect for projects away from the big city rush. Whole albums or just tracking, the best is now available for less than what you'd expect. See you here—sooner or later

•••• STUDIO C  
1338 Mission St., San Francisco, CA 94107  
(415) 864-2825  
Owner: Luther Greene, Will Haney  
Studio Manager: Ruby Eayang

•••• STUDIO "D" RECORDING INC.  
424 Coloma, Sausalito, CA 94965  
(415) 332-6289  
Owner: Terry Delsing, Dan Godfrey, Joel Jaffe, Randy Rand  
Studio Manager: Pam Dueck

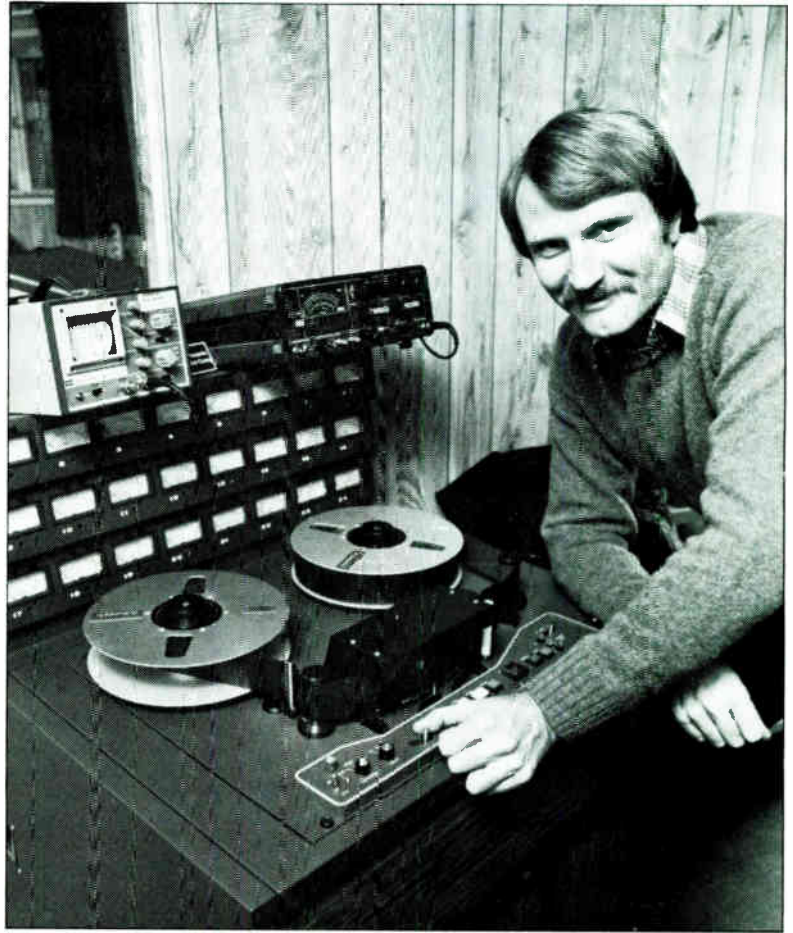
•••• STUDIO HAWAII  
1 North King St., Honolulu, HI 96817  
(808) 536-9311  
Owner: Mr. Al Harrington  
Studio Manager: John E.K. Chang

# A Thousand Set-Ups Later...

Ernie Hopseker has more than twenty years experience as a Broadcast Engineer and currently manages Techsupport,<sup>™</sup> the inhouse Technical Service Division of Bananas At Large. Ask Ernie which audio tape he recommends and the answer is always Ampex 456. Why?

“Ampex tape is consistent, reliable, and readily available. The last thing any engineer wants to worry about is tape. Over the years I found that by sticking with Ampex I could save myself and my clients a lot of hassle.”

Not all of us here at Bananas recommend Ampex as logically as Ernie, some of us just think it takes the best.



*Photo shot at Color Zone Productions, Novato, CA,  
A Bananas At Large Installation.*

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**AMPEX**



**SUN VALLEY AUDIO INC.**  
Sun Valley, Idaho

•••• SUN VALLEY AUDIO INC.  
Box 285, Sun Valley, Idaho 83353  
(208) 726-3476

Owner: Joint venture between Int'l Consoles Corp. & Amos Galpin  
**Studio Manager:** Lance Parker  
**Engineers:** Lance Parker, Randy Young, Steve Price  
**Dimensions of Studios:** 32 x 24, 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:** Stevens 24 track w/HTX 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 and EQ for each; wide assortment of delays and units. Live echo chamber 24' x 18' x 14'; Lexicon Model 93  
**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, AKG Tube, AKG 414s, etc.  
**Instruments Available:** Yamaha CF grand piano, Leslie, 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.  
**Video Equipment & Services:** BTX synchronizer and time code generator  
**Rates:** Available upon request  
**Extras:** Located in world-famous Sun Valley ski resort, we offer help with accommodations, ski passes, transportation. A wide variety of support services are available from our staff to make your stay as comfortable as possible  
**Direction:** Sun Valley Audio is not only a commercial studio, but also a research and development studio for International Consoles



**TELEMATION PRODUCTIONS/AUDIO**  
Seattle, WA

**SEATTLE  
DENVER  
PHOENIX  
CHICAGO**

•••• TELEMATION PRODUCTIONS/AUDIO  
1200 Stewart Street, Seattle, WA 98101  
(206) 623-5934

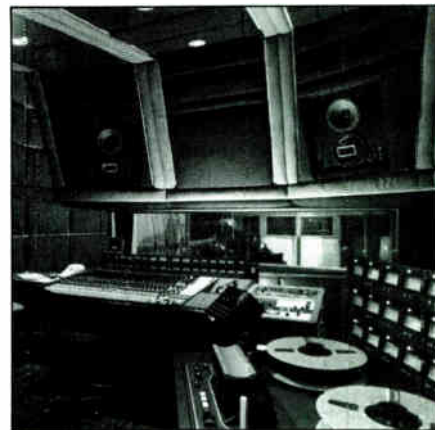


Owner: Telemation Productions, Inc./Salt Lake City, UT  
**Studio Manager:** Nicholas Olinsky  
**Engineers:** Peter B. Lewis, Susan McArthur, Nicholas Olinsky, Scott Charles, Bob Majors. Qualified freelancers welcome and well assisted.  
**Dimensions of Studios:** A: 28 x 38 x 14; B: 9 x 13 x 8  
**Dimensions of Control Rooms:** Alpha 18 x 16; Beta: 15 x 13  
**Tape Recorders:** Studer A-800 MKII 16/24 track, MCI JH-110B 2/4 track, Ampex ATR800 mono/2/4 track, Ampex ATR800 mono/2  
**Mixing Consoles:** Neve 5116 24/8/4; Neve 5432 8/2  
**Monitor Amplifiers:** BGW both rooms  
**Monitor Speakers:** Alpha: Auratone, Yamaha, Altec; Beta: Auratone, Yamaha, JBL  
**Echo, Reverb, and Delay Systems:** EMT 190, Ursa Major Space Station, Clover 500, Eventide H-949 Harmonizer and Lexicon PCM 42 & 224X available for rent.  
**Other Outboard Equipment:** ADR Vocal Stresser, Neve compressor/limiter, (2) Ashly SC130, Orban parametric EQ (2), (2) UREI LA-4A, (2) UREI graphic EQs, (2) Technics stereo cassette decks.  
**Microphones:** (2) AKG 414 EB, (2) RCA 77 DX (reconditioned), E.V. RE 20, RE-15, (2) Crown PZM, Sennheiser 814, (2) Neumann U-87s. More great and good mikes available for rent.  
**Instruments Available:** Yamaha C-7 grand piano, assorted percussion Kurzweil 250 and assorted synths and complete drum set available for rent.  
**Video Equipment & Services:** Complete video production with 2 postproduction edit suites and Bosch film transfer system; ADO available  
**Rates:** A \$175 per hour with video; \$85 without video. B: \$60 per hour, video rates on request

•••• TIKI SOUND STUDIOS  
792 E. Julian St., San Jose, CA 95112  
(408) 286-9840, 286-9845  
**Studio Manager:** Gradie & Jeannine O'Neal

•••• TIME ENOUGH WORLD ENOUGH  
Sausalito, CA  
(415) 543-9620  
**Owner:** Sandy Pearlman  
**Studio Manager:** Nancy Evans, Patricia Gomez  
**Engineers:** Dana Chappelle, Paul Manth, Ken Huncovsky  
**Tape Recorders:** Ampex 124 24 track; Studer A-80 24 track; Ampex 102 2 with 1/2" heads; Ampex 104 2 & 4 with 1/2" heads.  
**Mixing Consoles:** Trident TSM 40 inputs Automation  
**Monitor Speakers:** UREI 813 B Time Aligned 3 way, Big Reds, Yamaha NS-10Ms, Auratones, JBL 4311s  
**Echo, Reverb, and Delay Systems:** AMS RMX-16, AMS 15-80s, Eventide SP2016, live chamber, Lexicon 224, Lexicon PCM 42, Loft Delay, (2) Prime Time IIs, EMT 140.  
**Other Outboard Equipment:** Q-Lock synchronizer, Orban de-esser, Aural Exciter, Marshall tape eliminator, Panscan, (3) stereo Dyna-mite gates, (3) Pultec EQ PAs, (2) Pultec MEQ 5s, (2) API 550s, (2) UREI 1176, (2) UREI 1178s, (2) UREI LA 4s, 2A, ADR compact, Trident stereo, DBX stereo.  
**Microphones:** Large selection  
**Instruments Available:** Vocoder, Drumulator.  
**Video Equipment & Services:** Q-Lock synchronizer, ATR 104 4 track machine, ATR 102 1/2 track machine, (2) multitrack 24 machines, 40 input Trident console, 1/2" JVC 4 head video deck.  
**Extras:** All outboard and echo devices included in rate.  
**Credits:** "Revolution by Night" BOC, "Medicine Show" Dream Syndicate, "Instincts" Romeo Void, "Burning in Love" Honey-moon Suite, "Billy Hyena" Wide Boy Awake, "Breakin' Music Score, "Droppers" True West, Angela Bofill, The Whispers, Susie Caruze, Pastiche, Rob Banks, Slasher, Maria Muldaur, Mickey Rooney, Paul Anka.

•••• TRAX AUDIO  
also REMOTE RECORDING  
2470 North Fairchild Road, Layton, UT 84041  
(801) 776-4271  
**Owner:** Jeff Ostler  
**Studio Manager:** Jeff Ostler



**TRES VIRGOS STUDIOS**  
San Rafael, CA

•••• TRES VIRGOS STUDIOS  
also REMOTE RECORDING  
1925 Francisco Blvd., Suite G, San Rafael, CA 94901  
(415) 456-7666

**Owner:** Robin Yeager, Allen Rice, Jerry Jacob, Mike Steven;  
**Studio Manager:** Robin Yeager  
**Engineers:** Chief engineer: Robin Yeager; Gordon Lyon, John Clavin, technical supervisor. 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 ATR-102 w/SSI transformerless I/O's, 2 track, (2) Otari MX5050B 2 track; Pioneer RT 2022 2 track, RT 1050 2 track, Awa, JVC, Technics cassettes; most digital formats & brands available.  
**Mixing Consoles:** MCI JH-528B w/Aphex VCAs & custom mcds 28 x 28 x 2.  
**Monitor Amplifiers:** Control room: (2) Crown DO-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: UR2i E13A, Studio: UREI 811, MDM4's, Auratone C5's, AKG & Koss headphones.  
**Echo, Reverb, and Delay Systems:** Studio Technologies Ecoglate 1, Lexicon 224X, Eventide 949 Harmonizer, Lexicon Prime Time, Marshall Time Modulator, DeltaLab DL-4 w/memory module, A/DA STD-1, Lexicon 200, echo & outboard equipment packages available to suit your need  
**Other Outboard Equipment:** Allison Research Kepex & Gain Brans, UREI LA4a, Teletronics LA-2A, Symetrix gate, CL-100 w/de-esser, Furman parametric EQ, White 1/2 octave EQ.  
**Microphones:** Neumann U-87; Crown PZMs: AKG C414EB, C452EB, D224E, D2000 E, D170, D12, D20, RCA 77DX; Sennheiser MD421, MD441; E.V. Re-20; Beyers M500, M201, M202; Shure SM57, SM54, SM7, SM61, SM80, SM81, SM51, PG351/190; STTC 4038  
**Instruments Available:** 1935 Baldwin Selca grand piano, Yamaha CP-70, Polymoog, Roland TR-808, Dyno/Rhodes 73, assorted acoustic & electric guitars & basses, percussion kit. Constantly upgraded list of house & rental synthesizers, some prototype. Some rare.  
**Video Equipment & Services:** Available to suite client needs. Good shooting equipment. Separate lighting power  
**Rates:** Please call for rates.  
**Extras:** Anything your heart and music desire  
**Direction:** Designed by Chips Davis, Tres Virgos is the first of the growing number of LEDE™ Studios. You are invited to hear Tres Virgos for yourself! For information or a check out, call Robin or Jerry.

We're in it for the music.

•••• TRIAD RECORDING STUDIOS, INC.  
1825 Oak St., Eugene, OR 97401  
(503) 687-9032  
**Owner:** Gene P. Montz, Peter Lonczcz  
**Studio Manager:** Gene P. Montz

•••• TRIAD STUDIOS  
4572 150th Ave. N.E., Redmond, WA 98052  
(206) 881-9322  
**Owner:** Vector Communications, Inc.  
**Studio Manager:** Dan Foster  
**Engineers:** Larry Netzger, Tom Hall  
**Dimensions of Studios:** A: 24 x 36; B: 24 x 30  
**Dimensions of Control Rooms:** A: 19 x 24; B: 19 x 18  
**Tape Recorders:** Sony MCI JH-24 24 track; Sony MCI JH-24 2 track; (2) Sony MCI JH-110B 2 track, Sony MCI JH-110B 1/2" 2 track; Otari 5050 2 track.



Mixing Consoles: Neotek III 28x24; Neotek IIIc 36x24.  
 Monitor Amplifiers: Haller DH 500, Haller DH 220.  
 Monitor Speakers: JBL 4435, 4430, 4312, 4311; Yamaha NS10M, Auratones 5C, ADS L520.  
**Echo, Reverb, and Delay Systems:** Lexicon 224X, EMT Plate, Lexicon Prime Time 93, Lexicon PCM 41; Ursa Major Star Gate 323; Eventide Harmonizers.  
**Other Outboard Equipment:** ADR 760, dbx 160, Aphex UREI 1176, Orban 622B, Orban de-esser, API 550, Kepex, LA-2A, Panscan, Klark-Teknik RTA, Orban 424A, Symetrix.  
 Microphones: AKG 414, 451, C-60, D-12E, Fostex M77, Neumann U-47, U-87, KM 84, KM 88; Sony C-37A, Sennheiser 441, 421; Shure SM 53, 56, 57; E-V RE20; Beyer M500, Countryman E101.  
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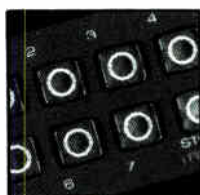
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**Mixing Consoles:** Custom design by Gail Martin & Associates 32/24.  
**Monitor Amplifiers:** Crown DC 300A (2), Crown C60, McIntosh 275, Altec 9440A (2).  
**Monitor Speakers:** UREI Time Aligned; JBL; 4430 Bi-radial, 4411, 4311, 4301; Altec 604E; Auratones.  
**Echo, Reverb, and Delay Systems:** EMT Stereo Plate, Roland SDE-3000 (3), Eventide delay.  
**Other Outboard Equipment:** ADR Vocal Stressor (2); Aphex Aural Exciter (2); dbx 904 noise gates (4), 903 Compressor (2), RM 160 Compressor, 162 Compressor, noise reduction; Dolby noise reduction; UREI LA3 (2); UREI 1176LN (2); Roland Dimension D (2); White Room EQ; DOD & UREI EQ; Allison Automation; Multisync Motor Drive; AKG & Sennheiser headphones.  
**Microphones:** Neumann U-87s; AKG: 414s, 451s, 415s, D58Es;



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# PREVIEW



## SSL SL 5000M Series Consoles

The SL 5000M Series from Solid State Logic is a new line of audio mixing consoles developed specifically for the multichannel production needs of the broadcast industry. The series is available in 36 mainframe sizes and utilize a modular motherboard design with unique horizontal and vertical buses which support an initial family of 28 Eurocard audio and control "cassette" modules. This arrangement allows the purchaser to custom specify an almost unlimited number of console configurations to suit any application.

All of the switching within the console is totally electronic, and address lines to all cassettes are provided, permitting the incorporation of extensive master control facilities in an essentially custom environment. For example, master controls on the auxiliary output cassette allow the engineer to switch all local sends to each aux bus on and off (and pre or post) at the touch of a single button.

Some of the 28 cassettes available include mono and stereo faders, aux sends, equalizers, compressor/limiters, expander/gates, communications and talkback master, channel multitrack control, VCA control groups, and an oscillator/noise generator. The cassettes are designed to interface with Solid State Logic's Total Recall and Instant Reset studio computers, and metering options include LCD bargraph meters, VU or PPM meters, phase metering, or any standard DIN modules.

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## Linn 9000 Digital Drums/MIDI Keyboard Recorder

The Linn 9000 from Linn Electronics is the first prod-

uct to integrate a MIDI-compatible keyboard recorder and digital drum machine in a single unit, with identical programming parameters for both. The 9000's keyboard recorder/sequencer memorizes every aspect of performance—dynamics, pitch bends, modulation and synth patches—simultaneously for up to 16 MIDI-equipped synthesizers (with a maximum of 32 tracks). The unit's digital drum section utilizes the current technology of devices such as the LinnDrum, and includes many new features: velocity sensitive keypads and rear panel inputs for electronic drum pads; programmable hi-hat decay; a built-in mixer with selective memorization of volume, pan, and tuning; a repeat function for programming rolls, constant sixteenth notes, etc.; and 18 digital percussion sounds—two crash and two ride cymbals, four toms, two congas, bass, snare, hi-hat, sidestick, cowbell, cabasa, tambourine and handclaps.

Recording and editing functions are designed to simulate those found on a multitrack recorder, with record, play, fast forward, and rewind, to facilitate operation. Retrofittable options to be available soon include: an audio input circuit board for sampling one's own sounds; a 3.5-inch disk drive for loading and storing programs and samples; and a SMPTE interlock card. The Linn 9000 is priced at \$4,990.

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## Hardy Mike Preamp Card

The John Hardy Company of Evanston, Illinois, has introduced the MPC-600, a transformer-input microphone preamp card which directly replaces the stock transformerless version found in MCI 600 series consoles. According to the manufacturer, the MPC-600 provides improved sound in the following areas: its 990 discrete op-amp is faster, quieter and better sounding than the stock 5534; its Jensen JE-16-B input transformer affords better matching, proper loading, and eliminates the input capacitors used in transformerless designs to block the phantom power supply voltage; and the DC servo control of DC offset, and input bias current compensation circuitry eliminates all coupling and gain pot capacitors. The MPC 600 cards are priced at \$184.00 in quantities of one to nine.

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## New Eventide Harmonizer

The H969 Harmonizer from Eventide employs a newly-designed digital intelligent splicing algorithm system—dubbed ProPitch™ by the company—to delivery clean, glitch-free pitch-change performance over a wider frequency range than ever before. The H969 is also the first Harmonizer to use 16 bit PCM linear coding.

New features include: a dozen pitch-change presets, enabling the user instantly to set a precise minor third, major third, fifth, seventh, or octave of pitch change (each can be selected as a sharp or flat); and separate coarse and fine adjust controls for easily setting precise pitch ratios. Full bandwidth delay has been increased in the H969 to 1.5 seconds; this can be increased to three seconds at half bandwidth, and any five delay times can be saved for instant recall. The full delay range is available in repeat and reverse modes. Delay time and pitch ratio are displayed on independent readouts, and Doppler and flanging effects are available.

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## Toa ME Series Studio Monitors

Toa's ME Series is a line of compact, high performance monitors designed for recording studio and broadcast applications. The top of the line 312-ME is a three-way system with a dome tweeter, cone midrange, and 11-inch woofer, with a continuous program power rating of 135 watts RMS. The smaller 280-ME handles 90w RMS and is also a three-way system, but employs a 3cm soft dome tweeter, a 2 cm dome supertweeter, and a 6.3-inch (16cm) polypropylene cone woofer. The two-way 265 ME handles 75 watts RMS of continuous program material and includes a 3cm soft dome tweeter and a 16cm woofer.

All of the monitors in the ME Series come in mirror imaged pairs with push-type input terminals. Cabinets are wood with a charcoal grey finish and removable black grille covers.

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## Klark-Teknik Digital Reverb

The DN780 Reverberator/Processor from Klark-Teknik incorporates entirely new processor algorithms used to handle a high number of reflections to realistically simulate a variety of acoustical environments. The internal architecture of the DN780 uses 16 bit linear A/D and D/A converters and a 32 bit arithmetic processor to provide the necessary computing power to control these reflections.

This compact rack-mount unit features comprehensive LED displays of the reverb parameters and easy to use "nudge" controls for varying any of the operational settings. There are 20 factory preset reverb programs for room, hall, chamber and plate, and variations of these can be easily stored in any of 50 non-volatile user memories for recall at any time. The DN780 currently includes ADT, multi-tap echo, sound on sound, straight delay, and infinite room in the effects program, and additional programs on EPROMs will be made available to DN780 owners as they are developed.

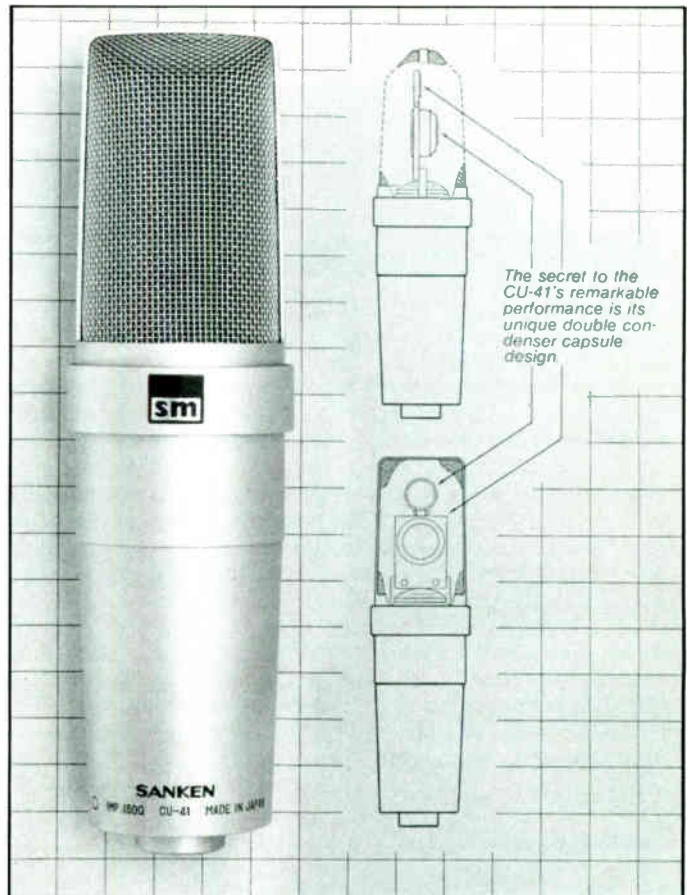
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## Simmons SDS1 Pad and EPB Digital Sampler

The Simmons SDS1 is a self-contained electronic drum pad with a digital sound source and player-changeable memory chips. Drummers can choose from an extensive library of chip sounds or can create their own using the SDS EPB digital sampler. The SDS1 operates on four 1.5 Volt batteries or an optional AC adapter and has controls for adjusting pitch, bend, run time, sensitivity and volume on the pad itself. Priced at just over \$350, the pad is available in black or white, and comes with mounting hardware and one of a choice of EPROM chips.

The SDS EPB (Simmons Digital Sampler/EPROM Blower) is designed for use with the SDS7 drum kit or SDS1 pad and allows the programming of memory chips from virtually any acoustic or electric sound. Sounds are sampled via a microphone or line source and held in internal RAM storage to allow audio inspection of the sample. Once the proper sample is produced, an 8 or 16K EPROM chip is inserted into the unit and the information is transferred to it. The programmed chip can then be put into the SDS1 or SDS7 where it will be adjustable for all functions. Exposing a chip to ultraviolet light for 30 minutes will erase its memory so it can be re-programmed.

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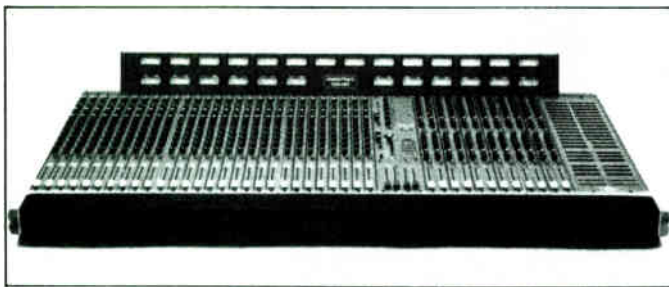


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## Soundtracs CM 4400 Console

The microprocessor-based Soundtracs CM 4400 console features software-flexible mixing at an affordable price. An RS-232 port allows the CM 4400 to communicate with any personal computer having an asynchronous input. Software enables the user to pre program the track sheet with each memory position shown on the terminal as functions rather than numbers. Soundtracs is currently developing a program to permit the mixer's internal RAM to be externally controlled by a SMPTE clock or track.

The CM 4400 is transformerless with electronically balanced inputs; output transformers are optional as are Penny & Giles faders. The board's line output features a screwdriver-adjustable gain control to match any tape machine input, +4dB or -10dB level. The CM 4400 is priced under \$20,000.

Circle #106 on Reader Service Card

## Furman Quad Noise Gate

Employing sophisticated variable pulse width modulation technology, the QN-4 Quad Noise Gate from Furman Sound features a fade time control for each of its four indepen-

dent channels. This allows the user to set the slope of the muting action—from a fast drop off to a gentle unobtrusive fade—to suit the program material. The device also contains wide range threshold controls enabling it to function in a wide variety of applications and with almost any audio source. The QN-4 is priced at \$395.

Circle #107 on Reader Service Card



## Yamaha Pro Cassette Deck

The C200 professional cassette deck from the Combo Products Division of Yamaha International is a four head, two DC motor direct-drive, 19-inch rack-mountable cassette recorder featuring XLR connectors with either +4dBm or +8dBm levels, or unbalanced -10dBv phono connectors. Dolby B and dbx II noise reduction systems are provided. The deck is highly automated with built in microprocessor control of many functions such as the "Alpha-Orbit" system for automatic bias tuning for any tape. Other features include: a real-time digital counter; a  $\pm 15\%$  pitch control; auto memory, replay and timer functions; and an optional remote control. The C200 is priced at \$895.

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## The dbx-700 Digital Audio Processor

by Karen Ensor

The Model 700 Digital Audio Processor by dbx is a low-cost alternative to PCM format digital recording. At \$4600 (optional preamps are \$370 each), the 700 is roughly comparable in cost to a professional analog two track machine. But that is where the similarities end. The performance of the new technology dbx has introduced in its Model 700 is outstanding.

### FEATURES

The 700 is rack mountable with three panels of controls (preamp, input and output), a metering system, and a power supply across the face of the unit. The optional preamp allows gain control for each of the two channels from 20 to 60 dB for either line or microphone inputs and a switchable 48 Volt phantom power source is available.

The analog input and output modules have pre- and post clip lights for accurate gain settings and both the input and output gain can be set by either a level-control pot which goes to infinity for program fades; a screwdriver trim pot for preset studio levels; or an internally set, non-adjustable reference ("ref") level for normal use. When both input

and output gain switches are set to ref, unity gain results: enabling sound pressure levels at playback to be equal to that of the original according to the microphone's impedance.

The 700 has a tri-metering system enabling the user to monitor record level, calibration levels, or signal level. The meters are displayed on two side-by-side columns of high density LEDs that perform with a peak hold and slow decay for easier reading.

In the record level position, the meters read directly off the RMS detector in the input circuitry which is equipped with a transient speed-up detection circuit (this circuit is explained later.) The RMS circuit prevents any signal above +20 dB instantaneous peak, the maximum recording level, from clipping at the input of the D/A converter. Thus the signal is detected and compressed before any overload may occur.

Keeping in mind that the digital recording process is not the same as the analog process, and considering the dbx's vast dynamic range, it should be noted that: nothing needs to be recorded "hot" on the 700, as with analog recordings to keep the signal as far out of the noise floor of the recorder as possible. The slight third harmonic distortion in-

herent in the audio when these "hot" levels are so close to tape saturation has become, to many, almost a part of the sound itself. The specified dynamic range of the dbx processor is 110 dB at almost that of the human ear. Therefore, in order to make use of this range, you cannot record hotter than the 700's specifications suggest; if record levels were too hot, extreme distortion would occur. A more conservative approach will result in cleaner recordings.

The meters are also used for monitoring calibration and signal level, both adjusted by the output pots. The signal level meter is a wide-range meter (from +20 dB to -100dB) giving a fair representation of the dynamic range and noise floor of your music and environment. This helps to determine the most effective levels throughout the gain chain (and also to find out just how quiet your microphones and room are).

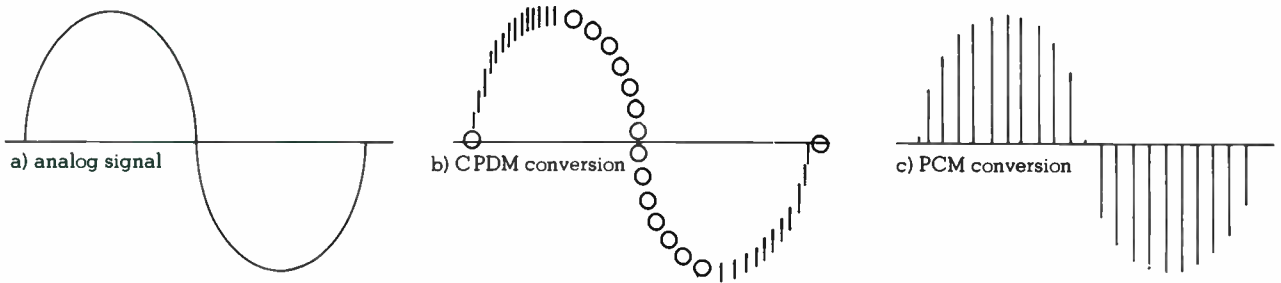
As with other video-based digital processing devices, the dbx has quite a unique editing system. Audio signals can be recorded onto the audio tracks of the video tape as well as the video track, the audio tracks being used for scratch editing. When the Edit Audio switch is in the automatic gain control (AGC) position, the signal is recorded onto the audio tracks (and the video track) with a 2:1 compression ratio (the signal without compression would be distorted). These scratch tracks may also help to eliminate editing mistakes which could occur if the video track is edited without a "practice" edit. A toggle switch permits easy access to monitor either "edit," for the scratch audio tracks, or "digital" for the real thing on the video track.

Playback status lights indicate video lock, standby, video unlock and error correction modes. The error correction light indicates when an error is being corrected. This is useful in diagnosing problems with the storage medium. Video unlock indicates that no video is being input while in playback status, standby means that video is being input but the phase locked loop circuitry (PLL) is still in the process of locking the signal (it takes about one second), and video lock indicates that the video signal is locked in and ready to roll. With these indicators it is a simple matter to use the 700 as interfaced with a video recorder.

### THEORY OF OPERATION

dbx uses its own digitization format called CPDM, Companded Predictive Delta Modulation. This conversion

**FIGURE 1**



method has its roots in delta modulation, using the idea of sampling the *difference* between voltage levels of the signal and not the specified levels themselves. The data is sampled at a rate of 644,000 times per second and results in a continuous one-bit stream. This bit stream method considerably reduces the magnitude of error. For instance, a one-bit error on a pulse code modulation machine, if occurring on the most significant bit (MSB) of the digital word, creates a large error: if a 16-bit word combination looks like this—100010011001100, and the error is in the MSB—000010011001100, then the error is on the magnitude of  $2^n$ , n being the number of bits used. This is quite a large error possibly causing an undesirable glitch in audio. On the other hand, if the dbx unit, using this CPDM technology which eliminates the MSB idea altogether, were to have a one-bit error, only the difference between successive samples of the signal would be incorrect, resulting in an easily corrected, inaudible error.

As shown in Figure 1b, the dbx unit generates 1's when the wave form of

the input signal is rising, 0's when falling, and an alternating sequence when there is no input (silence). This digital output is integrated by a low pass filter that removes the 644,000 sampling component. Because the Nyquist (half sampling) frequency is 350kHz, this filter can be smooth with a gentle slope allowing for a significant reduction in frequency phase shift, as opposed to PCM, whose lower Nyquist frequency phase shift necessitates a brick wall filter design (i.e. a filter with an extremely steep roll-off slope) to prevent unwanted frequencies generated by the sampling process from getting into the desired audio signal band. This brick wall filter causes phase shifting in the signal; the resulting audibility is presently a hotly contested issue (see *Mix* Digital Discussions, May 1984).

A voltage-controllable amplifier (VCA) and a voltage-controllable filter (VCF) are employed in the dbx unit to control the amplitude and frequency of the signal. The VCA adapts the signal size to the modulator (rather than adapting the modulator to the signal size as is

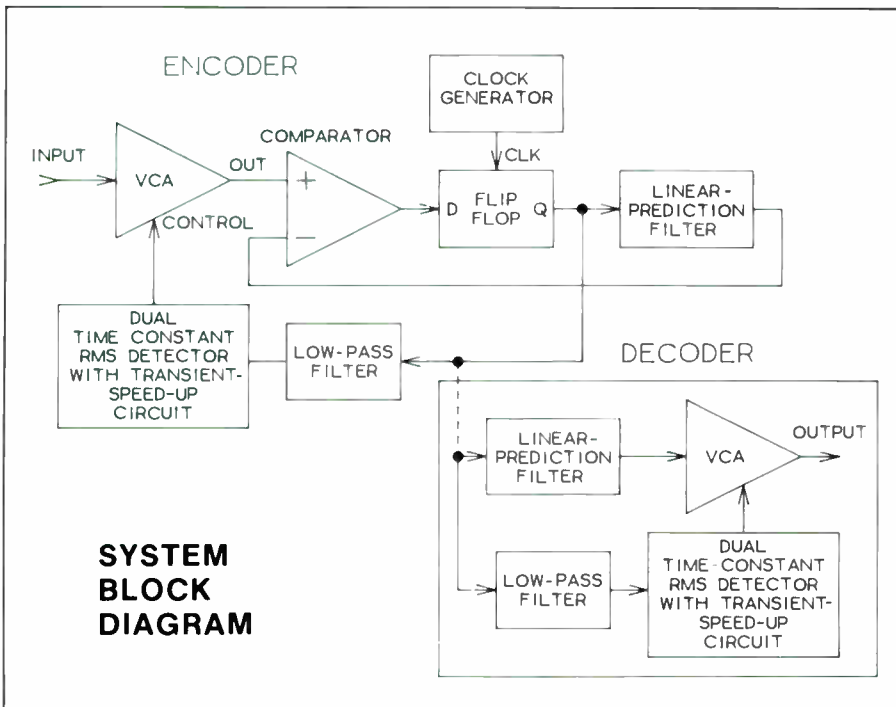
done in CPDM's cousin, Adaptive Delta Modulation) by adjusting the broadband gain of the signal in order to avoid slow rate limitations. This increases the dynamic range and allows for dither (a type of noise added to the signal to mask unwanted quantization elements) to be added.

Prior to the release of the current 700 unit, prototype testing demonstrated a need to reduce variations in frequency. Therefore, the engineers at dbx added a VCF to the circuitry for spectral compression. This filter decreases the high frequency response when a lot of highs are present and increases it when low frequencies predominate, giving the A/D and D/A a more comfortable range to work with. The signal-to-noise ratio is increased to around 85dB at 1kHz by the VCF due to its reduction of high frequency noise when low frequencies are present.

If there are tracking errors within a system such as this, the input and output become asynchronous: what comes out does not match what goes in. To compensate for this, the VCA and VCF of the output of the 700 are inverse in polarity and digitally linked to the VCA and VCF of the input. This results in unity gain and unity frequency response, elimination of any tracking errors.

Past information of the sampled signal is fed from a two-stage linear prediction filter back to the A/D input to predict the next sample value. This signal "history" is compared with the incoming signal to generate the next sample, the difference between the past and present being what is actually transmitted. For example, if the past six samples have all been 1's, then the prediction filter will most likely generate a 1. This unique feedback filter design increases the dynamic range, cuts down considerably on errors and reduces the quantization noise of the unit.

The 700 also employs a secondary transient speed-up circuit when faster gain reduction is needed to keep input transients from clipping: if more than 20 consecutive 1's or 0's are received from the linear prediction filter (indicating a possible overload at the input), this circuitry forces the RMS detector to change its output 10 times faster than normal so that no transients will be



clipped at the decoded output.

The digital signal from the dbx is coded into NTSC, the U.S. and Japanese standard television format, to be interleaved onto the videotape. The 700 can be used in conjunction with any VCR on any length video cassette tape. A European version of the 700 is currently in the works, for use with PAL/SECAM format recorders.

The memory of the dbx plays an important role in the synchronization process between encoding and decoding. 8k of memory is used for the data to tape interleaving process; the same memory space used for encoding the signal to be recorded or to the video tape is used for decoding what is being received from the VCR. Another 4k stores the data when the video format does not allow any input to be striped onto tape (i.e. at a vertical synchronization interval). With data flying in and out of the 700 at such a rapid rate, this 12k memory served as a buffer and contributes to the efficiency of the unit as well as the dynamic range.

Error correction is accomplished by parity; a parity bit being a designated bit derived from calculations of the surrounding bits occurring, in the case of the dbx unit, every fourth bit. If there is a 1-bit error, the parity bit, in theory, will enable the unit to detect and correct that one bit in question during the decoding process. When an error is being corrected, the error correction light on the front panel flashes for the duration of the error.

### THE TEST

The dbx-700 processor was linked up to a Sony VO-5800 professional U-Matic VCR with a Maxell 20-minute U-Matic "Still Frame" video tape. The analog machine for comparison was an MCI JH-110 two-track recorder calibrated for quarter-inch Ampex 456 audio tape. In order to maintain unity within the unit being evaluated, the dbx processor was set to its reference and the rest of the studio levels were adjusted to this reference keeping the studio at standard level.

We recorded an acoustic piano live on both recorders simultaneously, a piano being chosen because of its large dynamic range and percussive characteristics. The recording process was simple with the 700 and playback could be monitored at the flip of a switch. Upon playing back the recordings, we were truly amazed by the difference in sound quality between a digital recording and an analog recording. This came to be the most noticeable comparison throughout all the tests. The dbx performed extremely well — the dynamic range was astonishing; the quietest passages were very clean and none of the transients were clipped.

Some "noise" could be heard in the digital recording that sounded different from the noise in the analog recording. Although less offensive than the analog noise, the digital noise sounded foreign. It seemed to be almost separate from the audio, having a slightly gritty, granular characteristic. The analog noise did not sound as harsh as the noise from the digital processor, but at times it seemed to undesirably blend with the audio, especially during low level passages. Overall, we still preferred a digital recording because the actual *music* sounded so clean.

Next the 700 was put to the mix-down test. A prerecorded analog 24 track tape, all tracks occupied, was simultaneously mixed down to digital and analog formats. We mixed the songs on an MCI JH500 console using typical studio signal processing devices where applicable. The record levels again were set to keep the studio at standard level.

Even though the quality of all the recordings was a little closer this time (due to the analog tape source), the digitized recording again was striking, with an impressive dynamic range, free from transient clipping—the 24 track mix was replicated quite accurately. The higher sound pressure level of the mix masked any quantization noise that may have been present. This may have been

due to the fact that we were mixing an analog tape containing some degree of saturation.

### CONCLUSIONS

In the tests outlined above, the dbx processor performed exceptionally. The recordings made with the 700 had an incredible dynamic range and extremely clean sound.

It should be noted that this processor is by no means limited to professional studio uses. Broadcasters have already found this unit to perform quite well in the transmission and reception of live concerts and it is also a promising solution to the need for quality links in satellite transmission and point-to-point microwave transmission.

Format standardization has become quite an issue lately, with many companies leaning towards a PCM format for their digital machines. In this Model-700 processor, dbx has offered an alternative, CPDM. The low cost of the 700 system gives state-of-the-art studios, semi-pro studios and at-home studios a processor that offers high quality results yet won't deplete their budget.

dbx has met its stated goal of producing a digital recorder that is priced very close to that of an analog machine. With the 700, they have done this and much, much more. ■

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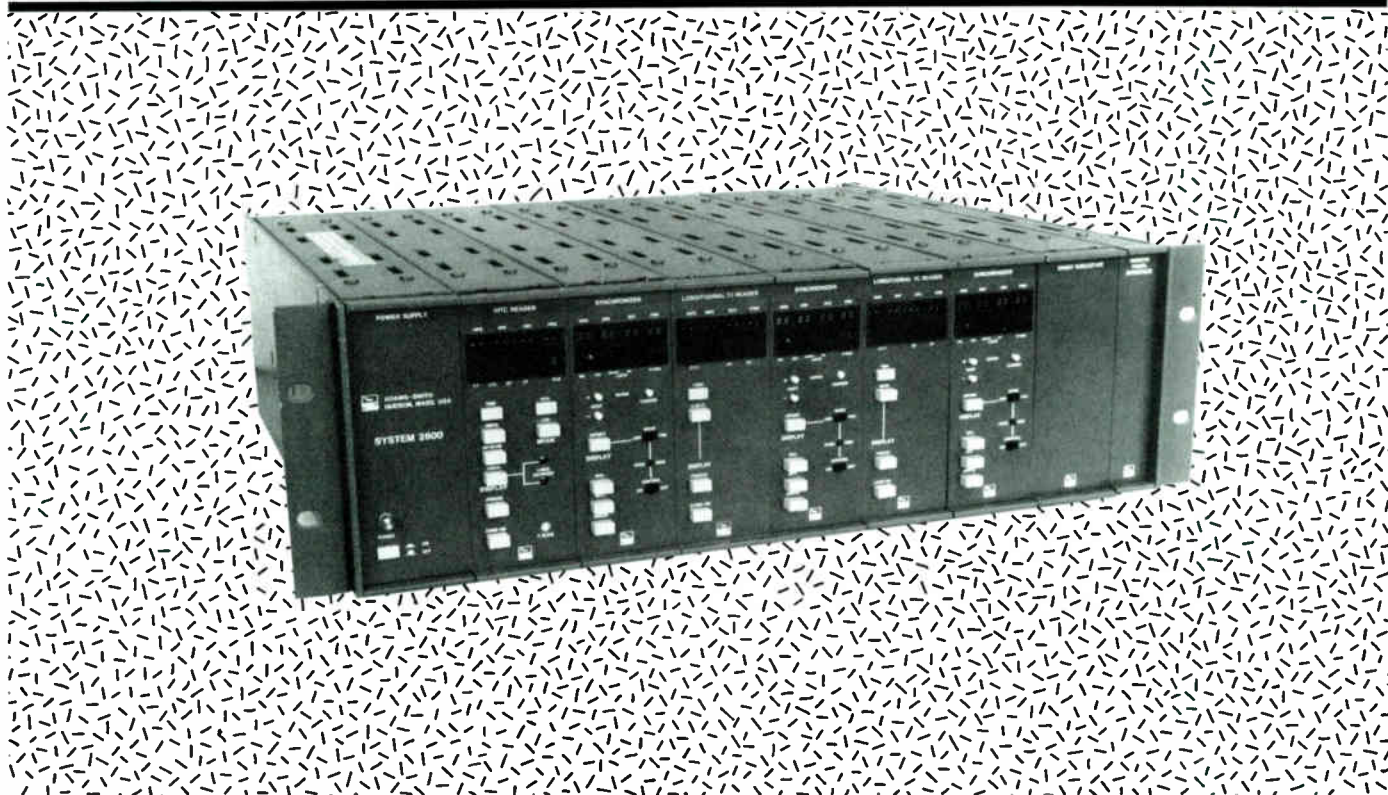
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## The Adams-Smith System 2600 and the Tascam Model 58:

*Mix examines a cost-effective post-production system.*

by Joe Van Witsen

System 2600 from Adams-Smith is a microprocessor device which provides the audio or video studio a variety of time code related functions for machine interface and control. The system is comprised of several different modules which can be easily combined to customize the system for the particular studio's needs. The 2600's unique concept and design allows the user to begin with a basic system: a chassis, power supply and single module. As the studio grows or as more time code functions are required, additional modules can be added.

While other manufacturers are adopting the modular approach, none have it with the foresight of the Adams-Smith team. Other so-called modular

systems are generally composed of individual 19-inch rack units, which are often large, and cumbersome to operate when stacked up to create a full functioning system. The system 2600 answers the needs for modular time code equipment more elegantly. All the modules needed to provide a large facility with comprehensive time code features can be housed in a single 19-inch by 5-inch high chassis.

The front panel of all the modules contains full control and status displays as well as time code registers on the appropriate modules. This is a refreshing relief from the "black box" school of electronic design whose motto is "Is it working?—Don't Ask!" The system 2600 is designed for the real world where many different types of machines must be brought together to produce an audio, video, or film program. When a problem arises in such a complex system of machines and electronics it is often due to operator error. Downtime at these moments must be kept to an absolute minimum. A process of elimination is necessary to locate the problem, and it is a reassuring feeling to look at the modules'

front panel display and confirm that the synchronizer/controller is operational. A "black box" design without this kind of status display can be frustrating.

Each module is a full functioning self-contained unit with all its necessary input and output jacks located on its rear panel. The different modules communicate with each other over an internal, time-shared, multi-conductor data buss, which also distributes power to the individual modules from the system's built-in power supply. Each module "broadcasts" its data and address on the buss to any of the other modules. Any number of modules of the same or different kinds can be arranged in the chassis in any configuration for a specific system, and future modules can be added as one's system and needs change. Any module can be removed from the chassis and connected to the data buss by a long extension ribbon cable for easy servicing.

Another unique feature of the System 2600 is its proprietary Chassis-Rod construction. The basic chassis is composed of two Side Panels tied together



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er by four 3/8-inch diameter nickel-plated brass ChassisRods. The ChassisRods come in varying lengths to accommodate the number and widths of the modules to be mounted—the chassis does not have to be of standard rack width. Each module's printed circuit board has a spring contact for making a ground connection with the ChassisRod. This construction along with the self-contained modules with their own input-output panels eliminates the need for motherboards and plug-in PCB connectors with their associated contact problems.

For this Field Test, we installed the System 2600 in an environment where we could observe a variety of functions. The system was interfaced with a Tascam model 58 8 track audio recorder, an Ampex VPR-80 1-inch broadcast video editor, two Panasonic NV-9600 3/4-inch VTRs and a Panasonic AU-A70 time code editing controller. The system that Adams-Smith sent to *Mix* for evaluation included the following components and modules: Chassis-Rod system with power supply and rack-mounts; remote control console; slave transport controller; data entry controller; longitudinal time code generator module; longitudinal time code reader module; vertical interval time code generator module; vertical interval time

**W**e were particularly interested in seeing how the vertical interval time code modules and the synchronizer module performed.

code reader module; translator interface module; tape synchronizer module; serial interface module; remote control processor; and two character inserter modules.

This Field Test was performed in a video postproduction studio specializing in music video programming. We were particularly interested in seeing how the vertical interval time code modules and the synchronizer module performed.

The vertical interval time code modules write and read a form of time code which gets combined with the video signal and placed in the vertical interval (the black bar seen atop the TV picture when it is vertically rolling). The

advantage of using vertical interval time code is that it frees up an audio track for additional sound work. Normally, longitudinal time code (LTC) is recorded on audio channel three on one-inch VTRs, and one of the stereo tracks of 3/4-inch and 1/2-inch machines. Freeing up an audio track on VTRs is invaluable in the audio sweetening process.

In our test we began by video editing from the 3/4-inch VTRs to the one-inch editor. Our goal was to end up with a one-inch edit master with VITC in the video, a dry audio edit on channel three, and a finished stereo track on channels one and two. The source 3/4-inch recorder had LTC on channel one and mono live audio on channel two.

Once the one-inch tape was edited with channel two from the 3/4-inch getting edited onto channel three of the one-inch machine, audio sweetening began. The audio from channel three on the one-inch was sent to track one on the Tascam. Simultaneously, the VITC in the one-inch video signal was sent to the VITC reader module of the 2600. The VITC reader separates the VITC from the video signal. The VITC is then sent over the 2600's internal data buss to the translator interface module which converts the VITC to standard LTC which can be recorded on an audio track. This new LTC has the exact same numbers as the one-inch VITC. The LTC is sent to track eight of the Tascam. The entire audio program on channel three of the one-inch is recorded onto the Tascam along with the LTC. Once the transfer to the eight track is completed, both the audio tape and the one-inch video master are rewound to the beginning.

The Synchronizer module is connected to the Tascam by means of a customized interface cable which Adams-Smith provided. Interface cables are available from the company for a variety of multitrack audio recorders. The LTC from the playback of track eight is sent over the interface cable to the synchronizer module. When the one-inch tape is put into play, the Tascam speeds up momentarily to find the same time code number as the one-inch VITC. Now, channel three of the one-inch is no long-



*The Remote Control Console shown here is one of many options available for the System 2600.*

er used, but the track is saved as an edit protection master. When the VTR is shuttled, the Tascam stays in step with it, and when the video deck is put into play again, the Tascam locks right back up to the time code. Video is viewed off the VTR while synchronized audio is heard off the Tascam 8 track.

Another useful feature of VITC is that it allows the time code to be read by the VITC reader at any speed, so after shuttling the VTR and resuming play, the audio recorder synchs back up immediately.

Now the sweetening process of adding other sounds on the available tracks of the Tascam began. We generally did not have to touch any of the Tascam transport controls other than track record select, punch in and punch out. Shuttling the Tascam was done by controlling the one-inch VTR. Stereo music was added in places on tracks two and three of the Tascam, stereo sound effects and stingers were laid in on tracks four and five. Narration was laid into portions of track six and background ambience (outdoor sounds) was recorded on track seven, with the time code remaining on track eight.

Before doing the final sweetening, we tried several off-line sweetening sketches to determine how we would

want different portions of the final mix to sound. To accomplish this we made a 3/4-inch copy of the one-inch master. The copy also contained identical time code in its vertical interval. Several copies, in fact were run in sequence onto the 3/4-inch tape, so there were multiple sub-masters on a 3/4-inch cassette.

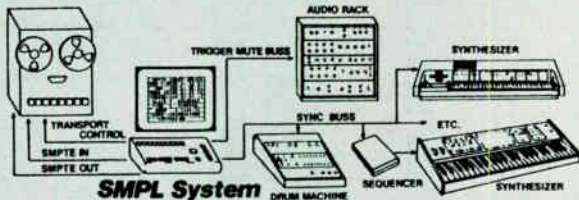
At this stage we put away the one-inch master until the final mix session. The 3/4-inch video out was sent to the VITC reader module. The Tascam locked up perfectly to the 3/4-inch dub, and the seven tracks of audio were mixed down to stereo. The 3/4-inch deck we recorded audio back onto was an editing deck, which allowed us to work on small portions of the mix by setting audio edit

in and out points and shuttling the 3/4-inch tape with the machine's editing controller. By loading the same two in and out points as a series of edit events in the edit controller's memory, we were able to have the 3/4-inch deck and the Tascam 8 track replay and punch in a number of times enabling us to try the mix in that portion of the program several different ways, adjusting levels, EQ, and pan positioning. When we got a section of the mix that was pleasing, we instructed the edit controller to Auto-Tag (which loads the last out-point as the new in-point) then we would shuttle the 3/4-inch deck to find an appropriate new out point.

The only non-automated function in this process was the actual control

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## Evaluating the Tascam 58

The Tascam 58 is a new generation eight track, half-inch 15 ips recorder/reproducer incorporating features and specifications previously found only on large format studio recorders.

The transport of the 58 was designed with time code in mind. One extremely attractive feature is its ability to synchronize to SMPTE time code systems through an accessory connector on the rear panel. This allows the 58 to take on demanding audio sweetening projects which involve synchronizing the 58 to either a film or video image.

The quality of the transport allowed the synchronizer to reposition tape in as small an increment as 1/1000 of a frame. This kind of repeatable control is vital when trying to synchronize two audio tapes. Most video editing systems can edit or synchronize as close as a frame, and this is fine for editing pictures because the edit point is always hidden in the vertical blanking between frames, preventing the edit from appearing in the picture area. Audio, however does not have defined frame lines. A video frame lasts 1/30 second which is a relatively long time in the audio realm. Sync error up to 1/30 second between two recorded sources can cause severe phase distortion and problems with stereo audio imaging. As a result, audio production machines must have cuing and editing resolution far greater than VTRs.



*The Tascam Model 58, an 8 track, 1/2-inch recorder, performed well in an audio-for-video environment.*

The Tascam 58 employs a sophisticated microprocessor-controlled reel servo system providing precise tape handling in fast forward, rewind, spooling, and manual edit mode. The supply and takeup reel motors, capstan motor, pinch roller, tachometer roller, digital counter, tape tension arms and guide rollers are all mounted on a rigid, precision machined aluminum base plate.

The audio quality of the Tascam 58 is excellent. The circuitry design employs direct-coupled amplifiers to eliminate distortion and optimize low frequency response. The first stage of the reproduce amplifiers consists of a pair of ultra-low noise field effect transistors (FETs), eliminating the coupling capacitor between the heads resulting in better transient and phase characteristics. The three head assembly uses new generation record heads for equal quality record and sync functions. Sync playback response is as good as repro response and permits "ping-ponging" or re-combining tracks without sacrificing audio quality.

Fast forward and rewind are activated by pressing their buttons once. Pressing twice activates spooling mode in that direction running the tape at an intermediate wind speed. A built in auto locator provides single search-to-cue and return-to-zero functions. A  $\pm 15$  percent variable speed control provides fine and coarse adjustment. Two optional remote controls are provided. The RC-50 controls transport, auto locator, and counter readout functions. The RC-51 is a full function remote control unit provided with a roll around stand and allows remote operation of the 58 from as far away as 8 meters. All transport controls (except edit) and front panel functions, including audio locator, counter readout, output select, pre-load (sync/input) and record (rec on/off) functions of the 58 can be remote controlled from this unit.

The Tascam 58 is an extremely rugged and reliable recorder/reproducer with excellent audio characteristics. The accuracy with which it works with time code makes it not only a flexible audio production tool but a vital asset in time code interlocked audio-video postproduction. The Tascam designers have succeeded in providing the marketplace that is needed: a no-compromise, portable multi-track created with synchronization in mind. ■

—FROM PAGE 129, ADAMS-SMITH

of the audio signals themselves, as we were not working with an automated console. However, fader, EQ and pan positions on all tracks were logged for each successfully mixed section. We repeated the process a few times on the 3/4-inch dub, trying different variations. Finally, the 1-inch tape was synched back up to the Tascam and using our mix log, working section by section on the 1-inch tape to complete a master quality stereo mix.

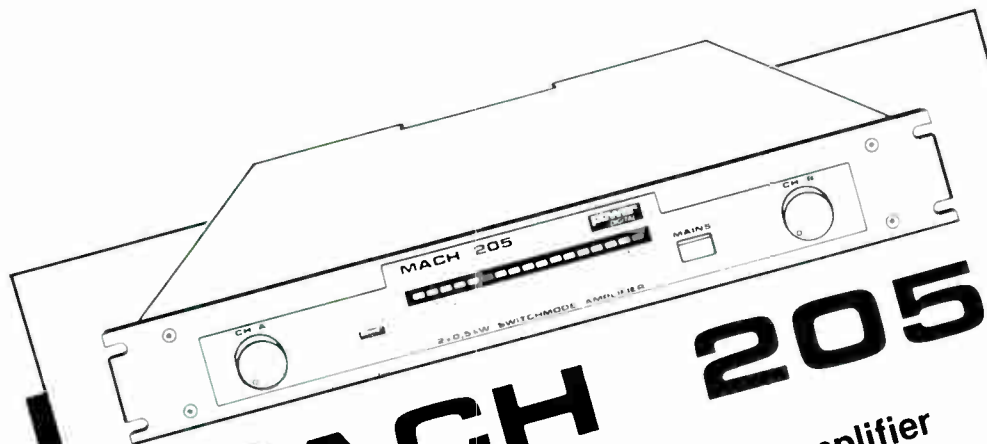
The System 2600 has two features in addition which were extremely handy. Two character inserter modules display the address in large, easy-to-read numbers on the video monitor when fed time code from a reader module. These addresses can either be recorded onto the picture (window dub) or just looped through the monitor. It is useful both in the video edit session and the sound sweetening stage of postproduction to not have to take one's eyes off the screen to see where you are on the tape. By using two character inserter modules we had the option of displaying on the screen source video time code, edit master time code or audio time code.

System 2600 also provides comprehensive remote control capabilities. The remote control processor module accepts commands from the remote control console and sends address positions to the remote display. The remote control console contains a slave transport controller which automates the operation of the slave controls. It also contains a data entry controller which contains a numeric keypad and several other keys to enter, read, store, transfer, and manipulate data such as time code addresses. The selection of the right controllers for specific applications allows the buyer to customize the controller to a particular configuration. Another option, the master transport controller, is also available but was not tested. The 2600 also permits through a serial interface, a separate computer or terminal to operate as a remote control device. A new module, the event edit controller, allows the selection of event outputs as well as single-keystroke event point capturing.

The Adams-Smith System 2600 is perhaps the most flexible device available today to perform the multiple tasks of time code tape control. The variety of modules and configurations indicates an awareness on the part of the designers of the diversity of time code applications in today's media production environment. The extreme compactness of the system and the logical layout of all the controls make it user friendly. The Adams-Smith design team has demonstrated great sensitivity to the marketplace by providing this cost-effective solution to the growing need for semi-customized studio control systems. ■

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**THAT'S THE WAY I FEEL NOW**  
A Tribute to Thelonius Monk  
Various Artists  
A&M Records SP-6600

Produced by Hal Willner for Deep Creek Productions, Ltd.; recorded and mixed by Doug Epstein; additional recording engineers: Gary Starr, Todd Rundgren, Don Was; recorded at Mediasound Studios, New York City, with additional recording at Sound Suite (Detroit, MI), Utopia Studios (Bearsville, NY) and Village Recorders (Los Angeles, CA); mastered by Greg Calbi at Sterling Sound, New York City.



# AN ALL-STAR TRIBUTE TO MONK

**O**ne thing that the recent Thelonius Monk tribute album, *That's the Way I Feel Now*, does not do is offer yet another definition of Monk's certified, offbeat genius. It does not propose to be musical portraiture, but more along the lines of a memorial collage. The cast of admirers donating their creative energies run the gamut from NRBQ pianist Terry Adams to avant garde prankster John Zorn, with stops at Carla Bley, Donald Fagen, Joe Jackson, Steve Lacy, Todd Rundgren and numerous others—a team that knows no consistent uniform. What producer Hal Willner and his odd assortment of comrades have concocted in this fascinating 23-cut assemblage is a daring hypothetical mosaic. What if Monk actually wrote pieces for Peter Frampton? Would it work?

Yes, even the one-time megastar Frampton is enlisted, on an angular Monk obscurity called "Work." Together in a taut two-guitar arrangement with Chris Spedding, drummer Anton Fig and bassist Marcus Miller, Frampton pulls out some spindly phrases that, even for an air of tentativeness, seem true to the spirit of Monk. Surprisingly, the cryptic astrobop of the late pianist's music makes a very clean translation into the slang of a dual crunch-guitar rock group; no communication gap whatsoever.

On the whole, Willner's two-record opus works wonders, exploring as it does the undiscovered stylistic possibilities waiting to be unlocked in the Monk trove. Willner's musicians counted the ways they could love Monk, and only space considerations limited options. "I couldn't make a ten-album set," Willner says a little ruefully. "The fact that 'Epistrophe,' 'Ruby, My Dear,' and 'Crepescul With Nellie' aren't on the record breaks my heart. Monk wrote 60 or 70 great tunes. We do have some that nobody ever plays, ever. Nobody does 'Gallop's Gallop' or 'Work' or 'Shuffle Boil,' 'Brilliant Corners,' 'Bolivar Blues...' I think we came up with a nice cross-section."

Monk's death in 1982 triggered a considerable amount of retrospective revival. Although he has been an acknowledged jazz pillar since the public fell in love with his bent-up blues and scrunched-up chord voicings in the '50s, Monk's legacy has been a synopated affair. Lumped in with the

bebop pioneers of the '40s, Monk was a veritable black sheep of that school, more interested in paring things down and bending the angles than he was in simply intensifying the musical materials. Whereas the principal coup of bebop was the modernization and adrenalization of a growingly complacent swing scene, Monk took another route. His tunes and pithy piano style typified a new economic eccentricity, rooted in the blues but fueled by a quiet rebel seed.

It came as no surprise that a good deal of Monk music has appeared on the jazz charts in the past couple of years. The first record by Sphere (Elektra/Musician) consisted entirely of his music, as played by predominantly Monk alumni and, ironically, recorded on the day Monk died. Chick Corea cut a side of Monk tunes on ECM. Arthur Blythe's last Columbia release, *Light Blue*, was devoted to Monk repertoire, nicely planted onto Blythe's keening alto sax signature. Basically, the jazz world has been rediscovering the Monk phenomenon. But, of course, the early tributes—relegated to the *jazz* bins—have been definitely limited in their marketing scope.

Willner, whose first such multifaceted tribute album was a Nina Rota project on the small, tough Hannibal label two years back, recalls the impetus for the Monk package: "The concept of doing Monk just came to me in a flash. I wasn't sitting around thinking of who I could make a tribute to next. I was sitting at a memorial concert at Carnegie Hall and got very frustrated at the lack of diversity of musicians involved, because Monk influenced a lot of non-jazz musicians. When I first heard him, I thought he was a rock and roll piano player in the jazz world. I couldn't believe what he was doing. I guess you could call it breaking rules or making new ones. But I immediately related to him and the same goes for a lot of people. With that frustration that this non-jazz element wasn't being realized, I left the concert saying, 'Well, maybe I can do one for Monk now.' Armed with the exuberance that comes from recognizing your mission, Willner set out to find sympathetic ears. His "regular" job as musical coordinator for *Saturday Night Live*—which he's held down for the past four seasons—has helped him build a network of music connections.

Naturally, the first step towards securing a record deal with a major label was to land some weighty names, to generate both marketability and validate the basis of Willner's concert. Along with the Frampton/Spedding track, Willner recorded the lush ballad "Reflections" with guitarist Steve Kahn and the mellifluous

synth textures of Donald Fagen, (both card-carrying Monkheads), a spunky rendition of "Little Rootie Tootie" by NRBQ, who have been throwing in Monk tunes in their club sets since their humble beginnings, and an unlikely arrangement of "Round Midnight" by Joe Jackson. The Jackson piece, an elaborate and overblown reading of one of the most starkly beautiful ballads in jazz, is the album's one notable error in taste. With its near 101 Strings treatment and lounge lizard piano solo, it puts a classic composition in a cheap red chintz smoking jacket.

NRBQ's track, by contrast, is a true blue Monk party, with the smart irony intact. Terry Adams, the group's pianist and a Monk protege from the second he first heard him in the early '60s, sparked up to Willner's noble project. "The hard thing about this project was picking which song to do," Adams reports. "Little Rootie Tootie" was something that we had just come across; we played it maybe twice before we went into the studio, so it was fresh for us. It was an afternoon session and we had played in the city late the previous night, so it was actually kind of morning for us. We did about three takes and that was it." Things run smoothly when there's a sense of purpose in the air.

In fact, the project came to pass with an overall smoothness that was almost surreal. Willner was prepared to brave the usual corporate web. "I made a few copies of this four-song tape which I was going to give to the record companies, but A&M said yes so quickly—no hesitation," Willner claims. "A&M, even though it is a large label, is independent, run by people who love music. Jerry Moss and Herb Alpert, who started the label, are still doing it. Jeff Gold, who brought the album to A&M, and I sat in the room and played Gil Freisen the saxophone duet [ex-Monk players Charlie Rouse and Steve Lacy doing "Ask Me Now," with no rhythm section] and he loved it. How many record company presidents are going to sit through something like that? A&M is a rarity—a major label that's still very personal. But it couldn't have happened if I hadn't done the Rota album. That established my track record a bit."

Before launching into the project full boar, Willner had to check his musical validity. "I called Steve Lacy and Carla Bley for their opinion, to see whether what I was doing wasn't sacrilege or something. They were very supportive. A lot of jazz people see it in a way where a lot of young people will be exposed to Monk for the first time, because of some of the musicians on the record. That

—PAGE 148

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# LEON RUSSELL

by Laurice Niemtus

When *Mix* last met up with Leon Russell, he was in a Los Angeles phase, talking about his newly acquired video recording facility. That was 1980, and there's been little word since.

But Russell, also known as the Master of Space and Time, hasn't really been away. He just moved—all the heavy Victorian furniture from the Tulsa home and all the video equipment from the L.A. operation—to Hendersonville, Tennessee, a little town north of Nashville most famous as the home of Twitty City, Conway's answer to Graceland.

Russell hasn't gotten out of the video business totally, since he still owns all the "stuff." Only now, he's let-

## returns

Paradise label. It's the "pop/adult contemporary" offering while the other is a "Vol. II" follow-up to his 1973 country album, *Hank Wilson's Back*. (Hank Wilson is his given name.)

Both of them play a part in Russell's half-year tour schedule, which began with some dates opening for Hank Williams, Jr., and went on to others with Russell topping the bill. All of it seems to mean that Leon Russell is back, and he was even willing to talk—with only one exception: no questions about his failed marriage to Mary Mc-

there's nothing nearly as exhilarating as "Delta Lady" or even "Tight Rope." And Russell's favorite, he said, is a mysterious, ultra-sad ballad called "Lost Love."

He looks awfully good, however. He's slimmed down from the girth of a few years ago. His mane of silky hair is now completely white except when you see it in the light, where it becomes transparent and prismatic. The aviator shades still hide the direct, piercing eyes that have conducted thousands of dates and sessions and musicians over his 25-year career, and his face betrays almost no expression. But his baritone speaking voice carries plenty of color and feeling—from courtly to cynical and from serious to sarcastic. And his long, eloquent fingers amplify or soften everything he says.

But once he begins, he's an easy man to talk to, and he has none of the absoluteness you might expect from watching him work. An awful lot of his thoughts are preceded by "I don't know, but..." and often, the sentences end, "Don't you think?"

**Mix:** Why have you done so few interviews over the years?

**Leon:** I really don't have much to say. Making music and dialogue don't necessarily go hand in hand.

**Mix:** So why Nashville, and how do you like it?

**Leon:** Here, everybody's a songwriter. It's great; I really like the specialty of it. Like when I lived in Tulsa, I had 15-20 people *every day* coming to my house, wanting a tour. There are not tours of the stars' homes in Tulsa, because the only stars they've got are Oral Roberts and Roy Clark and me, when I was there. And it was a lovely house; I'd have loved to show it to people. I just couldn't figure out the mechanics of it. Here, they've got that all worked out. That's something else I like about Nashville. They WILL sell those records out of the trunk, and they WILL show you their house for a buck. Why not? If people want to see it... I feel like this is a good place to be suc-

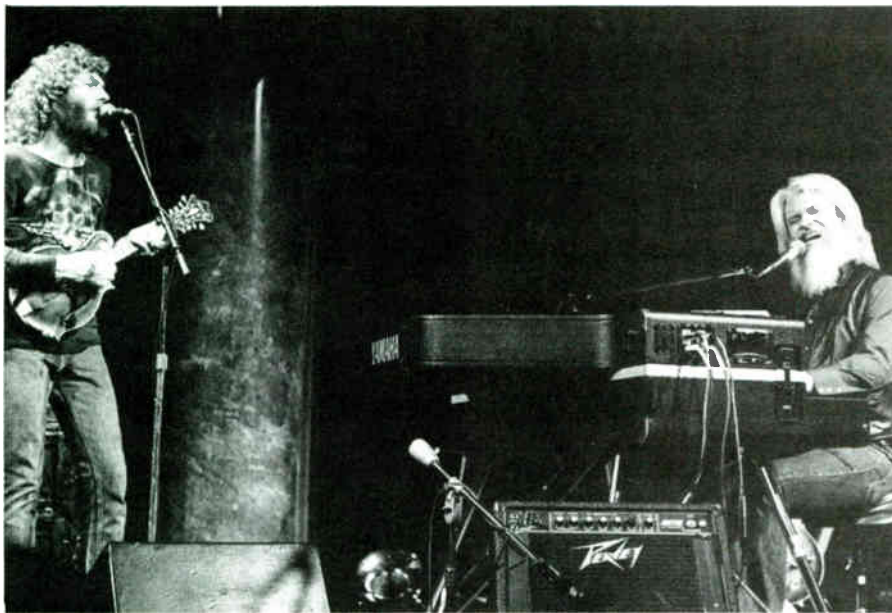


PHOTO: JON SIEVERT

Sam Bush (left) and Leon Russell, 1981.

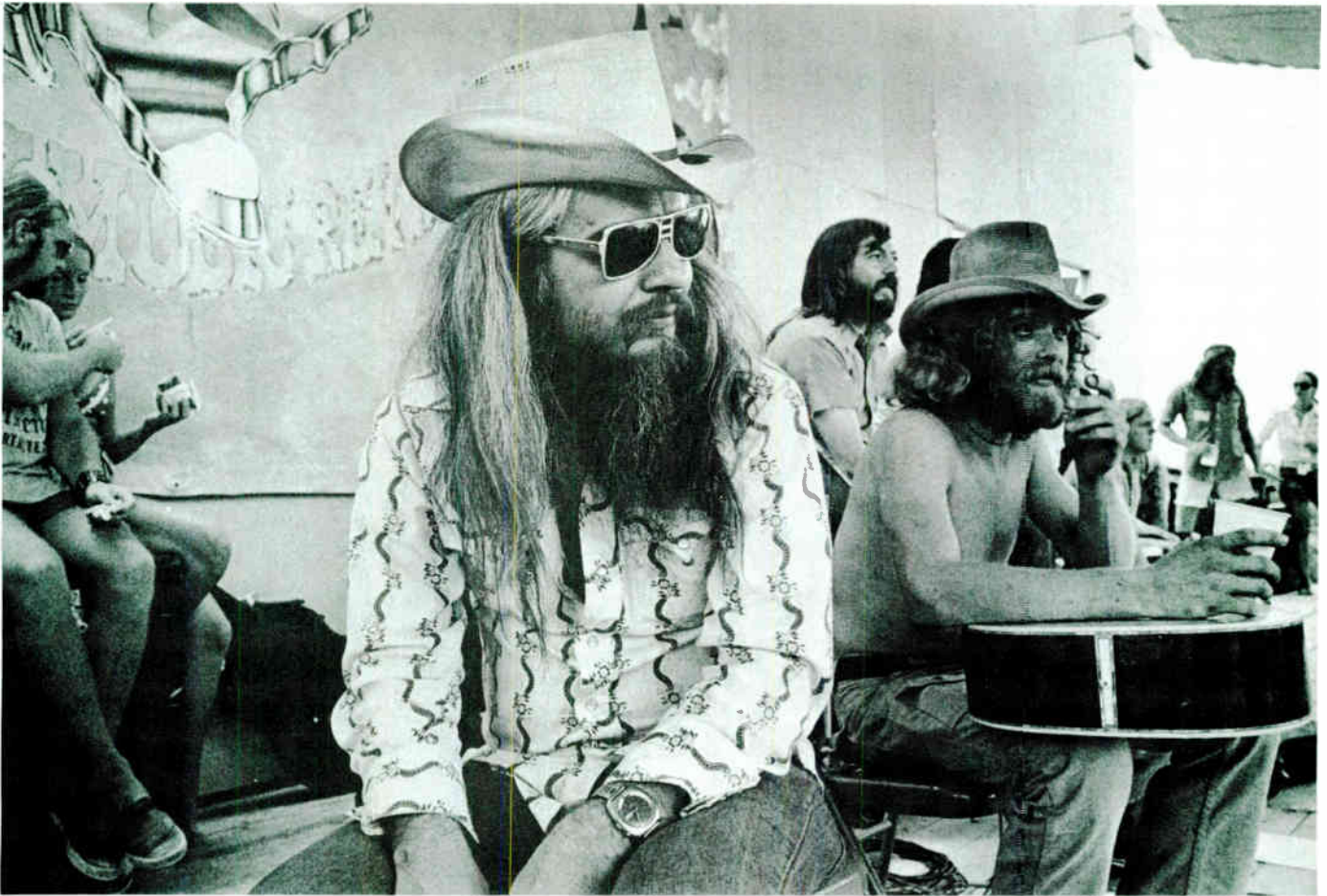
ting "other people mess with it." And there are two new Russell videos made with director Mike Griffin in Dallas (and featuring old buddy Willie Nelson) to support Russell's comeback album, *Solid State*.

*Solid State* is one of two new albums on Russell's re-activated

Creary, a singer with whom Russell lived and recorded during the '70s.

At first, that seemed like a strange request, but not after hearing *Solid State*, on which Russell offers a new batch of the instant standards for which he's justifiably famous. They are not cheery, upbeat tunes; in fact,





*Leon Russell, 1976.*

cessful. At this point, I'm not successful, but it's one of those periods when everyone comes up and slaps each other on the back and says, "Remember when...?" See, you gotta' have that stuff, too. Otherwise, it gets real boring. You think of poor Frank Sinatra. The guy's never had a failure in his life.

**Mix:** Poor Frank....But you're certainly not the old rock and roll Leon on *Solid State*. For one thing, the piano's rarely the lead instrument. The tempos are slow; there are strings and orchestrations. You seem to have made a demo tape as a songwriter, not a performer, here.

**Leon:** Well, any hits I've ever had have *not* been rock and roll songs. My concerts have always been rock and roll, whereas the records are not so much that way, except the live album. It's always been my problem that I don't fit into a convenient category. I've always had trouble with my directional blinders in that regard, but there's an attempt with *Solid State* to give programmers something they could categorize easily. But what happened is, we released the single [a re-make of Danny O'Keefe's "Good Time Charlies Got

the Blues," the only non-Russell composition] and about 80% of the coverage was on country stations. And of course, that record's not country, I don't think.

*"I'm hoping for just a nice, moderate little audience this time. That would be fine. After all, it's not that important, is it? It's just music."*

**Mix:** So releasing the country and the pop albums is a serious, double-

pronged approach, a sort of two-path career direction?

**Leon:** Well, it's just real odd for me. I'm classically trained and when I did the first Hank Wilson album, I was reading the songs out of a book... But I have sort of, I don't know, been exposed to country music throughout my life because it's been there. But I never played any country music in Oklahoma. I started playing at 14 and left when I was 18, and I never played a country gig till I went to California, which I thought was interesting.

**Mix:** But you also did The Crystals and The Ronnettes, The Byrds and Gary Lewis & the Playboys. You did a lot of different kinds of things once you got to California. How did you end up doing sessions for Sinatra, for instance?

**Leon:** Well, it's just kind of a clique you get into; in my case, it was the rhythm section. I played with a drummer named Hal Blaine and a bass player, Ray Crullen, and Glen Campbell on guitar. And we did as many of the dates as they could give us all. I think that's not happening so much anymore, because one of the drummers that used to be in that kind of clique—Earl Palmer—is now treasurer of the union.

**Mix:** OK, so then there was your

Shelter label — the *Leon Russell*, *Shelter People*, *Corny*, *Leon Live*, *Hank Wilson's Back* and *Will O' the Wisp* albums. And there was *Mad Dogs and Englishmen* and the Bangladesh concert and album. Then there was Paradise and those albums (with former wife, Mary). Then what happened?

Leon: That dark period you're talking about was when I was on Warner Bros. I just haven't had real good luck in terms of being on major labels. So we're back to independent again.

Mix: But that's hard. You have to have your own infrastructure at every level of the business...

Leon: You have got to have that if

you're going to do it the other way, too. That's the thing I didn't know at the time. Just because they've got a huge office building and they say they're going to sell your product, it's not necessarily true. Or, it's not true at all, in fact. To naively hand them the record and expect that they'll sell it, that was my mistake.

Mix: Did you have trouble about what they wanted or expected on your records?

Leon: Oh yeah, sure. I think of that as the Dire Straits syndrome. This is a band they've paid all this money for, and then the first thing they tell them is "OK, now let's make a *real good* record. The first one did pretty good,

now let's make a good one." Which is basically what they were saying to me. I finally got to the point where I asked them if they'd ever heard any of my records, because I was sure they hadn't. I have no idea what they thought they were buying...

Mix: The attraction at Warner Bros. was the money they offered?

Leon: That *was* the attraction. I'm afraid it wouldn't be attractive again. It cost *me* a lot of money, and I feel they buried me.

Mix: So instead of doing another "Roll Away the Stone," you did "Good Time Charlie's Got the Blues" here. Why? Are those lines about being 43 meaningful to you?

Leon: I'm 42. I'll be 43 next birthday [April 2, 1985]. But I don't know, I just always thought that was a special song somehow. I don't know why. It's just an old, dumb song, but it struck me as the kind of song that people like in some mysterious way. And I'm interested in mystery music—compulsion as it relates to music. Prince, for example, has got a little interest in mystery music going on. I'm interested in that stuff. It flourishes in the primitive tribes, and in the "civilized" people, it becomes coated with a veneer and people think it's something else. In reality, it's still the same, and it has the same sort of power. I'm no expert on it; I'm just a student of it.

Mix: You mean you don't know physically or biochemically how it works but there are certain sequences or frequency combinations you can pull out that will work a given way? It's just mysterious because you don't know how it works?

Leon: There are certain things that have worked quite successfully for the Church of God in Christ, and I know a couple of those things. But I'm no expert.

Mix: I remember a quote from an old interview you did with *Rolling Stone*. You said, "Organized Christianity has done more harm than any other single force I can think of in this world."

Leon: Well, that's for people who believe they won't get shot if they talk about that stuff.

Mix: Do you think you'd get shot?

Leon: I didn't say anything like that. I'm totally not political. I don't know anything about it. It's beyond my scope.

Mix: But you remember that quote?

Leon: Sure, it's absolutely true, don't you think? I mean, I fear for Michael Jackson. I hope he's got his security

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together, because that mystery that I'm talking about...people who are able to construct that out of thin air are crucifixion candidates and always have been. I feel for him in particular because he's just, I don't know, so much better than all the rest.

Fame has this weird property of altering a human being's perspective. For example, Willie Nelson came up to me one day and said, "I just figured it out." This was years ago, and I said, "What is it?" He said, "You're Jesus and I'm John the Baptist." And I said, "Not this time. I'm not going to do that again."

And then suddenly, one goes from that perspective down to a somewhat less credible position. And it all has to do with fame, which is pretty arbitrary, really. And I'm that way, too. If Michael Jackson were to walk in here, I'd lose my shit.

But it's just made me realize that all that stuff is very fleeting and transparent. For those who've never experienced it, it's fun. It's fun to have that sort of acceptance, I suppose, especially for someone like me, because I'm basically...Throughout my life I've dealt with unacceptance as a form. That's the whole main element of my style is not being accepted in school or whatever. And then suddenly, at 28 years old, there were throngs of people with their hands out to me. But the oracle is fame. It's not the person.

**Mix:** Well, you seem to understand both Michael's position as well as the flip side of it. You've seen that love and sometimes, that craziness in people's eyes, and it appears that you know how to control the crowds through that magic.

**Leon:** No, not really. It's just sort of an attempt to teach. I mean, it's a privileged point of view, but the magic comes from some place else.

**Mix:** Can you imagine being as big as Michael? Or anyone else being that big?

**Leon:** There's always a new generation. Prince is coming right behind him and breaking all the records too. I'm sure there'll be...I don't think there's going to be 10 people next year who sell 35 million records, but at some point, maybe in another three or four years. But as for me, being a star bothered me. Not the money. The money takes a certain amount of effort, but the thing that really takes the effort is that bell curve [of lunatics among the fans]. I didn't like that, and I wouldn't like to be that big again. If I could do it in disguise it would be all right. Jermaine Jackson said something about dancing until your side hurts and then

going to hide. Well, I have never been much of a dancer, but I've done my share of hiding.

**Mix:** But you're about to go out on the road to start it all over again. Do you still like the touring?

**Leon:** Yeah, I like to play. But they don't know who I am now.

**Mix:** Do you really think that?

**Leon:** I know that for a fact. Particularly in the case of Hank Williams, Jr., we played two shows with him once before and I know 90 percent of the audience didn't have a clue who I was...First of all, they were selling liquor at those shows. They had little booths around the auditorium, and that's a real com-

bination for disaster — to sell liquor at a rock and roll concert.

In those shows, it was frighteningly difficult. I wondered if it didn't have something to do with the whiskey. There were a lot of people in trouble out there. It reminded me of the Fillmore or Winterland in San Francisco. I slipped in there one night, and I felt like I was playing a junkie convention. And it was packed, and everybody was just sort of lying around.

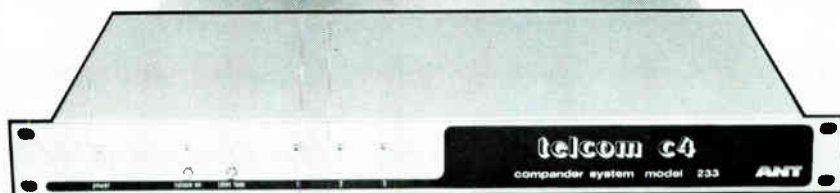
I'm hoping for just a nice, moderate little audience this time. That would be fine. After all, it's not that important, is it? It's just music.

**Mix:** Oh, I think music's really important, and I would assume you do, too.

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Leon Russell.

PHOTO DUINN

**LEON:** Music *is* important, but that's not to say that *mine* is that important. Just a nice little show, with a nice little audience would be perfectly fine with me.

**MIX:** What's your life like when you're not gearing up for this nice little show and releasing two new records? Do you keep working at your home studio?

**LEON:** It helps to have an excuse. Bob Dylan, for example, happens to be cutting in town for a couple of months, and Pete Drake called up asking for tunes. Apparently, Dylan's going to cut all outside tunes, if you can believe that. So I wrote seven songs last week for that, and I think if I had more of those things, I'd probably write more and do more, because it's fun to anticipate if one can see what his preference might be. Of course, now I probably won't get any songs on his album, and it won't be so fine after all. But I don't know, it's almost like the opposite of organized religion. It's sort of unorganized religion. It's what I do. I make records. At other points in my life, I decided what I really do is basically make records and sing.

**Mix:** So what do you think of the current music? Contemporary rock and pop?

**Leon:** There's a tremendous amount of fantastic music out there. I really sort of feel like a primitive beating on the wall when I see a lot of that stuff, because I cannot use the experts. I take an anti-

elitist attitude, and that's another problem an artist like me has with a company with a company like Warner Bros. They kept asking me, "When are you going to cut an album with some real musicians?" And I don't look at it that way. It's not necessary as far as I'm concerned. Some of those studio cats are great, but I get nervous in the presence of greatness.

**Mix:** In your own stuff, there's certainly always been an identifiable soul at the center. Do you always hear it "your way" or do you ever envision other singers or maybe younger musicians doing your songs?

**Leon:** No, but I want to start doing that as a technique, because we were knocking out one a day for Bob. So I want to start that as a writing technique. It's always been very difficult for me to write. Except for the last year, every song that I ever wrote to completion has been released.

**Mix:** You're kidding. Bobby (Roberts, Russell's manager) showed me a room full of tapes.

**Leon:** All experiments. There's probably not one completed, full-blown song there. So, no, I am not kidding. ■

**Editors note:** The author of this story, Laurice Niemtus, was killed in a boating accident in mid-November. A strong and dependable correspondent for *Mix* (and other publications), Laurice will be missed by all of us.

—FROM PAGE 76, N. W. RECORDING

"We feel that anything can be good if you have control—and after all, what goes outside the studio is a living commercial for your company... We just got Gallo Wine, and we got it by word-of-mouth." Most work at Bear Creek is commercial. About one-third is audio-for-video composing and scoring for film, TV and multi-media takes up the rest of the bulk. Music for vinyl is not a priority, although Ian Matthews has been doing demo work there for years. Recent equipment acquisitions include an AMS stereo digital delay.

The recording industry in Utah does not rely as heavily on the ups and downs of huge advertising firms and record companies. Sharp business acumen and an aggressive sales stance seem to be factors in the success of studios here. Kristin Randle of Rosewood Recording in Provo, Utah (about 40 miles from Salt Lake City) says buying an Emulator II synthesizer was a shrewd business move. "It's a small market—we only pull \$35 an hour no matter what we have...but the E-mu is really exciting. We've sold 12 hours in the last week that we wouldn't have sold otherwise." Randle says this market generates the conservative MOR and pop R&B sounds more than rock. The synthesizers fit the bill perfectly for that and for the constant jingle jobs that most studios do. Rosewood's Yamaha DX-7 and their new Drumulator get a lot of use.

In Salt Lake City, Bonneville Studios is grabbing all kinds of industrials; audio for teleconferencing, and training films for Wicat and AT&T have helped keep their three studios busy. In '84 an Audio Kinetics Q-Lock system went in control room two, along with a 16 track Ampex recorder and an MCI audio layback machine. Again, sales strategy is heavily on studio manager Dave Michelsen's mind: "Putting in the Neotek console has gotten more clients. We've taken a proactive stance winning new business from brand X."

A film score to *Red Fury* and a couple of national commercials came their way, as well as six albums targeted to the Mormon Church market, which is a strong influence in Utah.

### **Meanwhile, Back at the Ranch**

The northwest offers beauty, climate and space that cannot be found elsewhere. Consequently, there are several studios dotted throughout the region which offer unique pleasures to specific clientele.

Caribou Ranch in Nederland, Colorado is such a studio. For example, where else could a musician record an album, and stage an extended family reunion with 29 adults and 11 children? This is the third year that contemporary

Christian recording artist Amy Grant has combined work with a familial celebration at Caribou. Michael Jackson took a 7 day breather between dates on the Victory tour to fool around in the studio. Ronny James Dio spent six weeks recording an album which went gold soon thereafter. Yes also cooled their heels there for a week, although they did not record. Studio manager Sandy Tomes says it was, "an okay year—steady but not spectacular."

Nestled in the alpine splendor of Lake Tahoe outside of Reno, Nevada is a new 24 track resort studio called Cougar Run. Co-owner Jody Peterson, who used to run Sierra Nevada Recording, says Cougar Run is scheduled to open at the end of this month with a Neve console, BTX Shadow Synchronizer, 2 track digital capability, a Roland synthesizer, and a Yamaha DX-7. Steve Fouce of Lakeside Associates designed the room, and a three bedroom house comes with the rental deal.

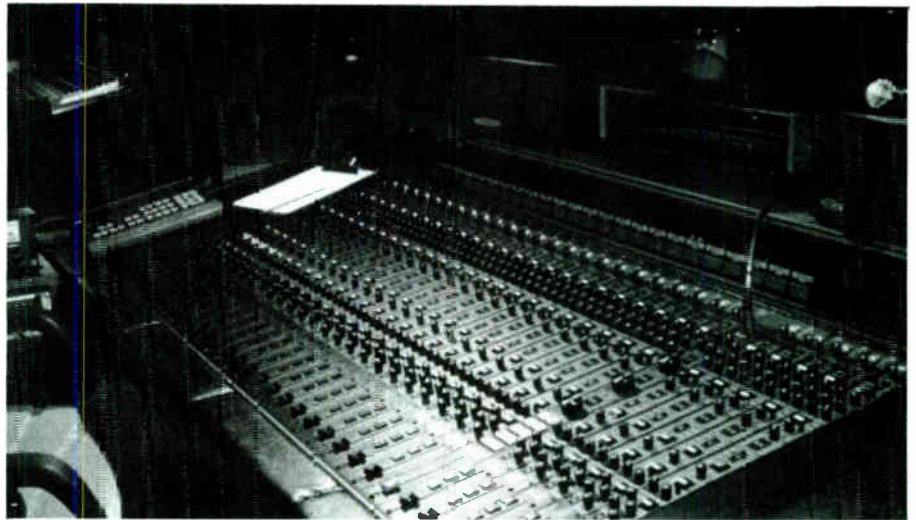
Also of interest to the downhill crowd is Sun Valley Audio (in Sun Valley, Idaho) celebrating their first anniversary this month. Chief engineer Lance Parker was expecting a certain degree of success since his is the only 24 track in Idaho—but still—snagging Steve Miller as one of his first clients was a pleasant shock.

Miller locked out the studio for two and a half months to record tracks for *Italian X Rays*. And then Barbra Streisand called. (No big deal—she just wanted to listen to some 24 track masters for a few hours while she was visiting the fashionable resort.) Despite the flurry of star activity, Parker acknowledges that the first year was unsteady. He's placing his hopes for bread-and-butter work to come from Boise and Montana.

For those who prefer water skiing to downhill, Sea West in Hawaii beckons. Sequestered an hour away from Honolulu on the north shore of the island, this beach-front facility does album work exclusively. "We've had a great year," claims studio manager Donna-Alexa Keefer. Clients included Adam Bomb for Geffen (produced by Rick Keefer, owner of Sea West), Michael Furlong for Atlantic, and a CBS/Sony Japan project from Blue Army. Graham Nash works there frequently.

Back on the mainland, congratulations to Rocky Mountain Recording in Cheyenne, Wyoming who celebrate their 30th anniversary this year. This facility specializes in custom record pressing and packaging for the region.

Members of the National Academy of Recording Arts and Sciences: be aware that the Northwest chapter will be offering practical and interesting seminars in the coming year. In '84 several events sparked enthusiasm in the Bay Area: studio tours; a seminar on music



Sun Valley Audio

PHOTO: WILLY COOK

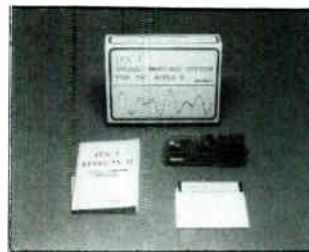
video featuring directors and producers; a listening party to alert members as to what had been nominated for the Grammy awards; the traditional Grammy awards celebration; and a seminar on stereo television offered at PES station KQED, San Francisco. This year be on the lookout for: a seminar on the music business and your taxes in March; a syn-

thesizer workshop in April; in May, a Producer's workshop; and a networking party in June. Beverly Sommerfeld of the San Francisco regional headquarters wants to congratulate Paul Speer, honorary governor of the Seattle branch, for his active involvement. She hopes to encourage more interest from other members throughout the Northwest. ■

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## Steel Pulse Finds New Ways To Send the Message

The very name of the band, Steel Pulse, connotes both the industrial origins and the throbbing musical toughness of the British group that has risen to a position in the world of reggae. Formed in the mid-1970s in the West Indian Handsworth district of Birmingham, England, Steel Pulse became both a critical and a popular favorite by the end of the decade, on the strength of its first two albums, *Handsworth Revolution* and *Tribute to the Martyrs*. Those records were forged in the fires of racial tension that gripped Britain's working-class neighborhoods and shaped by specific issues of racism and black liberation. Now, three albums later, Steel Pulse has extended its political reach with an ambitious LP, *Earth Crisis* (Elektra), and is carefully measuring the elements that go into its strong musical alloy, hoping to broaden the band's appeal.

In interviews during their last U.S. tour, lead singer/songwriter David Hinds and keyboardist Selwyn Brown talked about what goes into the balancing act required for a music that both carries a message and commands an insistent dance groove. Arguing from the premise that "political songwriting has never been accepted in the first place," Hinds explained, "We've got to go off with a different strategy to make the music evolve as a music. We have to find ourselves fighting a little harder, trying another angle to get our voice heard."

Whereas the first Steel Pulse albums were pointed and direct in their political content, whether taking on the Ku Klux Klan or honoring such "martyrs"



Steel Pulse

as slain Soledad Brother George Jackson and black South African hero Steven Biko, *Earth Crisis* is more diffuse, using more ambiguous metaphors and widening the reach of the topical net.

"*Tribute to the Martyrs* was a concept album," Hinds explained. "We thought that people in general need to be more familiar with martyrs like those and we couldn't help but call names. Right now we can afford to write ambiguous lyrics where people can make an impression themselves of what we're saying." The songs on the new record create images of oppression—walking on a "Tightrope," being robbed by a man in a flashy car in "Rollerskates"—and address enormous social problems and moral issues like imperialism in the Third

World, nuclear threats, abortion and genetic engineering all in the context of polished, danceable music.

And it is in the music that Steel Pulse is attempting to make precedent-setting advances. Still conscious of fending off the "Jah Punk" label which was attached to the band in its early days of Rock Against Racism concerts with British punk bands, Steel Pulse has quite deliberately honed its skills. As Selwyn Brown sees it, Steel Pulse can satisfy both musical and the political purists. "Some people are coming for the message, the lyrics," he said, "and you've got other people who come strictly on a musical level and then you've got the people who are coming just to dance, just to enjoy themselves."

For *Earth Crisis*, according to Brown, the band spent much more time in the studio than it had working on any previous album. The basic tracks were cut at Horizon Studio in Coventry, England, digital recording was done at Jacobs Studio in Farnham, Surrey, England, and the remixing and editing was completed at Soundworks in New York City. Meticulous care ate up the equivalent of several months of actual studio time.

In the studio, Brown found that "you can stretch your imagination and stretch your playing," and, as the group's keyboardist, he saw his musical role expand dramatically. "David will come up with most of the original ideas, songwise, for the album," he said, "but when we actually start working on it, I'm in the studio day in, day out. It's like I'm living in the studio." Brown outlined an example of how he "would mess around on the keyboard" to come up with a variety of key parts for the songs. On the

—PAGE 146

### THE FAR SIDE

By GARY LARSON



"Gee ... look at all the little black dots."

## Ray Parker Jr. Chartbuster

So you need a theme for your comedy. Who you gonna call? RAY PARKER!

Jr. that is. After long, increasingly fruitful years at the bit of music—as the right stuff of soul session work and more recently as a solid, reliable self-contained solo artist—Parker got the big call. Just as fretful clients suffering from spectral visions and ectoplasmic residue might call Dan Aykroyd for ghostly extermination services, the forces behind the summer's big smash *Ghostbusters* summoned Parker late last spring. They needed a hit tune to help propel the movie. They needed it fast. Parker, ac-

—PAGE 142



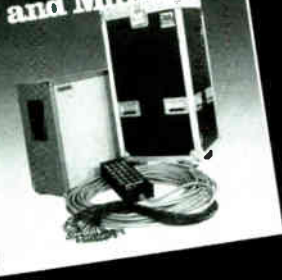
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—FROM PAGE 140, PARKER

customized to working under pressure in studio hot seats and under the gun of a record contract, bolted upright to the occasion. And, a mere few months later, his randy theme song was riding the crest of the *Billboard* charts for a few scorching summer weeks, the mightiest hit of a hit-filled career.

Chalk it up to the fickle fate sisters of pop that Parker should reap such an opportunity seemingly from out of nowhere. "That's exactly where it came from," he mutters. "Nowhere." Its taught, energetic construction has the kooky appeal of the movie concept and the no-ghosts allowed insignia you've been seeing haunting our city streets on T-shirts and helium balloons. Parker's tune is, in its way, ideal—a jingle (he says he got the call-and-response idea from a Roto-Rooter commercial), a one-liner and a hooky sonic billboard for the flick, all rolled up into one happy Huey Lewis groove. So the horn arrangement, the pulse and the 1-7-4 chord pattern

smacks plainly of Lewis' hit "I Need a New Drug;" Parker makes reparations for his larceny with rich deposits of fun. In the face of sheer, unbridled fun, all misdemeanors shrivel.

Parker shrugs off the Lewis comparison. "That's just the way the song ended up turning out," he states flatly. "I did the music first—just a happy-time feeling, typical chords." He pauses, remembering the circumstances of his hit's birth. "I had a couple of days to get it together. A friend of mine worked at the film company, and they had had about 60 songs come in and didn't like any of them. So, at the last minute, they called me. As a last resort. Movies have to come out on time in the theaters, you know, so I had to write the song, record it and everything in a couple of days. I think they were just going to go with source music if my tune hadn't come along. It's amazing for that big of a picture not to have a theme song that late in the game. It's funny. As fast as we got it all together, the video, movie and record all came out on the

## Digital Synthesis at AES

*(Right) The Fairlight demonstration featured such noted tutors as Roger Powell and Todd Rundgren (shown here), Al DiMeola, and Jan Hammer.*

*(Below) New England Digital showed new options for their Synclavier system with sessions by Kashif, Pat Metheny, and Oscar Peterson (shown here).*



PHOTOS: GEORGE PETERSEN





same day. It was close, but it happened."

Things have happened for Parker with a sureness almost too close to clockwork at times; there's an effortless ease, a bouncing feel that amounts to miraculous modesty. Floating off of his soft-core R&B is a cool and an innocence regardless of what sordid Other Woman he's singing about. No pain, no strain. Still, the "Ghostbusters" phenomenon is alarming for its swift ascent up the charts. "To write it I didn't have more than a few hours. It is ironic when you think of the songs I've spent three months on that haven't clicked nearly like this one. That's terrible." A little eruption of nervous laughter follows the thought.

On this sunny morning up in the lush foothills of Beverly Hills, in the comfortable, coolly decorated living room of his modest hilltop house, Parker is in a giddy, distracted mood. Suddenly in the position of having to promote this curve-ball hit, Parker is being pulled away from the projects at hand: a production of a new Raydio album *and* his final solo record under the Arista contract. The enclosed environment of his Ameraycan Studios in Hollywood is his element, not trying to explain his job in mere words.

Parker is not one to divulge trade secrets, the origin of his magic tricks. On the subject of song inspiration: "The ones I usually keep are the ones I finish. I've got piles of tapes. I never set out to do anything in particular. I just cut, just record whatever is happening. If somebody has just beat me up or something, that's on there," he laughs. Now that Raydio—once the pseudonymous workshop for Parker—has become a separate entity, Parker is left to cultivate his own thing. But little has changed for the multi-instrumentalist who likes to operate mostly in a do-it-yourself mode. Although the new album is fleshed out with Martin Page on bass and keys, Brian Fairweather on guitar and keys, and Charles Green on saxophone, Parker is the studio dean, the main man in and out of control. "I record the same way now as I did with Raydio, put down the tracks the same way," he says. "It does get lonely after long hours in the studio, but I get my girlfriend in there to wake me up. Or distract me."

Parker's records bear the stamps of an artist with great abilities of assimilation, perhaps the mark of one whose session work numbered into the 1,000+ range before he broke out on his own. It's no fluke that you run up against little slap-backs of pop/soul history in Parker's tunes, from a taste for synthesizer fills recalling Stevie Wonder—one of Parker's significant early gigs—to the point-blank lift of a line from the Police's "Every Break You Take" on Parker's hit of last

year "I Still Can't Get Over Loving You" (Parker comments with a giggle, "Yeah, that was just to say hello").

Essentially, Parker's mission is to entertain with as little aesthetic struggle as possible. While he is among the cache of one-man soul artists, he doesn't aspire to the psychic/sexual probes of a Prince or the spiritual bent of his one-time employer Stevie—Parker's role is to keep the party hopping, not to question why we're partying in the first place. He downplays any suggestion of hidden depth or meaning. Yet there has been evidence of socio-sexual thought in some of Parker's tunes, such as the Dou-

ble Standard theme in "A Woman Needs Love." His lyrics are not entirely from the scrawled-on-matchbooks-and-napkins, clichés school.

Is there, in fact, a reflection of Parker's moral urges afloat in his songs? "No. It's just from watching television." Parker says, clearing the air once and for all. "I get ideas from watching *Dallas*, so far." A couple of years ago, *Village Voice* pop scion Robert Christgau summed it up, without derision: "Ray Parker Jr.'s only great theme is getting laid, and as he's sure to remind us eventually, that takes two."

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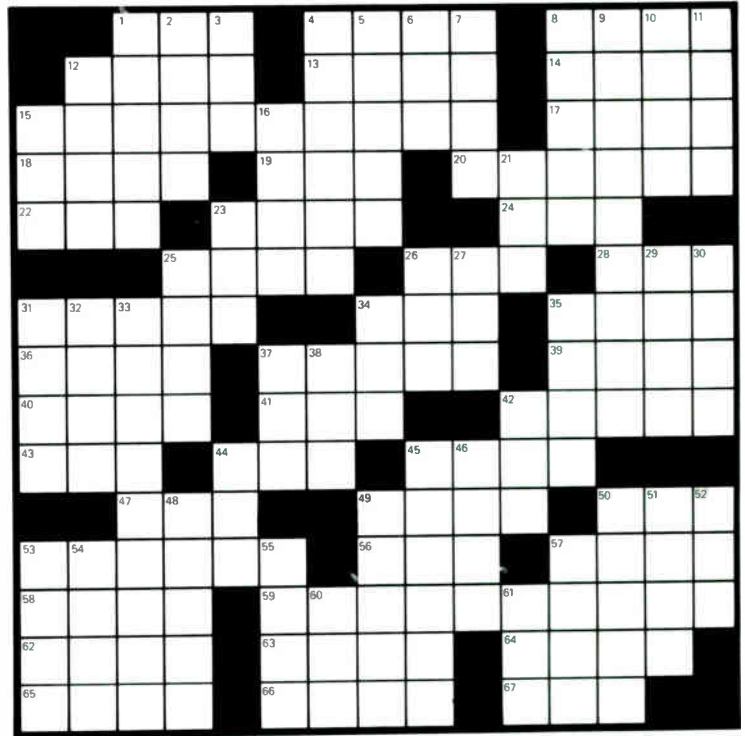
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# MIX WORDS

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## "NORTH BY NORTHWEST"

ACROSS

1. Fix it in the \_\_\_\_\_
4. Music editor herein
8. Spanish verb
12. S.A. monkey
13. Lion/Christian score
14. Cripple
15. Studio in San Rafael
17. Quaintly pleasing
18. Name in electronics
19. " \_\_\_\_ of Aquarius"
20. Number \_\_\_\_\_  
Chan offspring
22. Printing meas.
23. Firebird composer
24. Teachers grp.
25. The Bard of \_\_\_\_\_
26. "Cold as \_\_\_\_\_"
28. \_\_\_\_\_ Series amplifiers
31. Organist Smith
34. Brian \_\_\_\_\_
35. Refine
36. Audio electronic mfg.
37. Audio org.
39. American indian
40. Copenhagen native
41. Poem
42. Buccaneer perquisites
43. Conger
44. Be in debt
45. Look over
47. Mouths
49. \_\_\_\_\_ music
50. Papal \_\_\_\_\_
53. Bestow knowledge
56. Adam \_\_\_\_\_
57. Hit the \_\_\_\_\_ (parachute)
58. Alone, as in whiskey
59. Salt Lake City studio
62. \_\_\_\_\_ Earth
63. Away from the wind
64. Comedian Johnson
65. Signs
66. Musical symbol
67. "The bravest of the brave," Napoleon

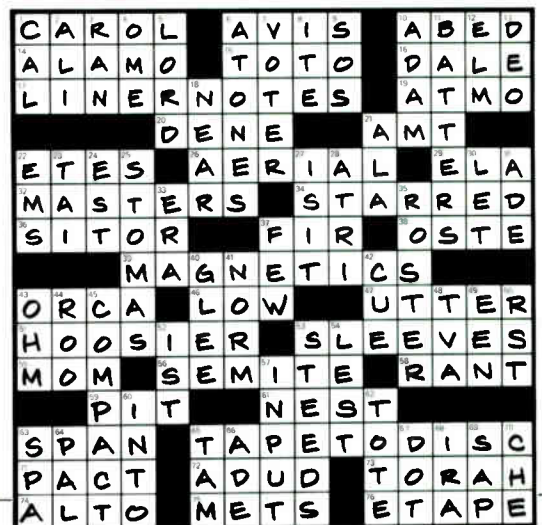
DOWN

1. Bearings
2. Polka-dot bikini word
3. 1st Century Roman date
4. One whose hair was changed to serpents
5. Ire

6. Revival prefix
7. Tepid
8. Roast host
9. Home of "The Plant"
10. Yugoslav great
11. Word of agreement
12. Disney flick
15. Half of a fly
16. Shakespearean role
21. Compass dir.
23. "Poison \_\_\_\_\_"
25. Pierre's friend
26. \_\_\_\_\_ pinch
27. Trig. word
29. Oodles
30. Pianist Carla
31. "Hey, \_\_\_\_\_"
32. Dies \_\_\_\_\_
33. Music Annex location

34. " \_\_\_\_\_ I saw Elba"
35. "Bad \_\_\_\_\_ Rising"
37. Women's org.
38. Summer cooler
42. " \_\_\_\_\_ is Bad"
44. Something to strike or stroke
45. 14-line poem
46. Dove home
48. Fees
49. Found on horses and lions
50. Like the Mississippi
51. She, in Normandy
52. \_\_\_\_\_ out an existence
53. Crucifix letters
54. " \_\_\_\_\_ Mr. Mustard"
55. Ski lift
57. A.K.C. word
60. Corrida sound
61. \_\_\_\_\_ Morrison

### Solution to December Mix Words



—FROM PAGE 143, PARKER

may help explain his healthy crossover market indentation, and it helps to explain the many shades between black and white music on last year's Parker record *Woman Out of Control*. For the simmering funk tracks of the title cut and "Invasion," the subdued ballad "She Still Feels The Need" and the grandiose, LinnDrum propelled "I Still Can't Get Over Loving You" display idioms from outside the R&B neighborhood.

Also, there is something about the direct, form-fitted pieces to his production that links Parker to the cause of streamlined pop music. Parker doesn't like the comparison. "I always thought I was cutting R&B tunes. I know they come out differently, but that's usually my primary goal." Perhaps because Parker's rise to fame, as an artist in his own right, has been so slow if always perfectly on course, he's been able to maintain a certain humility that's admirable once you get in to the megastar orbit. It shows in his music, smart and sleek without being injected with delusions of musical grandeur. He knows how to set in motion an appealing, understated groove and where to hang the hooks up to dry.

And, it seems, all of his gained

knowledge is making him somewhat weary at this stage. He has often been called on in a production capacity in the past, but he is bluntly honest about the prospect. Is he doing much production nowadays? "No. It's boring," Parker quips. "Especially if it's an artist who doesn't write songs and is not real talented; we're talking *bo-ring*. It takes a lot to get me to do it; either a whole bunch of money or a bunch of real great songs to work with. As far as just saying, hello, I'm a singer. Produce me, it's boring. It's a very hard thing to do. It takes more effort than to cut your own album. It's like you do an interview and write it yourself, but what if they said we'll pay you half the money and we'll tell you how to write it. You'd say wait a minute, I could be writing it by the time you tell me what to do. But you do all the work. That's the difference.

And though Parker has long been an artful dodger when it comes to painting with both real and synthesized sound—listen, for example, the balance of circuitry to flesh and blood on "Ghostbusters"—that may be in flux. As much as Parker can analyze any of his creative evolution, he feels a change coming on in terms of instrumentation. "It looks like

I'm always playing keyboards lately, which is a shame; I'm a guitar player," he says. "That must tell you something. I must be getting tired of the old days."

But isn't the synthesizer fixation potentially hazardous to musical substance—going overboard? "I don't think you can go overboard with electronics anymore. You can go underboard," he says with a laugh. The whole thing is electronics; that's going to be *it* from now on. It's going to get smaller and hipper than the electric bass and the drum set. Nobody cares anymore if you buy a guitar with nice fine wood. I mean there will be nostalgia, just like jazz now; jazz people will say, "We don't want those electric guitars or electric basses, we want stand-up bass. It will be like that; you go to a nightclub and instead of hearing old jazz, you'll hear old rock and roll—a drum set and a bass. It'll be nostalgic. Your kids will look at it and say 'Oh, dad . . .' You'll be sitting back saying 'This is kinda hip.' See some old blonde guy, 45 years old, singing some old Mick Jagger song. It will be like history."

—Josef Woodard

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—FROM PAGE 140, *STEEL PULSE*

song "Wild Goose Chase," he explained. "We went through about five different bass riffs and what happened is, one day we tried to get a Moog bass in the background and the background bass ended up being the lead bass. We put it on and it sounded nice with the old bass riff and then about two days later we came back again and we thought, 'Let's try this new synth-bass riff on the bass guitar; and it just worked.'" Brown's battery of keyboards was used to fatten the melody lines played by the horns and to complement the vocal harmonies with rich chordal sustains in the background.

The album production was overseen by Jimmy Haynes, guitarist with another prominent British reggae band, Aswad. Because Haynes is a working musician, Brown believes, he was able to empathize more immediately than most producers with the feelings and goals of the band members, including bassist Ronald "Stepper" McQueen, drummer Stevie "Grizzly" Nesbitt, and percussionist Alphonso Martin. According to Brown, the band was seeking a different sound, "something that was approaching some of the jazz-rock music that you hear nowadays," and he was more than

satisfied with what Hinds characterized as "a bit more laid back, a sort of rhythm and blues type mode."

Hinds sees Steel Pulse's successful musical experimentation as evidence that "British reggae has improved" to the point where it should no longer be considered the inferior stepchild of the Jamaican product. "The bands got a lot better," he said, "and created a lot more interesting sounds. Not only that, but they created a whole new lifestyle for black people in general. Coming from England, it's like a new ball game—you got your Jamaica, you got your Barbados and you got your black England. All of a sudden, this piece of land is just emerging out of the water. A whole force is happening on it."

The musical strategy—to produce an album that grabs listeners with the strength of its compositions, arrangements and playing—was crucial, according to Hinds, because, "To get the music played on the radio is hard enough, especially with certain things Steel Pulse wants to say." It succeeded enough to earn the band a second U.S. tour in 1984, opening shows in the fall for the re-funkified Herbie Hancock. "Reggae music still needs to be exposed on a very

large scale," Hands asserted, "and we feel that Steel Pulse has the potential and the opportunity to put things right with that."

—Derk Richardson

## Production Notes

### Rubato Piano X-Acto

A number of factors contribute to the making of a hit record: talent, the right equipment, timing, luck, an X-acto knife.

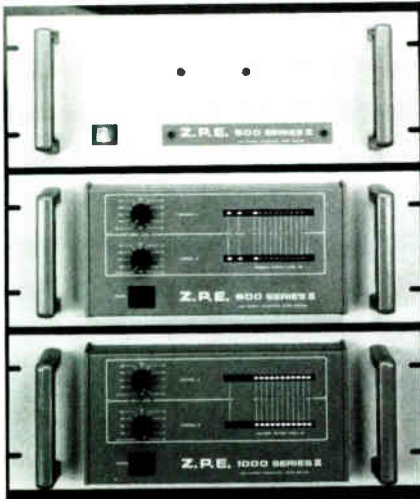
An X-acto knife? Well, in truth, a sharp and shiny razor blade will usually do.

While recording "Sister Christian," the first hit off Night Ranger's latest album, *Midnight Madness*, engineer John Van Nest faced a not-so-unusual problem. The entire intro and first verse was all piano and a few string overdubs. And who wants to do take after take until both the piano player and the rest of the band come together perfectly 49 seconds into the song? There had to be an easier, more creative way.

Enter X-acto blade. "We decid-

—PAGE 161

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## Mighty Casey at the Mike

The Chicago Cubs captivated the country this past fall, in their headlong race for the National League pennant, as no other baseball team has in recent history. The lovable-losers-turned-winners, poised for the first time in 39 years at the brink of the World Series, amazed and delighted fans with their annihilation of the San Diego Padres in the first two games of the National League playoffs. And then, as columnist Mike Royko ruefully observed, it was as if some malevolent spirit had breathed on our Cubbies, rendering them powerless. They dropped the next three games to the painfully inferior Pods, resulting in a World Series which for thrills could have been surpassed only by watching grass grow through cracks in the sidewalk.

What's all this got to do with rock and roll, you ask? Well, imagine if you will the tenor of excitement zipping around Chicagoland (and as far as we Chicagoans could tell, much of the free



PHOTO: MELINDA NEWMAN

(Left) Keith Moreland and Jody Davis

world) last September. Imagine the Cubs just a handful of games away from clinching the National League East, gleefully waving bye-bye to the reviled New York Mets. And just think that, with all this potential victory staring them in the face, the Cubs would just as soon have chucked it all for the chance to be country rock stars on the order of supergroup Alabama.

Actually, they wouldn't have, of course. But it should be noted that when five of our Wrigley Field heroes got to play recording artists one evening during that magic month, they couldn't be dragged away from their headphones

and mikes.

The fruit of their labors, a honkytonkin' ditty called "Men in Blue," began making the rounds of Midwest radio stations 'round about playoff time, with vocals courtesy of Cubs right fielder Keith Moreland, catcher Jody Davis, first baseman Leon Durham, pitcher Rick Sutcliffe, and outfielder Gary Woods. Joining the ranks of the rowdy Cub anthems that blare from tavern jukeboxes all over town to the accompaniment of clanking beer cans, "Men in Blue" ended up selling over 50,000 copies (all pro-

—PAGE 151

## Synth Tips: String & Horn Patches

I'd like to begin this article with a discussion of analog patch design. The patches that I will cover are very useful, and should, after some manipulation and fine tuning, work on any analog synthesizer.

A good string sound is often essential for a full and contemporary sounding recording. Useful for sustaining chords in any register, as well as accompanying unison lines, string patches are probably the most prevalent of synthesizer sounds.

The secret to a good string sound is motion. Start with a square wave (a pulse wave with a 50 percent duty cycle). If you have two or more oscillators, tune them to a unison and then detune the second oscillator until you hear about three or four beats per second. Modulate the pulse width of each oscillator with a sine or triangle wave from the low frequency oscillator (LFO). Then attenuate the amount of voltage control from the LFO by about 75 percent (less, as you play higher on the keyboard) with your modulation wheel or by whatever means is available. The LFO frequency should be about 10 Hz, or just high enough so that individual cycles in the modulated signal are not noticeable. You will need to filter out some of the high frequencies with the low pass filter; the filter setting will vary according to the slope of your filter and your preference as to brightness. A small amount (about 20

percent) of envelope control to the filter is necessary. Set your envelope parameters as follows: Attack 40 percent, Decay 60 percent, Sustain 80 percent, Release 50 percent.

The envelope generator on your voltage controlled amplifier (VCA) can be used to tailor the response of the keyboard to suit your performance needs. A moderate attack (40 percent) is usually best with a long decay (70 percent), a longer sustain (100 percent), and a moderate release (50 percent). For recording purposes you should keep in mind that the VCA controls: the level of output from the synthesizer, more specifically, the level of each note will change, from attack to release, according to the envelope configuration which controls it. If this becomes a problem, you can counteract it with a limiter.

Some synthesizers have built-in chorus units. You may have to use this, or an external chorus unit to get both the smoothness and the amount of motion necessary for a good string sound, although I use these devices only as a last resort.

Be sure to tune this patch carefully before you record it—you'll have to use your ears on this one because the inherent phase-shift and overtones will cause confusing readings on a strobe or electronic tuner.

Brass patches have become very popular lately. They're great for

rhythmic punches and background figures, and they are easy to design. Start with a sawtooth wave, phase-lock your oscillators, and set your low pass filter to the desired brightness. This patch needs a fair amount of envelope control to the filter (about 45 percent), and because the initial partials of a brass sound are so important, the envelope configuration is critical. Set the parameters as follows: Attack 40 percent, Decay 50 percent, Sustain 50 percent, Release 45 percent. You will need to fine-tune these settings as you go. As before, the envelope generator on the VCA can be used to personalize this patch, usually a configuration like this: Attack 40 percent, Decay 50 percent, Sustain 70 percent, Release 50 percent, will work. If you like the sound of spit in your horns, try adding some resonance from the filter.

A good flute patch is a very versatile arranging tool; used properly it can add fullness to any synthesized texture. For a convincing flute sound start with a sawtooth wave (use a pulse wave if you prefer a woody sound), phase-lock the oscillators, and set the filter to the desired brightness. The amount of envelope control to your filter should be about 30 percent, set the Attack at 45 percent, Decay at 70 percent, Sustain at 70 percent and Release at 45 percent. On your VCA envelope generator set the Attack at 45 percent, Decay at 50 percent, Sustain at 70 percent and the

—PAGE 151

—FROM PAGE 133

would be the greatest thing we could do. It seems to be working the other way around; jazz people hearing Joe Jackson and Donald Fagen for the first time and saying, 'Wow, they're good.' I can't believe what I'm hearing about Frampton."

For the most part, Willner's base of operations was the New York Media Sound Studios. "It's a great studio—an old church," Willner says, adding coyly, "and it's only a block from my apartment." He had no problem rounding up talent—it seems that plenty of players have the Monk monkey on their backs. Willner had no tolerance for hemming and hawing on the part of prospective participants. "No one got called twice. We wrote a letter, called them, but I didn't plague anyone with phone calls. It was a definite rule; obviously if they were not thrilled to do this, if it was something they weren't excited about doing, it would come across in the performance."

There is no evidence of slack attitudes here; the conviction behind the often experimental versions of songs—such as Mark Bingham's bumptious marching spin-offs on "Brilliant Corners" and "Jackie-ing" on the outside and Carla Bley's epic sweep on the theme of "Mysterioso" on the inside—matches the overall delicate balance of textures and intensities that makes the album a savory play from start to finish. "I kept the organization pretty much in my head," Willner says when asked if he kept a bulletin board in use. "I knew if I needed another rock guy or another solo piano piece. It wasn't calculated. Certain things on the record I happened to run into; Shockabilly [a frazzled and eclectic sort of rock unit] I just saw playing in a club. Barry Harris I just thought about one day [Harris does a solo "Pannonica" on tack piano]. It was all very personal, people who I like."

Among the tracks done outside of Media Sound are some of the more imaginative pieces in terms of studio wizardry. Todd Rundgren's cosmic hoedown version of "Four In One—" stocked with a sizzling array of synthesizers and guitar perking along beneath Gary Windo's alto sax—was put together in true Rundgren fashion; autonomously and self-engineered at his home Utopia Studio in Bearsville, New York. The opening trombone-lined fanfare of "The-lonious" was recorded by Bruce Fowler at Village Recorders in LA—the only cut from west of the Mississippi: a bit of regional chauvinism there?

Meanwhile, in Detroit, the expandable, inflatable, inimitable Was/Not Was conspiracy of David Weiss and Donald Was was (were?) piecing together their version of "Ba-Lue-Bolivar-Ba-

Lues-Are." A diamond in the rough featuring vocalist Sheila Jordan and a cast of many, it clocks in at only 1:53 but comes off like a great small package. "We basically had a Was/Not Was party," Weiss explains in his articulate deadpan, "which involves inviting all these various goofballs who hang around and participate on our thing, and we kept adding tracks until the cows come home. I usually balk at that concept, but in this case, my idea was to have a noisy, New Orleans funeral, because frankly, I believe you can't do Monk, you know? His phrasing is everything; you can't imitate that."

Weiss and his party of cohorts piled on horn parts and vocals until past the point of diminishing returns. "Don is always the trusting ear," Weiss confesses. "He says 'don't worry.' I see this forest sprout up between us and the prospective listener. I'm saying, 'you're kidding; what's with these doowoppers? What are they doing now?' He says 'don't worry, we'll get rid of them if it doesn't work out.' And in the end, it's the more the merrier." Weiss, a former jazz critic among other musical laurels, felt right at home on the Monk tribute. "It's an amazing kind of record and the reason we fit in so well is that we are neither one thing or another, and we like it that way."

Once all the pieces were gathered, it was up to Willner and engineer Doug Epstein to assemble an attractive puzzle, to condense the material down to four sides worth of music and get a musical flow in motion. "I can't even tell you how smoothly the sessions went," Willner recalls. When it was hard was after it was recorded. Doug and I had to mix it and edit it and sequence it; that's where it got difficult. The artists were there for their own mixes, but it was not an easy record to put together. Every time we wanted to edit a track we had to go through something with the artist, because obviously the artist had to be treated with respect."

The artist whose respect was most honored couldn't be present, but the essence of Monk is captured and translated by the musicians involved. There is no singular party line, one resident aesthetic put across by the record, but rather a plethora of attitudes on the subject, varying in focus from the purist to the anarchist. Monk's influence on music takes on many shapes and colors depending on who's listening and playing, but there is a certain timeless eloquence that strikes home with a wide spectrum of music fiends, in jazz, rock and other circles. NRBQ's Terry Adams has an idea why: "I think the important thing people should understand about his music is that almost always he swings. To have a real

rocking rhythm section, or swinging section—however you want to say it—that's the most important thing of all, more than the chords of anything. That feel."

And it is that elusive feel that the album celebrates, in its multi-hued fashion. "We're not revising or making anything better," Willner comments. "We're just interpreting, seeing what we can do with someone's music, while being very loyal and showing the love that there is for it. I think that in a strange way I'm helping to put different musical forms together, getting certain sounds together you've never heard before. It's a time in history right now where people's musical classifications should be learning from each other. Rock, jazz and other types of music have gone as far as they're going to go without learning from each other from a non-commercial point of view first. It is fusion in a way, fusing jazz and rock. But it's not—I hate to say uncommercial because I find that's a negative word and I think the record is commercial in its appeal—but it's done for the love of music, not to get on the radio, necessarily."

Yet it is Willner's hope that the Monk project, as well as his current tributes in the works—a second Nino Rota record and tributes to Kurt Weill and Charles Mingus, will, in fact, carve out their own marketing niche. Though the Monk album received generous airplay on jazz and college stations, rock formats didn't budge as much as Willner had hoped, even tracks by Todd Rundgren and Joe Jackson. It could be the upshot of the generally narrowing scope of commercial radio in recent years. Maybe if he signs Boy George to the Kurt Weill record . . .

But, regardless of how well the record sells (by jazz sales standards, it's blue skies), Willner's Monk memorial is one of the richer jazz compendium record projects in recent years. Aside from creatively eulogizing a legend, the album tests the status quo of what a jazz production should be: it's a convincing argument for forced musical integration.

In addition, the snappily-packaged, well-documented album package provides a rallying point for those of us who concur with David Weiss' summation of the man with the brilliant corners: "The guy was obviously the rapier wit of jazz. His poetics were light. He wasn't willing to play an austere role. He was always reaching out and participating. And that wit, that poising over the keyboard but refusing to phrase until it was most unlikely—that was his art. The art of surprise. There is no one like him. Who ever took that kind of chance? It could have been only one quirky personality."

—Joseph Woodard

# Digital recording gets its own microphone. At Camera Mart.

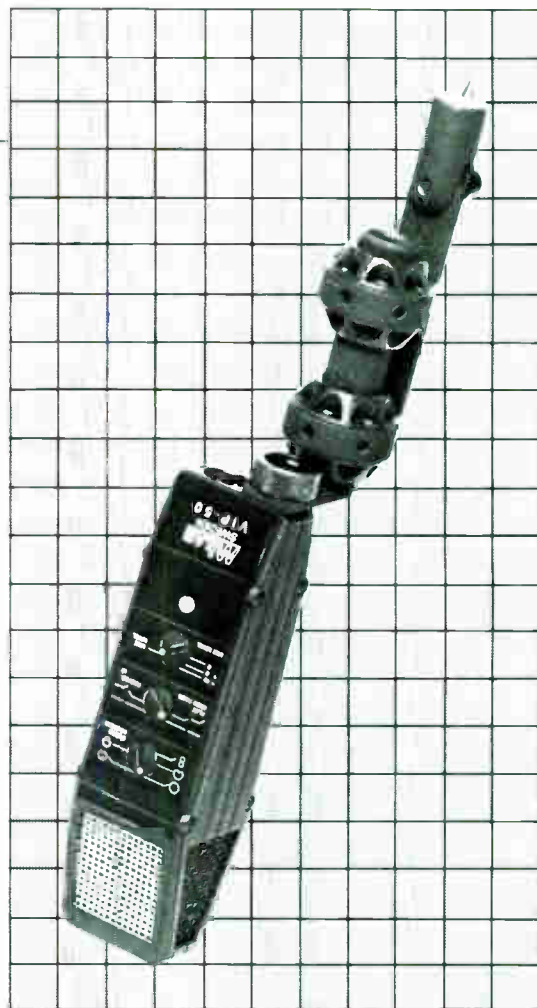
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# VIDEO NEWS

by Mia Amato

## RESOLUTIONS FOR '85

Good riddance, Mr. Orwell.

Having successfully negotiated 1984, it's time to urge our tired brains forward to the new year. A few New Year's resolutions seem in order, and here are a few suggestions:

**Someone out there should resolve to press the question of royalties paid to producers and directors of videoclips which are sold to broadcast interests.** Will this come about as the result of a noble, fair gesture by those record companies who've already made some small millions by selling six month exclusives to *MTV*? Or will it occur because of a quiet, concerted hell-raising by "name" directors?

**Recording studios might resolve to gain video business by association, not capitalization.** A Long Island recording studio company is expanding to the *Kaufman Astoria Studios*, providing the refurbished grande dame of the city's soundstages with the recording studio it had lacked.

**Master Sound owners Ben Rizzi and Maxine Chrein** have pledged a \$3 million commitment to the con-

struction of a 32 track recording studio to service the movie and television companies in the Astoria complex.

**Charles Bilello** designed the control room and two recording stages, one arranged for film scoring with full orchestra. Master Sound is also supervising the prewiring of three other soundstages with 100 microphone inputs each. Audio sweetening and audio post in both digital and analog recording formats is planned.

Other studios might not need megabucks to take advantage of "colocating" an audio studio in the same building as someone's video facility. And any studio can forge a tie that binds with a video company, to offer package deals, tap a new clientele, and "get into video" without a big hardware outlay.

**Home Video distributors should resolve to reproduce higher quality audio for videocassettes.** These execs might start their research at *VCA/Teletronics* in New York, which is successfully matching digital audio masters to home video products.

A quick tour of the studio is provided by **Ira Kemp**, chief audio engineer. Kemp has a crew cut and would look as much at home smashing a sound

board with a brick as he does setting up automated recall on the room's Solid State Logic 600E 32 track console.

"One of the projects we're doing now is transferring sound for Sony Video 45s," he explained. That day, they were working on sweetening the digital audio track for *David Bowie's* 20-min. musical film, "Jazzin' With Blue Jean," in preparation for mass duplication. "We also do a lot of opera work for PBS' *Great Performances*, for commercials and rock video. We did the postproduction audio for *Bruce Springsteen's* "Born in the USA" clip for *CBS Records*."

For postproduction, Kemp has a customized Studer 800 recorder capable of handling 2, 4, 8, or 16 tracks. There's a Sony PCM 1610 digital converter in a corner, and a recently purchased Studer DASH unit. In a side room are crowded a mag dubber and racks for manipulative devices: a Lexicon digital echo, Quantec room simulator, a Scamp rack. All can be synchronized and time-code controlled to provide audio support to video studios on other floors of the building. "All forty of our house VTRs have Dolby noise reduction as well," Kemp added.

Kemp has worked four years on VCA's sweetening room. Before that, he was head technician at the Power Station recording studio. "I still steal most of my staff from recording studios," he claims. He collects microphones and has about 150 old-timers; VCA offers for use in the small announce booth beyond the console room a rather large assortment of vintage mikes. Ancient Neumanns and RCAs give "a warmer, closer tone" to voiceover dubbing projects such as *Laurie Anderson's* "Sharkey's Day," which was recorded here.

VCA's duplicating laboratories in New Jersey, Illinois, California, and Texas, all have Sony cassette-based digital playback equipment. But Kemp plans to change the format over to DASH, which he prefers.

"We'll probably keep the Sonys for standards conversion between the two," he explained. "We'd offer it as another service; there is probably a lot of archival material around."

**This column resolves to keep an eye on the maturing video music industry.** We can all enjoy our hi-fi cassettes on our new stereo TVs, catch *Miami Vice* with a stereo simulcast, watch video clips that promote movies instead of records.

Sound continues to be the handmaiden of picture, but now it's a better paid one. Music is a more respected element in the film and TV industries, boosting ratings, box office receipts, software sales. This could be a boom year. ■



Audio engineer Don Wershba in VCA Teletronics audio room.



—FROM PAGE 147, CUBS

ceeds going to charity).

Imagine, if you please, the friendly confines of Chicago Recording Co. studios (CRC) on a balmy night in mid-September. The abovementioned Cubs, T-shirt clad and beers in hand, are tentatively harmonizing in front of their respective microphones in Studio A. CRC chief engineer Hank Neuberger, a man accustomed to working with pale, frail musicians, peers through the control room glass at the moonlighting ballplayers. "Those guys are *big*," he murmurs.

"Haven't you ever," asks "Men in Blue" writer/producer Jim Ritz, "wanting to hang out in the Wrigley Field dug-out, swing a bat over home plate? Well, this is their fantasy."

It all started last summer, when right fielder Moreland, after attending yet another Alabama concert, was struck with the idea that he and his fellow country music-loving teammates should try recording a country tune of their own. He enlisted the aid of old friend Ritz, an L.A.-based actor and filmmaker (a former *Happy Days* scriptwriter, Ritz has appeared in all of Ron Howard's movies), who'd known Keith since his Phillies days. Ritz, who plays host to the Cubs when they're in Dodger-land (often holding post-game singalongs for them with songwriter Al Petrowski), proceeded with Petrowski to pen a country-flavored Cubs fight song.

Moreland rounded up the other four devoted locker-room harmonizers, kicked in around \$10,000 out of his own pocket to cover recording, pressing, distribution, and related expenses, and arranged for Ritz to fly into Chicago—on the eve of the Cubs last series with the Mets—to produce the "Men in Blue" session.

The game's been rained out that day, a fortuitous occurrence which grants the neophyte vocalists several hours of rehearsal time, as Ritz observes while the ballplayers troop into CRC. Rehearsal or no, the Cubs are tense about their impending brush with the wonderful world of recording. "Don't worry," Ritz reassures them. "I've heard you guys sing, and I've heard a lot worse."

Ritz puts the Cubs through preliminary paces, going over the solo lines delegated to each. When Gary Woods' startlingly deep bass voice booms out his part, Durham collapses with laughter. "Man, you sound like Barry White!" he chokes.

Durham's own contribution, when played back, is a discordant three-and-a-half tones higher than it should be. "I want a cassette of that!" hoots Jody.

"I just got a little above my range, brother," the first baseman grimaces, to which Moreland counters, "You're the next Charley Pride, Bull."

The carrot-topped Texan himself has slid confidently into the role of associate producer: directing traffic, inquiring periodically of engineer Tom Hanson, "Can we punch in a vocal right here?" and dashing into the control room with suggestions on miking techniques. However, after blowing the lead-in on his opening line a few times, Keith finds himself at the receiving end of a barrage of advice from his teammates.

When Moreland finally pulls it off, he looks mighty pleased. "I need some Skoal, bad—that's my problem," he chuckles, declaring, "I may be tone deaf, but I tell you, I'm havin' a lot of fun."

Slowly the song comes together, a clap-along good-timey tune that encapsulates the Cubs' stellar 1984 season—the fans, the lights, the ivy, and all—punctuated by signature exhortations from the vocalists: "Sing it, Sut!" "Go Woody!" "Yeah, Zonk!" Our boys of summer really can carry a tune, after a fashion, in particular Cy Young Award winner Sutcliffe, with his sweet, steady tenor.

"They play better ball," comments an unconvinced *Sun-Times* photographer who's dropped in for a picture or two.

There's a B-side yet to be cut, a beer-drinkin-hell-raisin' song without a single reference to baseball, which the warmed-up Cubs are frankly eager to tackle. Entitled "Good Ol' Time Tonight," the tune follows the same game plan as "Men in Blue," with solo lines delegated to each.

"I gotta have the last line," Moreland demands. "Honest to God, I gotta have it, y'all—" and he proceeds to put a down-home whoop into his delivery that would do Alabama proud: "Y' better check'n'see if YEW ain't dead!"

Song number two takes a little less time to get down on tape, with Ritz as well as Moreland's wife Cindy joining in on the chorus. The Cubs are loose and crooning with confidence now, appearing as natural behind microphones as they do in the field. It's easy to believe that if these guys couldn't be swinging bats, they'd be picking steel guitars.

The high-fives abound during playback, when it's apparent the recording has come off better than anybody had hoped. All the same, Durham comments ruefully, "I'd better stick to playing first base."

"If this thing doesn't sell, I could lose some money on the project," Moreland comments later in the control room, a little red-eyed but pleased at the proceedings.

"But if it could raise twenty, twenty-five thousand dollars for charity," Keith starts to smile, "I'd be the happiest man in the world."

—Moira McCormick

—FROM PAGE 147, SYNTH TIPS

Release at 50 percent.

A slight vibrato will add warmth to this patch. Simply modulate the filter with a triangle wave from the LFO, adjust the speed of the vibrato with the LFO frequency control, and the intensity with the modulation wheel.

If your synthesizer has voice defeat capability, here's a trick that is great for either layering or solo lines: Defeat all but two of your voices, then put the machine into the unison or mono mode, the result will be a fatter sound, retaining most of the character of the original patch, but without the stodginess which usually occurs in the full unison mode.

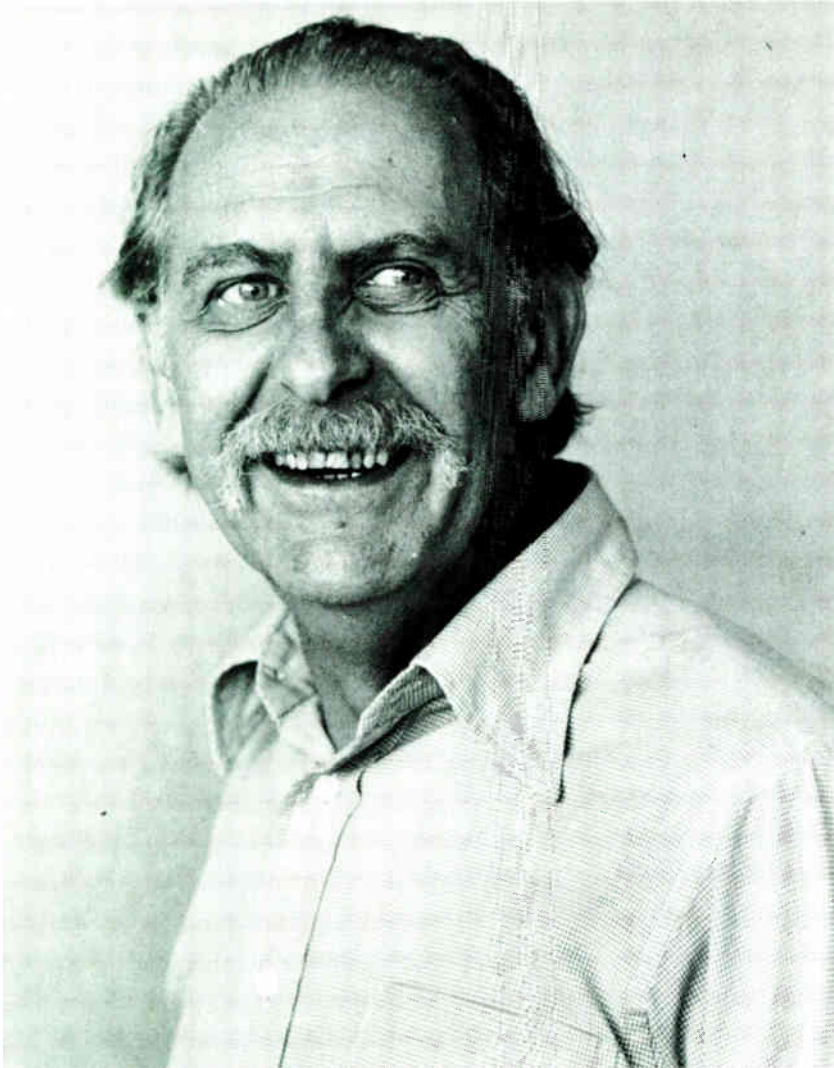
A common source of frustration in recording, is the difficulty entailed in attaining rhythmic accuracy. Rather than waste time trying to execute difficult passages, try recording at half speed. I have found this technique to be very effective; although it is not as desirable as an accurate performance at normal speed, it is a good way to insure rhythmic precision while maintaining a human feel.

The first thing to do if you plan to record at half speed, is to transpose all of your parts down an octave, since the speed change causes a one octave change in pitch. Also, any component of your synthesizer sound which changes in time will change twice as fast at full speed, so to compensate, you must adjust the parameters of your filter and VCA envelopes, as well as the frequency of your LFO and any other modulation controller you are using. As you record, listen for the duration of each note. A note played staccato at half speed may be much too short at full speed, while notes held for their full duration might end up sounding more legato than you had planned.

If you are to be recording some tracks at half speed, and some at full, it's a good idea to lay down two separate click tracks, one in quarter notes for full speed, and one in eighth notes for half speed (so there won't be too much time between clicks). You can do this with a drum machine; first, find your tempo with the machine's metronome, then set up a repeating sequence of eighth notes with one of the percussion sounds (a clave or wood block would be best), and record the two channels onto separate tracks.

If you'd like to hear a bright, ambient sound, add some reverb while you're at half speed, when you switch back to full speed you'll find that the reverb is not only shorter in time, but has taken on a totally different tone quality. You can also use this trick with your drum machine, its one way to add life to digital tom-toms.

—Steve Quinzi



*Augie Blume*

—FROM PAGE 64, BAY AREA

one is always coming along with something new and exciting."

And though he is seeking a lower profile than in the past, you can bet that David Rubinson will be part of the Bay Area's music in some way for years to come.

—B.J.

## **AUGIE BLUME**

Augie Blume, a self-described "27 year survivor" in the music business, has been an important part of the Bay Area music community since 1970, when as a promo man for RCA Records, he came to San Francisco to work with groups such as the Jefferson Airplane. In 1973, he started Augie Blume and Associates (located in San Anselmo, CA), a firm specializing in band and music consultations and independent record promotion. Blume characterizes the company's function as an "information brokerage"; their latest project is the compilation of media and music-related business directories covering both Northern and South-

ern California, to be published this month.

My general feeling is that music overall is doing pretty well," says Blume, commenting on the health of the Northern California music scene. "Studios seem to be pretty active, and there are a lot of local labels putting out some very interesting things. There's every kind of music you can think of going on here—not only rock and roll, new wave, and all that—but there's a lot of really fine jazz coming out; good folk music; a big reggae scene; and a lot of international and experimental music. They're all surviving. Local country artists have a bit of a problem however, because the country stations are extremely tight and local product has a difficult time getting exposed, but this area is really blessed—no other part of the country has the diversity of music that's being created here."

Blume feels the relationship between the small labels and the record stores in the area has been quite positive, especially with chains such as Tower Records, whose policy of offering consignment sales to independents and bands with product has given smaller la-

bels a chance for in-store exposure and sales. Distribution, however remains a problem for many independent labels, Blume contends, especially with the troubles encountered by intermediate-sized distributors such as Pacific Records & Tapes (who folded after losing Motown, their largest client) and Pickwick, who lost their Arista account. "So we're left with City Hall in San Rafael, who handles 300 independents; Bayside in El Cerrito handles another 300; California Record Distributors have opened a branch here; and there are a number of very specialized companies such as Rick Ballard, who deals entirely with jazz and new music; Fortuna in Novato have new age or meditative music; and a couple of others, like Systematic in Berkeley and Rough Trade in San Francisco who deal primarily with the new wave. With all things considered, these distributors are doing a pretty good job with what they have, but they're the last to get paid by the stores and it's very difficult for them."

While the majority of the Bay Area's radio stations are overly formatted and heavily involved in ratings battles, Blume feels a number of viable alternatives exist: "Fortunately, there's a fair amount of college radio and listener-sponsored stations here—thank God for them—but the small segments that the various stations give, whether it's KQAK's "Early Tremors" or KRQR's "Best of the Clubs" show, are entirely too short. Radio consultants who choose the playlists for stations are another problem. I think a lot of local records die on the vine because they can't get the kind of exposure that they could or should."

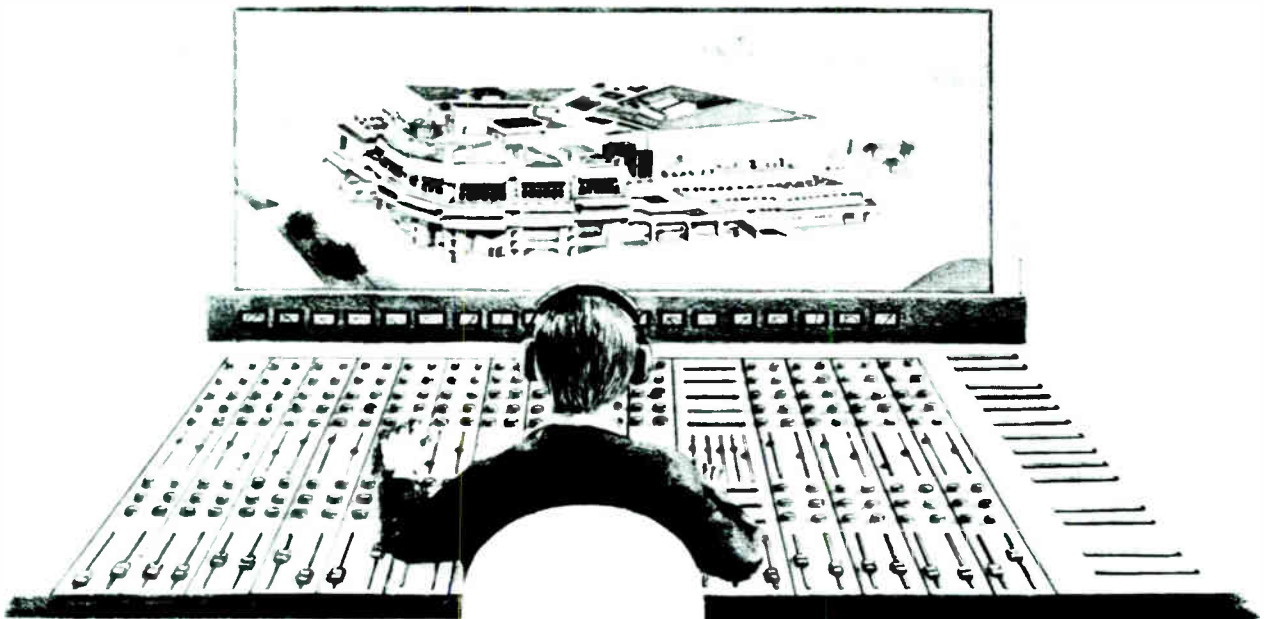
Despite distribution and airplay problems, and a club scene that many locals perceive as faltering, Blume sees a strong and growing music industry: "By my count, there are 582 audio, video and film studios; and over 200 record companies and distributors in Northern California. Overall, there's a pretty healthy musical scene here, and we're in the process of putting out the 1985 Northern and Southern California Music Directories, which will help both people in the business and those who are trying to get started. These will list all the booking agencies, record companies, distributors, radio station formats and music directors, television stations, cable TV, music TV, newspapers, magazines, reviewers, recording studios—audio, video and film, record producers, music equipment stores, schools, colleges, music societies, archives—primarily covering the media and music businesses. We're also putting out two supplements; one listing retail record stores and the other listing performing venues. We want to get this information out to help the people who need it."

—G.P.

# **MIDEM EQUIPMENT**

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**W**hen we decided to call this column Music Video Production, it was with appreciation for the dual translation of the acronym MVP, as in "most valuable players"—the team behind the scenes and the backstage stars of music video production. A greater industry and consumer awareness of the people, production companies, and facilities who constitute the music video production community, will also help encourage more diversity and creative selection in programming content and formats. And it is in that spirit that we wish to recognize and acknowledge the above-and-beyond-the-call-of-duty efforts of some of the most valuable players in the music video production arena.

In major league baseball the sportswriters pick the MVP of the year. In this case we invite you to acknowledge the talented people behind the scenes for *Mix* reader's choice MVP's. Please check-off or write-in your vote for each of the categories listed. If you don't know the name of your MVP in a given category, write-in the name of the music video and we'll track it down. MVP award winners will be announced and profiled in the April issue of *Mix*.

To participate in the *Mix* Video Awards, photocopy or send these pages with your votes to: *Mix* MVP Awards, 2608 Ninth Street, Berkeley, CA 94710. All ballots must be received by January 31, 1985 to be eligible.

*[Note: The April issue of Mix will contain the next music video supplement. If you are involved in any aspect of music video production you will want to be included in the free listing section of the supplement.]*

## MUSIC VIDEO PRODUCTION MOST VALUABLE PLAYERS 1985 MIX MVP AWARDS™

### AUDIO SWEETENING

- |   |                 |              |
|---|-----------------|--------------|
| <input type="checkbox"/> Bill Nelson                              | Michael Jackson | "Thriller"   |
| <input type="checkbox"/> John Quinn, Jan Schulte & Ken Willingham | Lionel Richie   | "Hello"      |
| <input type="checkbox"/> Nile Rodgers                             | Duran Duran     | "The Reflex" |
| <input type="checkbox"/>  |                 |              |

### CINEMATOGRAPHY

- |   |             |               |
|---|-------------|---------------|
| <input type="checkbox"/> Daniel Pearl       | Duran Duran | "The Reflex"  |
| <input type="checkbox"/> John Metcalf       | David Bowie | "China Girl"  |
| <input type="checkbox"/> Andresj Bartkowiak | Rod Stewart | "Infatuation" |
| <input type="checkbox"/>                    |             |               |

### COMPUTER ANIMATION/GRAPHICS

- |   |              |                   |
|---|--------------|-------------------|
| <input type="checkbox"/> Peter Conn & Brian Samuels   | Al DiMeola   | "Sequencer"       |
| <input type="checkbox"/> David Yardley & Thomas Dolby | Thomas Dolby | "Hyperactive"     |
| <input type="checkbox"/> Charlex & Bob Ryzner         | The Cars     | "You Might Think" |
| <input type="checkbox"/>                              |              |                   |

### CONCERT PERFORMANCE

- |   |                   |                       |
|---|-------------------|-----------------------|
| <input type="checkbox"/> Jon Roseman & Dave Stewart     | Eurythmics        | "Right by Your Side"  |
| <input type="checkbox"/> Brian DePalma                  | Bruce Springsteen | "Dancing in the Dark" |
| <input type="checkbox"/> Cynthia Biederman & Jim Yukich | David Bowie       | "Modern Love"         |
| <input type="checkbox"/>                                |                   |                       |

### DIRECTOR

- |   |             |                     |
|---|-------------|---------------------|
| <input type="checkbox"/> David Mallet         | David Bowie | "China Girl"        |
| <input type="checkbox"/> Charlex & Jeff Stein | The Cars    | "You Might Think"   |
| <input type="checkbox"/> Tim Newman           | ZZ Top      | "Sharp Dressed Man" |
| <input type="checkbox"/>                      |             |                     |

### EDITING

- |   |                    |                   |
|---|--------------------|-------------------|
| <input type="checkbox"/> Bill Weber & Danny Rosenberg | The Cars           | "You Might Think" |
| <input type="checkbox"/> Sim Sadler & Bob Sarles      | ZZ Top             | "Legs"            |
| <input type="checkbox"/> David Yardley                | Lindsey Buckingham | "Go Insane"       |
| <input type="checkbox"/>                              |                    |                   |

### FILM ANIMATION/GRAPHICS

- |  |                          |                               |
|--|--------------------------|-------------------------------|
| <input type="checkbox"/> Jerry Kramer, Wayne Isham & Bill Morgan | Rod Stewart              | "Some Guys Have All the Luck" |
| <input type="checkbox"/> Peter Rosenthal & Stephen Oaks          | The Alan Parsons Project | "Don't Answer Me"             |
| <input type="checkbox"/> Mark Merek                              | Cyndi Lauper             | "She Bop"                     |
| <input type="checkbox"/>   |                          |                               |

### HOME VIDEOGRAM

- |  |                 |                  |
|--|-----------------|------------------|
| <input type="checkbox"/> Vestron Video       | Michael Jackson | "Thriller"       |
| <input type="checkbox"/> Warner Home Video   | The Cars        | "Heartbeat City" |
| <input type="checkbox"/> Sony Video Software | David Bowie     | "Video 45"       |
| <input type="checkbox"/>                     |                 |                  |

### INNOVATION

- |   |                    |                   |
|---|--------------------|-------------------|
| <input type="checkbox"/> Charlex & Jeff Stein                             | The Cars           | "You Might Think" |
| <input type="checkbox"/> Danny Kleinman                                   | Lindsey Buckingham | "Go Insane"       |
| <input type="checkbox"/> George Folsey Jr., Michael Jackson & John Landis | Michael Jackson    | "Thriller"        |
| <input type="checkbox"/>  |                    |                   |

### LIGHTING

- |  |             |                  |
|--|-------------|------------------|
| <input type="checkbox"/> Daniel Pearl    | Duran Duran | "The Reflex"     |
| <input type="checkbox"/> Bryan Greenburg | Al DiMeola  | "Sequencer"      |
| <input type="checkbox"/> Bruce Lojan     | Sheila E.   | "Glamorous Life" |
| <input type="checkbox"/>                 |             |                  |

### LONG FORM VIDEO

- |   |             |                           |
|---|-------------|---------------------------|
| <input type="checkbox"/> Anthony Eaton & David Mallet | David Bowie | "Serious Moonlight"       |
| <input type="checkbox"/> Julien Temple                | David Bowie | "Jazzin' for Blue Jean"   |
| <input type="checkbox"/> Kate & Derek Burbidge        | The Police  | "Police Around the World" |
| <input type="checkbox"/>                              |             |                           |

### FEATURE FILM MUSIC CLIP

- |  |                |                                  |
|--|----------------|----------------------------------|
| <input type="checkbox"/> Albert Magnoli; Cavallo, Ruffalo & Fargnoli; Steve Panama | Prince         | "Purple Rain"                    |
| <input type="checkbox"/> Jonathan Demme  | Talking Heads  | "Stop Making Sense"              |
| <input type="checkbox"/> Peter Webb & Paul McCartney                               | Paul McCartney | "Give My Regards to Broadstreet" |
| <input type="checkbox"/>   |                |                                  |

**PRODUCER**

<input type="checkbox"/> Simon Fields	Sheila E.	"The Glamorous Life"
<input type="checkbox"/> Ken Walz	Huey Lewis & the News	"Heart of Rock'n'Roll"
<input type="checkbox"/> Lexi Godfrey	Frankie Goes to Hollywood	"Two Tribes"

**SCREENPLAY**

<input type="checkbox"/> Charlex & Jeff Stein	The Cars	"You Might Think"
<input type="checkbox"/> John Landis & Michael Jackson	Michael Jackson	"Thriller"
<input type="checkbox"/> Ken Walz & Ed Griles	Cyndi Lauper	"Time After Time"

**SET DESIGN**

<input type="checkbox"/> Henry Selick	Rick Springfield	"Bop Till You Drop"
<input type="checkbox"/> Bob Ryzner	The Cars	"You Might Think"
<input type="checkbox"/> Steve Hopkins	Elton John	"Sad Songs"

**SPECIAL EFFECTS**

<input type="checkbox"/> Joseph Vogt	Rick Springfield	"Bop Till You Drop"
<input type="checkbox"/> Dave Yardley	Thomas Dolby	"Hyperactive"
<input type="checkbox"/> Alex Hadju	Earth, Wind & Fire	"Magnetic"

**MVP TECHNOLOGY HALL OF FAME**

<input type="checkbox"/> Computer Image Corp.	Analog/Digital Real-time Video Animation System IV
<input type="checkbox"/> Ampex Corp.	Ampex Digital Optics (ADO)
<input type="checkbox"/> Quantel	Digital Graphic System (Paint Box)
<input type="checkbox"/> Sony Corp.	U-Matic Cassette (Helical Scan)

**MVP HALL OF FAME PIONEERS**

<input type="checkbox"/> Group	Beatles
<input type="checkbox"/> Solo Artist	David Bowie
<input type="checkbox"/> Director	Richard Lester
<input type="checkbox"/> Producer	John Roseman
<input type="checkbox"/> Music Video Label	Pacific Arts Video: Mike Nesmith & David Bean

**MVP VIDEO OF THE YEAR**

<input type="checkbox"/> Charlex & Jeff Stein	The Cars	"You Might Think"
<input type="checkbox"/> Scott Milaney & Russell Mulcahy	Duran Duran	"The Reflex"
<input type="checkbox"/> Ken Walz & Ed Griles	Cyndi Lauper	"Girls Just Want to Have Fun"
<input type="checkbox"/> Tim Newman	ZZ Top	"Leas"
<input type="checkbox"/> Albert Magnoli; Cavallo, Ruffalo & Farqoni	Prince	"When Doves Cry"
<input type="checkbox"/> Adam Whittaker & Daniel Kleinman	Thomas Dolby	"Hyperactive"
<input type="checkbox"/> <i>Mix</i> Reader's Choice		

In the world of music video production, 1984 was a year of retrenchment and redirection. The *Mad Magazine* comic book fantasy of a 24-hour rock and roll channel was repackaged, presented to Wall Street and institutionalized as the MTV Networks Inc., when Warner Communications and American Express took MTV public in a major stock offering. In November MTV announced skyrocketing third quarter revenues of \$28.777 million, an increase of more than 116 percent over the same period in 1983. A milestone was established with the exponential expansion of videomusic programming and the introduction of new satellite music channels from MTV, Turner Broadcasting, and Discovery Music Network.

The business of making music videos, still treated as commercials to promote album sales by most record companies, continued to grow as an important part of the television and home video programming marketplace. The manufacturers and distrib-

utors readjusted their sales projections and renegotiated or vacated deals based on overenthusiastic or unrealistic expectations.

In 1985, as form follows function, the technology of inexpensive playback-only VCRs, with prices as low as \$100, may prove to be the missing link in bringing music video programming to another younger more music oriented generation of VCP owners. The availability of the personal video cassette player—VCP as part of an integrated stereo TV home entertainment center should prove to be a major factor in stimulating made-for-home video productions.

Acknowledgement of the combined talents of the creative artists, technical craftspeople, writers, directors and producers who create quality productions is an important element in helping this fledgling artform achieve creative and economic recognition in the international programming marketplace.

—Lou CasaBianca

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INTERFACE

by Neal Weinstock

A  
DICTIONARY  
OF  
MUSIC  
VIDEO

With this column, the current author abandons his Video Interface identity. For two years, the window of a monthly magazine page has afforded me a view of a quickly maturing new industry, music video production. These days, so much comes into that view that the territory the page tries to cover moves too fast to grab hold of—like the view from a speeding train window. That view has also, to a large extent, sucked in its viewer; and the demands of my own industry work, all very “software,” make keeping up with hardware changes tough. Video Interface will go back to an emphasis on hardware.

And, in an every-other-month series, I'll be reporting on what seems to this observer the make-or-break issue in the business of video-music: how to make money at it.

Here we are saying bye-bye, and still nobody's defined a good portion of the terms we use all the time in our little intersection of video and music. I speak not of those terms that can be spoken or written, and not of those musical terms that can be played acoustically or electronically. In music videos we are creating a new vocabulary for a new language, no more related to the language of the movies or television or popular song than English is to French and German. Those who master the new language will profit both artistically and economically. Those who don't will find their videos doomed to incomprehensibility.

So, herewith, a beginning, horribly incomplete:

### A Dictionary of Music Video

#### I. The Music Video Alphabet

There would seem to be 46 visual “letters” utilized in all music videos. (I may have missed a few. If so, please write in and help along this important research. Like most music video endeavors, it's tax-deductible, so pitch in.) In various combinations they make up the “words” and “sentences” of visual communication. A few will be defined here in coincidental alphabetical order of their translations into English:

1. **Adults.** These occur only rarely in the music video language. When they appear, typically they all look alike. When in good physical condition, they favor military dress or dark flannel suits, and are usually attempting to capture or harm an indiscriminately post-teenage protagonist. They become friendly when overweight, in which case males dress in grimy T-shirts and females favor pink coffee-shop uniforms. For important variants, see Big Bald Fat Guy, Mad Scientist, Mom, and Dad.

2. **Beach.** A place to have fun with people who look good when undressed. The concept has cinematic roots in Annette-Frankie films of '60s. Music

video beaches only rarely feature water, and if so always in motion, at a distance.

3. **Blondes.** Ninety-five percent of the female portion of the human race. Only notable exceptions are singers. Often seen in threes, dressed in leather, driving red cars, wearing red lipstick and pouting expression, or all of above. Only blondes are permitted to occupy convertibles, with one important exception traceable only to a star's peculiar desires (see Redheads). Never get speaking lines. Concept has dark cinematic roots in TV commercials; a theory that all blondes appearing in music videos are manufactured in test tubes at a secret Clairol laboratory has never been conclusively disproved.

4. **Cage.** Commonly found in low budget, studio videos, enclosing lead singer. In high budget videos, see Prison. Symptom of persecution complex and inability to communicate, presumed by market research to be common in suburban teenagers.

5. **Cameo Appearance.** Serves to define in-crowd. Descends from first use in Hollywood films of '50s, noting the beginning of that industry's slide to decadence.

6. **Cars.** Often these are the best actors in production, symbolizing all that the band/protagonist wishes it/he were. Exceptions are videos of New York bands, to whom no need for a car to define self serves as a partial definition of self.

7. **Colors.** Red, blue, pink, grey and yellow are dominant in the music video spectrum. Green exists only in coffee shops frequented by rival gangs; extensive psychological testing has determined that the target market considers it icky. To make videos watchable over and over again, colors must be carefully chosen for proven appeal. Insiders suggest art directors use pizzas for palettes; use blue to cover cheap effects, and when in doubt paint it grey. (See Hair Color; selective coloring of Monochrome Video.)

8. **Drug Paraphernalia.** Limited to suggestions of cocaine use in air-play; items associated with marijuana and heroin define club market.

9. **Fedora(s)**. Basic hat worn by protagonists who aim for a career in movies in life after rock.

10. **Flames**. The ubiquitous product of hot licks.

11. **Glitter**. See Star Screen Filter. Both are now so out of fashion as to be used only a few times in each video.

12. **Guitar**. Low Slung. Signifies intended appeal to an audience too young to remember the Rolling Stones, too sheltered to have ever seen a break-dancer.

13. **Gun(s)**. Wonderful art form we have here, isn't it?

14. **Hair Style**. Most commonly, permanently wind-blown. When otherwise, the sum of most videos' positive depiction of women.

15. **High Spiked-Heel Shoes**. Reaganomics in action.

16. **Insert Mattes**. Flattened, tilted, compulsive.

17. **Lipstick**. Often used, incidentally, to write shooting scripts.

18. **Mad Scientist**. The technogage's thrills and chills, relationships of fathers and sons, mistakes of the older generation, and aspirations of young technoid rockers, all neatly wrapped in one feminine invention of 1818 and not popularly played by a woman till Laurie Anderson came along.

19. **Masks**. Dead giveaway of a band that wishes videos were not necessary to sell their records.

20. **Mirror(s)**. See Still Water, see S. Freud, *Interpretation of Dreams*.

21. **Monochrome Video** (with selective colors). Signifies video's increasing ability to duplicate technical achievements of D.W. Griffith and Georges Melies.

22. **Monster(s)**. See Adults, Mad Scientist. Curiously, the wonderful movie sub-genre of the pitiable, audience-identifiable monster, typified by Frankenstein, the Wolf Man, Gorgo, even The Hulk, found no expression in videos till *Thriller*. Monsters abounded, but only to persecute heroes who may have been too concerned with their pretty images to chance the role. After all, after Wolf Man, Lon Chaney could not believably play a non-monster. Michael cashes in where others fear to tread.

23. **Olden Days**. See Color (yellow); 1950s, 1960s. Sepia, used to represent anytime earlier than 1940, as it is generally used in videos, is a conditioned response Konrad Lorenz would have found most interesting.

Space precludes many more definitions here. The remainder of the alphabet is as follows: 24. **Paranoia**. 25.

**Party**. 26. **Performance** (on stage, on street, in classroom, in bar, in bedroom). 27. **Prison**. 28. **Production Number**. 29. **Prostitutes**. 30. **Religion** (hero worship, self worship, devil worship). 31. **Shattered Glass**. 32. **Shredded Clothing**. 33. **Smoke**. 34. **Soft Focus**. 35. (not so) **Special Effects**. 36. **Still Water** (see Mirror). 37. **Stop Motion**. 38. **Suburbia**. 39. **Surrealism**. 40. **Threes** (especially of anything female). 41. **Waking Up**. 42. **War**. 43. **Wimp**. 44. **1950s** (see 1960s, Olden Days). 45. **1960s** ("). 46. **1970s** (as never-ending for, among others, Rod Stewart, Fleetwood Mac, etc.)

II. **Syntax**: How to express a thought in music video language. "You mean all I have to do to make a music video is choose a string of those images?" Yes, you, too, friend, can learn how to talk Music Video. Just send \$19.98 to . . .

You want to make better music videos than the above vocabulary would seem to have room for? It is a pretty small vocabulary, isn't it? In George Orwell's *1984* they believed a smaller vocabulary led to smaller, more manageable thoughts. It has taken no totalitarian to enforce real-live 1984's small-minded videos. Perhaps in '85 we can enlarge the language a little. ■

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## MUSIC NOTES

### -FROM PAGE 146, VAN NEST

ed to go on and cut the basic meat of the song, which starts about a minute into the tune where the drums begin. That's what we considered to be our basic track," says Van Nest.

The piano intro and first verse were recorded on a separate piece of tape at a later date. "This was mostly rubato, and we recorded without a click track; however, we did feed the click track to Fitz (keyboardist Alan Fitzgerald) for about the last eight bars before the drums were to enter," Van Nest explains.

The piano intro was simply spliced onto the original track where the drums begin on the finished song. "We wondered if it was going to work," Van Nest says with a laugh. "We got the song finished and said, 'Well, it's time to put the piano on it.' We were hoping the darn thing was going to work out okay."

The lead vocal was recorded

"live" with the piano in both the first verse and last verse when the rest of the band drops out for that "magic, rubato" feel, he explains.

Bad editing is bad editing, says Van Nest, but if you hide the cut somewhere where the listener either won't be able to hear it, or draw his attention away to some other sound, in this case the first snap of the snare drum, then you're in the clear.

### THE GUITAR SOUND

"A lot of people have asked me about the guitar solo on 'Sister Christian' and how that sound was created." Van Nest gives most of the credit to "The Big Room."

"The Big Room" at Image Recording, says Van Nest, is about 1,200 square feet with a ceiling height of 22 feet. The room is tremendously live, having concrete floors, slab rock walls and a wooden ceiling.

Both the lead guitars and drums were recorded in this room for a large, roomy feel. In addition to a tight mike on Brad Gillis' Mesa Boogie stack, two Neumann U89s were placed about 20 feet back to pick up the sound of the room.

"He cranked the guitar amp louder than anything I had heard in my life. I had neighbors complaining from a block away!" he says. So mega volume in a mega room with Mesa Boogie is what helped create the sound.

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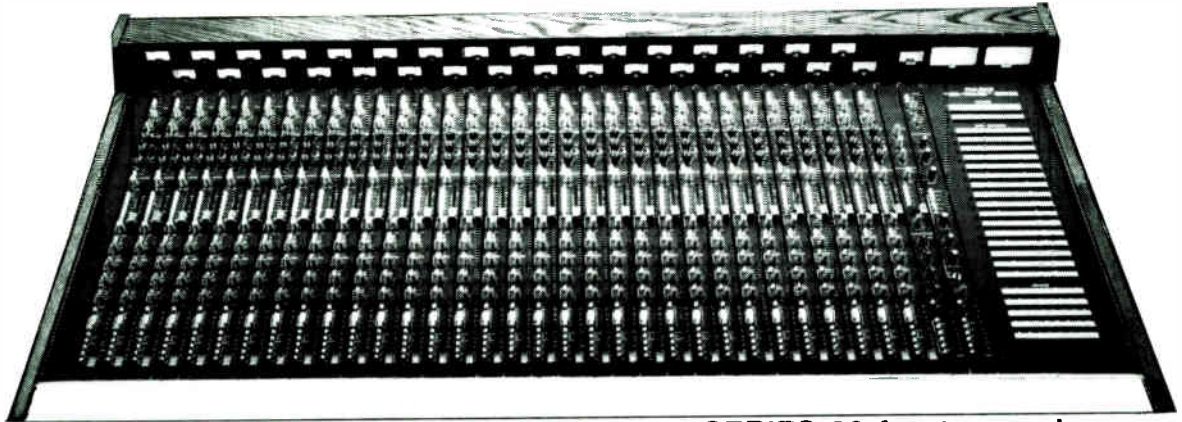
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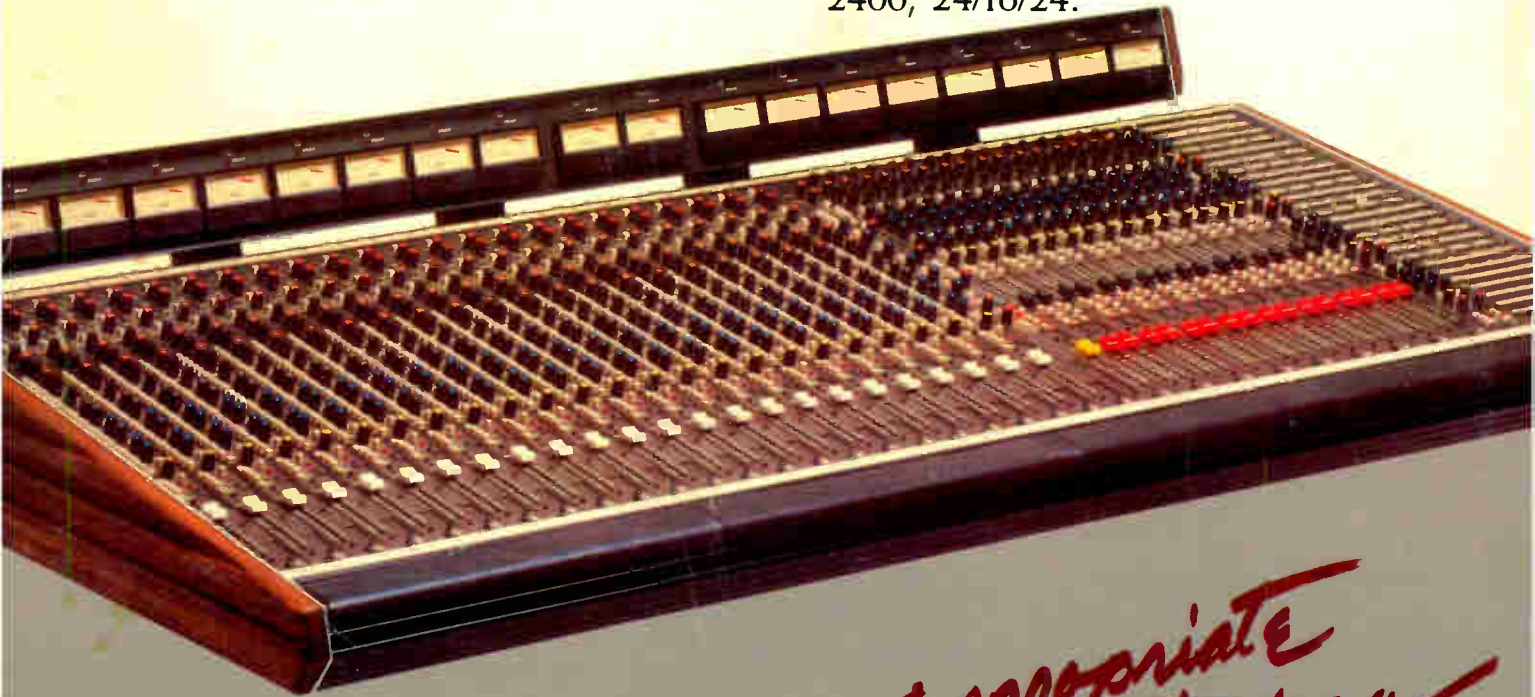
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