

MAY 1986  
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THE RECORDING INDUSTRY MAGAZINE

# Mix

Interview: Steve Lillywhite

**Digital Recording  
Supplement**

**Listings:  
Northeast Studios**



CA 91329

**Building a Sampling Studio**

**John Woram's "Basics"**

**Joe Zawinul**

**Insider Audio**

**Lunching With Danny O'Keefe**

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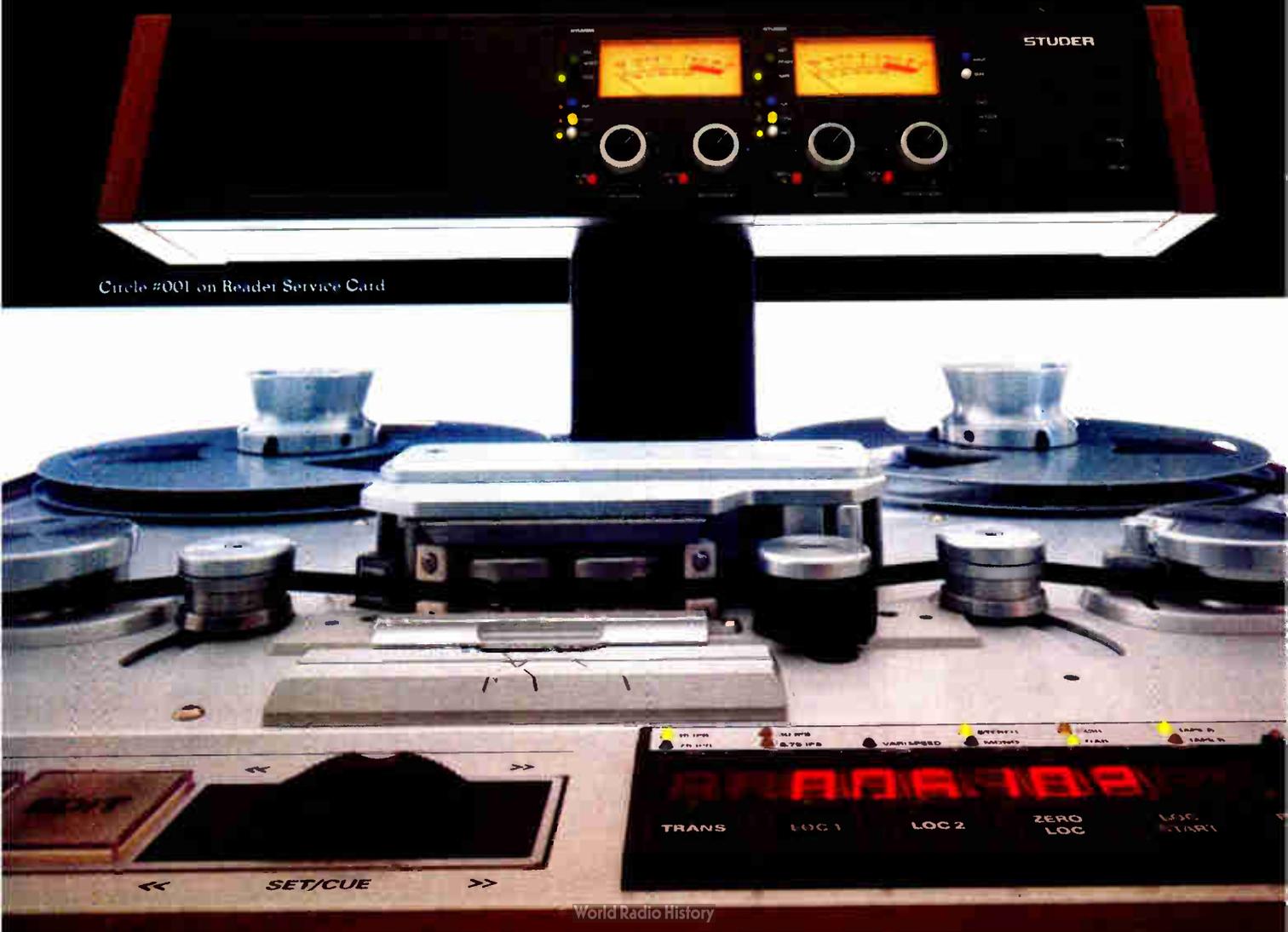
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# STUDER REVOX

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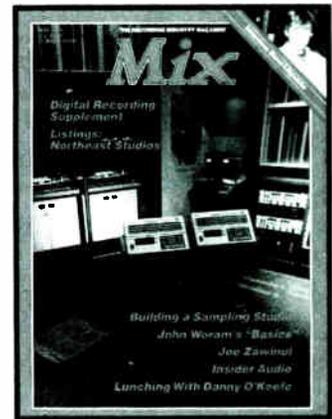
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Cover: The A-1 control room at Master Sound Astoria (Astoria, NY) offers 48-track recording in either Ampex ATR-124 analog or Sony PCM-3324 digital formats. The room is said to be the largest certified LEDE™ studio in the world, and has audio and video tie lines to the three main soundstages at Kaufman Astoria Studios.  
Photo: Ken Howard  
Corner photo: Steve Lillywhite by Paula Parisi



One focus of this issue is on studios of the Northeast U.S. In addition to our always information-packed section of listings (see location index on page 142), Linda Johnson checks out growth trends in the region (page 116), and we offer an in-depth look at two very different Northeastern facilities: Bears-ville Studios (page 36) and Blue Jay Recording (page 134).



Digital recording is the subject of a special section that starts with a separate index on page 43. Highlighted this time around are several articles about sampling, including part one of an exhaustive two-part piece explaining sampling basics by the always thorough and entertaining Larry Oppenheimer. In another article, Terry Fryer offers tips on building a sampling studio, while Fairlight founders Kim Rylie and Peter Vogel examine the phenomenon of the tapeless recording studio.



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# GET ON TRACK!

Whether you're recording original music scores, layering up sound effects, or synchronizing to video or film for audio-post sweetening, you need a tape recorder that's built especially for your new and exciting business. The MX-70 is the perfect multitrack for the synthesizer oriented studio tied together with MIDI.

The "70's" three-way design gives you 7.5, 15 and 30 ips in a 1" 16-track, a 1" 8-track, or a 1" 8-track prewired for 16. (An optional 1/2" 8-track is also available.) Noiseless, gapless, punch-ins and punch-outs provide quiet, inaudible inserts into pre-recorded program material. The MX-70's wide dynamic range makes for quiet, clean recordings. In fact, you'll find the "70" at 30 ips is so quiet that noise reduction just isn't necessary. And to complete this perfect package, you can add an optional autolocator to the standard full function remote for complete session control.



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World Radio History

## MIX MAGAZINE STAFF

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PUBLISHER/  
GENERAL MANAGER  
Penny Riker Jacob

ASSOCIATE PUBLISHER/ADVERTISING DIRECTOR  
Hillel Resner

MANAGING EDITOR  
Blair Jackson

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Ken Pohlmann

SENIOR EDITOR  
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MUSIC EDITOR  
David Gans

EDITOR AT LARGE  
Mr Bonzai

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Dan Daley Bruce Nazarian  
Larry Oppenheimer Bruce Pilato  
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ASSISTANT ART DIRECTOR  
Dave Marrs

DESIGN AND PRODUCTION  
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TYPOGRAPHY  
Linda Dierking Connie Wiggins

PRODUCTION MANAGER  
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22458 Ventura Blvd., Suite E, Woodland Hills, CA 91364  
(818) 999 4649

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# FROM THE EDITOR

# F

rom time to time, we find ways to improve what we're doing here at *Mix*. Recently, we've computerized our operation, we've undergone a BPA circulation audit, and we've enlarged our staff in order to serve you better. This month we are doing some editorial tweaking that we hope you enjoy.

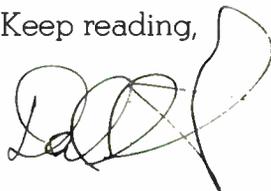
John Woram has been a mainstay in the audio industry for many years as engineer, author and educator, and it is our good fortune to have him join us as senior editor. A former editor of *db* magazine, John is a Fellow of the Audio Engineering Society, a previous director of the Music Engineering Department at the University of Miami, and an all-around good guy. John's new column, "Basics," discusses fundamental audio concepts, showing how they apply to today's industry, equipment and technology.

Another new appearance in this issue is Phil De Lancia's column, "Aftermix," providing a running commentary on topics relating to record mastering and manufacturing, tape duplication, CD replication, storage and formats. Phil, a mastering engineer at Fantasy Recording Studios, has asked me to invite those of you out there involved in these areas to put him on your mailing list for news and views.

Still more changes show up in Ken Pohlmann's department. Our futurist and cognophile from just north of the Bermuda Triangle has evolved his Audio Applications column another step into "Insider Audio," which will keep tabs on the latest audio developments and offer a bonus service as the ad hoc clearinghouse for industry speculation and scuttlebutt.

You'll be seeing a few more changes from us in the coming months and we'd like to know what you think. We depend heavily on your input, so please stay in touch.

Keep reading,



David M. Schwartz  
Editor/Publisher

# CURRENT

## **AES Confers on Television Sound**

The Audio Engineering Society will be holding their Fourth International Conference, May 15 through 18 in the Westin Hotel at Chicago's O'Hare Airport, on the topic of "Stereo Audio Technology for Television and Video." The conference will consist of tutorial and new technology presentations and demonstrations, production cost/benefit analyses, a look at present and required standards, research into consumer preferences and future directions. Twenty-three technical papers will be presented at the conference as well as special demonstrations of satellite up/down link stereo audio, broadcast television transmitter-receiver link, live stereo remote, analog and digital post-production audio editing and state-of-the-art consumer stereo audio/video playback. Beyond the demonstrations, no exhibits will be presented at the event. For more information, contact the AES at (212) 661-8528.

## **Philips/Sony Develop CD Interactive Media**

The CD-ROM has taken another step in its evolution with the recent announcement by Philips and Sony of their jointly developed specifications for the audio/video applications of the interactive CD-ROM. These new specifications provide a complete format, called "CD Interactive Media" (CD-I), which allows for full interactive use of the CD-ROM in handling music, sound, natural still and animated pictures, graphics, computer programs and computer data. The new format will also enhance the capabilities of home and personal computers with easily accessible, high quality audio/visual information. The two manufacturers feel that this development will open the door to "new forms of interactive entertainment and education ranging from songs with text and pictures to

talking dictionaries and encyclopedias."

CD-I is designed with the same level of disc interchangeability as in CD digital audio, allowing any disc made in accordance with the new specification, as well as currently produced audio CDs, to function with any equipment based on the new format. Optionally, players with built-in computer interface capabilities will be able to act as peripherals to home or personal computers.

Philips and Sony, who co-introduced the Compact Disc Digital Audio system in 1980, are currently circulating the new specifications to manufacturers and suppliers within the consumer electronics and computer industries to enlist their support for the format. According to the *CD Data Report*, "Prototype drives based on the (new format) are not expected to reach the market before late 1987... Philips and all the major Japanese CD manufacturers are expected to market CD-I drives."

## **High Definition Television Update**

The effort to develop a studio standard for high definition television (HDTV) began in March 1983 when the Fourth Conference of the World Broadcasting Unions recommended that the nine regional unions, representing all the world's broadcasters, "...encourage their members to carry out studies on the preferred characteristics of a uniform world standard for a high definition television system."

In May 1983, the Advanced Television Systems Committee (ATSC) was formed to "...develop a national position for presentation by the Secretariat to the Department of State for purposes of developing a United States position within the Consultative Committee on International Radio (CCIR) and with other international organizations as appropriate." Membership in the ATSC is open to all interested American par-

ties and it is currently comprised of 47 member companies and 12 observers. The CCIR, whose membership is open to any interested nation, began formal studies of an HDTV studio standard in September 1983.

The United States position was established on March 19, 1985 when the ATSC's High Definition Technology Group adopted, by a clear majority vote, a set of HDTV studio standard parameters for transmittal to the U.S. State Department. On April 3, 1985 the ATSC Executive Committee unanimously approved that recommendation. The State Department then called together the U.S. CCIR National Committee that unanimously approved the recommendation as the United States position for the next meeting of the CCIR's Study Group 11. At that point, all interested companies and countries were provided the opportunity to be aware of the proposals before the CCIR, and to comment on them.

In November 1985, CCIR Study Group 11, with delegates from over 50 countries, approved a Proposal for a New Recommendation: Parameter Values for Signal Generation in HDTV Studios and for International Exchange of HDTV Programs. The proposed recommendation has been debated and approved in an international forum and now awaits the final meeting of the CCIR Plenary Assembly in May of this year.

The Plenary Assembly can accept or reject the Proposal for a New Recommendation based upon the interests and wishes of the 159 member nations of the International Telecommunication Union. Similar attempts to achieve international standardization of television systems have failed at least twice in the past. If a studio standard for HDTV cannot be established at this time, it is widely believed that multiple de facto standards will emerge, thereby foreclosing another opportunity to establish a recommendation in this area. ■

# NOW ALL THE WORLD'S A SOUND STAGE.

No matter what you're recording in the field, from Shakespeare-in-the-Park to "Dancing in the Dark," you'll find a Sony portable mixer that brings the creative control and flawless sonic performance of the studio to wherever you happen to be.



Studio quality is no longer confined to the studio.

## 12 FOR THE ROAD.

The big difference between the Sony MX-P61 and other studio-quality 12-channel mixers is that the Sony can be tucked neatly into a small case and carried to any location—thanks to its switching power supply, transformerless design and, of course, the fact that it's made by the company that's best at making big things small.

Its myriad professional features include transformerless, electronically-balanced inputs and outputs, complete equali-

zation for comprehensive signal control and modular construction for reliability and easy maintenance. Along with the phenomenal sonic performance with which the name "Sony" has been synonymous for decades.

## THE 4-CHANNEL MIXER

### FOR EVERY CORNER OF THE GLOBE.

The incredibly small and light MX-P42 lessens not only your burden, but the complexities of field recording as well.

That's because each input incorporates a fast-acting compressor/expander with gain make-up control.

So input levels can be preset separately, then maintained automatically during recording.

### HIGH QUALITY FOR LOW BUDGETS.

The family resemblance between the 8-channel MX-P21 and

Sony's more expensive portable mixers is readily apparent:

The MX-P21 is portable, durable, and has an incredible array of features for its size—including phono EQ, fader-start and cascade interface.

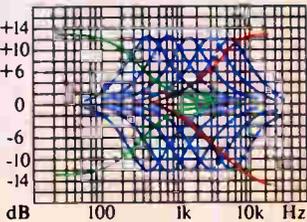
All of which makes the choice between Sony and any other portable mixer a simple one.

Just decide whether you want all your location recordings to be as good as studio recordings.

Or not to be.

For a demonstration or more information, call Sony in the North at (201) 368-5185; in the South (615) 883-8140; Central (312) 773-6000; West (213) 639-5370. Or write Sony Professional Audio Products, Sony Dr., Park Ridge, New Jersey 07656.

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Professional Audio



EQ characteristics of the MX-P61.



The Sony MX-P42 weighs in at a scant 8 lbs., 10 oz.



# INDUSTRY NOTES

The **Showbiz Expo**, to be held May 30 through June 1 at the Santa Monica Civic Auditorium, near L.A., is a business services trade show catering to all aspects of the entertainment industry. Exhibits include a wide range of production and financial services, computer hardware/software, and educational conferences and seminars. The Expo targets producers, production managers, business owners, studio management and computer users in video, film and music production. For more information, contact **Live Time, Inc.** (213) 668-1811. . . A private network of studios across the country have interconnected via the National Public Radio Westar IV satellite. Included in this network are **Soundwave Recording Studios** in Washington, D.C., **Waves** in Los Angeles, **The Mix Place** in New York, **Streeterville Studios** in Chicago and **Cookhouse** in Minneapolis. Full spectrum audio can be sent or received by any of the studios. . . **Linn Electronics**, which recently ceased operation at their Tarzana, CA facility, has arranged for **J.L. Cooper Electronics** to provide updates and service for Linn products. . . A petition is circulating to ask **NARAS** to recognize the category of Disk Mastering Engineer within the **Grammy Awards**. For further information, contact either **Greg Fulginiti** at (213) 461-2751 or **Bob Ludwig** at (212) 541-5022. . . **Bruel & Kjaer Instruments, Inc.** has announced the appointment of **Geoffrey Perry** as president. . . **Music Graphics, Inc.**, a newly established firm specializing in music-oriented film production for television and the home video markets, has opened offices at **Kaufman Astoria Studios**, 34-12 36th St., Astoria, NY 11106. . . **Klark-Teknik** has acquired miking console manufacturer **Dearden Davies Associates Ltd.** of Isleworth, England, which will continue to manufacture products under their own name. . . **Doug Johnson**, chairman of the board of directors of **The Droid Works** (an affiliate of **Lucasfilm Ltd.** and **Convergence Corporation**), has assumed the post of acting president of **The Droid Works**, following the departure of former president **Robert J. Doris**. Also at **The Droid Works**, **B. Morgan Martin** has been named product manager for the **Sound-Droid Digital Audio Processing Systems**. . . **Renkus-Heinz, Inc.** has expanded to a new manufacturing facil-



*Over 4000 attended the Montreux AES show. More details in the June Mix.*

ity at 17191 Armstrong Ave., Irvine, CA 92714. . . **Richard Klender** has founded the **Ventura County Producers and Songwriters Guild**, an industry networking group that meets the last Thursday of each month at **West Oak Recorders** in Westlake Village, CA. Call (805) 495-0606 for details. . . **Soundcraft USA** has named **Chafee Enterprises** as representative of the year for 1985. . . **Rick Plushner** has been appointed western regional manager/digital audio, **Sony Professional Audio Division** and **Gary Rosen** has been appointed to a similar position for the eastern region. . . **Andrew G. Da Puzzo** has assumed the position of national marketing manager for video products at **Agfa-Gevaert**. . . **International Tape/Disc Association** is presenting its first "How and Why Seminar" dedicated to improving the quality of pre-recorded audio cassettes May 12 through 14 at the **Clarion Hotel** in St. Louis, MO. Call (212) 956-7110 for registration information. . . The **Association of Independent Commercial Producers** has established a Seattle Regional chapter. Call (206) 281-8136. . . **dbx Professional Products Division** has presented their Sales Representative of the Year Award to **Professional Audio Associates Inc.**, of Burlington, MA; and Outstanding Achievement Awards to **Sphere Associates**, Reston VA; **William J. Ray & Associates**, Atlanta, GA; and **LP Marketing**, Oakland, CA. . . **Statuto Advertising** has formed to assist U.S. manufacturers in promoting their products through European media. For more information, call (817) 894-6923. . . **Michael Petrus** has been named vice president of engineering at **Convergence Corporation** in Irvine, CA. . . **Bob Bergfeld** has been appointed the national sales manager of the electronics division of **Lenco, Inc.** in Jackson, MO. . . **Sound**

**Productions Inc.** has added **Pro-Service**, a repair facility, and moved into larger quarters at 6021 Lyndale Ave. S., Minneapolis, MN 55419. . . **New York City's Martin Audio** has added **Gary Hall** to the staff as sales engineer and **Tom Cahill** as senior technical service engineer. . . **Adrian Bailey** has been appointed the new sales and marketing director of **DEC Ltd.** the English branch of the **Mitsubishi Pro-Audio Group**. . . **Lisa Weske** has joined **Tin Man Enterprises**, the St. Louis duplicator, as account executive. . . **One Pass Inc.**, in San Francisco, has promoted **Paul Reinhardt** to director of sales, **Karen Tezyk** to director of post-production operations and **Amy Herndon** to director of advertising and public relations. . . **Bill Dykes** has recently joined the staff of **Volunteer Record Pressing and Music City Tape Duplicators** in Nashville, TN. . . **Bernard H. Fryman** has been named vice president of marketing for **Star Case Manufacturing Co.** of Munster, IN. . . **Philip Lantry** has been appointed regional sales manager, professional products, at **Audio Technica**. . . **Pierce-Phelps** of Philadelphia, PA has opened a branch office of their video systems division at 928 Roland Dr., Pittsburgh, PA 15221, (412) 271-7603. . . **Joseph Tibensky** has been promoted to audio products manager at the magnetic tape division of **Agfa-Gevaert, Inc.**. . . **Klark-Teknik Electronics, Inc.** has appointed **Marcus Johnson Associates, Inc.**, of St. Charles, MO, to represent the **Klark-Teknik** and **Brooke Siren** product lines in Missouri, Nebraska, Kansas and Iowa. . . **Ken Fujii** has been named manager/technical services for **TDK Electronics Corp.**. . . **Chris Anderson** has joined **Production Masters Inc.**, of Pittsburgh, PA, as an audio engineer. . .



# Westar

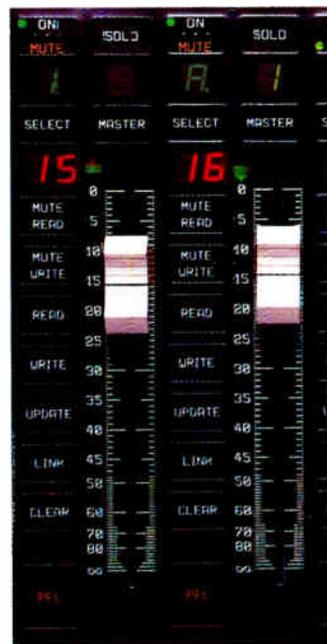
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# SESSIONS

## NORTHWEST

The *Flying Karamozov Brothers*, internationally known juggling, magic and comedy act, completed the soundtrack at *OTR* in Belmont, CA for their new operetta, *Lady Clown* . . . Impressionistic guitarist *Eric Tingstad* has been working on his third LP at *Triad Studios* in Redmond, WA. Also, *Steve Miller* was in for pre-production mixing and digital transfer for a new album project; *Rick Fisher* engineer, *Mike Tortorello* assisting . . . At *City Sound Recorders* (formerly San Francisco Sound Recording), *Ronnie Montrose* and his band—including ace bassist *Glenn Letsch*—cut tracks with engineer *John Cuniberti*. Cuniberti also helped mix the new *Dead Kennedys* record there . . . MCA recording artists *Taxxi* were in at *Prairie Sun* in Cotati, CA, working on new material with *Steve Fontano* at the board . . . *Rare Silk* was in *Colorado Sound* (Westminster, CO) working on their next LP. Also in was *Flash Cadillac*, who put the finishing touches on some songs for their two latest albums . . . At *The Plant* in Sausalito, *The New Santana Band* put the final touches on their latest album project, produced by *Carlos Santana* and *Chester Thompson*. *Maureen Droney* and *Wayne Lewis* cut the tracks. *Jim Gaines* and Droney mixed the album . . . *Constance Demby*, known for her incredible array of instruments and musical textures, cut some synthesized New Age music at *Banquet Sound* in Santa Rosa, CA. *Warren Dennis*, engineer, teamed up with *Stephen Hill* to mix this extravaganza, entitled *Novus Magnificat*.

## NORTH CENTRAL

At *Sparrow Sound* in Chicago, the vocal group *Colossal Nerve* recorded an a capella arrangement of "I Thought About You" direct to half-inch stereo at 30 ips, engineered by *Joanie Pallatto* . . . BBC America/Epic Records artists *Smoke City* dropped by *Tone Zone Recording* in Chicago recently for some re-mixes of tunes from their album release, *I Really Want You*, for 12-inch dance and instrumental sides . . . *Jim Kaiser & the Aluminum Foil* finished up work on a demo tape of rearranged standards and original material at *IVO Sound* in Hastings, NE . . . Motown recording artist *Chico DeBarge*, brother of the DeBarge singing group, finished tracks on an upcoming project with *Tony Ray* engineering at *United Sound Service* in Detroit . . . Recording activity at *Gnome Sound* in Detroit included *Midway*

cutting new product for D&B Productions, with producers *Bruce Nazarian* and *Duane Bradley*; Nazarian engineering . . . At *Studio A*, Dearborn Heights, MI, r&b artists *Steve* and *Sheila Washington* laid tracks on their self-produced project, *Eric Morgeson* engineering . . . Scottish rockers *Nazareth* have been recording a new album at *Pearl Sound Studios* in Detroit with producer/engineer *Eddie Delena*.

## SOUTHWEST

Recent activity at *Planet Dallas Studio* included *Robert "Goodie" Whitefield* producing tracks for Southwest Experience Records, *Rick Rooney* engineering . . . *Goodnight Dallas* played host to *The Hooters* during their winter tour swing through Texas. British engineer *William Wittman* recorded guitar and synthesizer overdubs by The Hooters for the upcoming *Patty Smythe* album on CBS records. *Ruben Ayala* assisted . . . Producer *Bart Barton* of Lemon Square Productions worked in *Dallas Sound Lab's* Studio A recording a single release for country & western artist *Billy Parker*. Engineer on the project was *Bob Singleton* . . . *The Unsung Heroes* were in working on an album project with producer/engineer *Phil York* at *Crystal Clear Sound* in Dallas . . . *Reel-sound's* Austin-based remote trailer was called to handle audio for the Anheuser-Busch Music TV Festival at the Summit in Houston. Recording and mix sweetening was handled by *David Huff* and *Malcolm Harper* assisted by *Mason Harlow*, *Billy Myers*, *Brent Campbell* and *Gordon Garrison*.

## SOUTHEAST

At *The Castle Recording Studio*, Franklin, TN, producer *Jimmy Bowen* cut tracks for *Roger Miller's* new MCA album and *George Strait's* next LP with engineers *Chuck Ainlay*, *Bob Bullock* and *Keith Odle* assisting . . . *Ray Charles* tracked at *Eleven Eleven Sound* in Nashville with producer *Billy Sherrill* and engineers *Ron Reynolds* and *Ed Hudson*. Also *David Allan Coe* has been recording there with the same team . . . At *Wally Cleaver's Recording* in Fredericksburg, VA, former Artful Dodger guitarist *Gary Cox* was in laying down tracks for some new tunes he's working on with *Peter Bonta* engineering . . . MCA Universal Studios teamed up with *Ron Rose Productions* of Tampa, FL to complete work for the upcoming NBC-TV

series *Dalton-The Road Back* network television. Jim Howard, Shannon Stein, and Fred Brodersen, actors for the series, were at Ron Rose Productions for audio looping to picture . . . *Ella Brooks* was in Memphis' *Cotton Row Recording* recording an MCA publishing song called "Sparks," with *Niko Lyras* producing . . . At *Hummingbird Recording* in Melbourne, FL, *No Dice* finished recording their first album for Whistlefield Records. *John Foley* engineered all the tracks and produced the record . . . At *Wistaria Recording Studio*, Yorktown, VA, Cinnamon Records wrapped up its first release, "Love Ain't What It Seems," on artist *Lana Puckett*. It was produced and engineered by *Kim Person*.

## NORTHEAST

*Remote Recording Services* (Monsey, NY) purchased "The Black Remote Truck" originally designed for N.Y. Record Plant Studios. *Phil Gitomer*, who had been in charge of the truck since its construction, signed on as operations manager of the remote division. The truck immediately went to work on the live television broadcast from Radio City Music Hall honoring Martin Luther King, Jr. . . . Producer *David Williams* was in *Reel Platinum Studios* (Lodi, NJ) cutting tracks on vocalist *Mona Rae*. *Bob Allecca* engineered . . . *Gwen Guthrie* has been in *EARS* (East Orange, NJ) cutting tracks for her new LP coming out on Polygram Records. Exchanging engineering duties were *Greg Mann* and *Tom Zepp*. Assistants on the project were *Tom Vercillo* and *Ernie Dimeo* . . . At *RPM Sound Studios* in New York City, *Beat Rodeo* recorded their next album for IRS Records. *Scott Litt* produced and engineered with *Jeff Lippay* assisting . . . The *Corvairs* recorded their third record at *Intergalactic Music* in NYC, produced by *Keith Streng* and engineered by *David Lechenstein* . . . At *Secret Sound Studio* in NYC, *Hiram Bullock* produced *Mike Stern* and *David Sanborn* . . . *Secret Society Studios* had CBS/Profile recording artists *Run DMC* in session with engineer *Steve Ett* working on tracks for their third album . . . At *39th Street Music*, NYC, *Ashford & Simpson* recorded new tracks utilizing the Synclavier with *Tim Cox* engineering and *John Paul Cavanaugh* assisting . . . Artist *Bootsy Collins* was in NYC's *Quad Recording* with producer *Bill Laswell* recording four songs for his forth-coming album on Arista Records. Engineering was *Bob Musso*, with *Peter Sturge* assisting . . . Producer/arranger *Peter Drake* was in *Sound Heights* in Brooklyn working on a dance re-mix of *Mikata's* "Gang Gang

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Dance." *Vince Traina*, who recently engineered the group's debut album, was once again behind the board with assistants *Abdu Malahi* and *Anthony A. Barry*. . . *Cove City Sound Studios*, a brand new 24-track Neve/ Studer facility in Glen Cove, NY opened its doors this winter. The first sessions were *Naked City* and *Blank Verse*, produced by *Alan Landon* and *Mike Mittenberg*. *Clay Hutchinson* was at the console . . . At *Evergreen Recording* in NYC, *Rob Stevens* was in producing the group *Boy Wander* and solo artist *Stuffy Shmitt*. . . *Westrax Recording Studio*, NYC, completed taping *The Life and Times of the Swamp Fox* produced by Radio Arts, engineered by *Jesse Plumley*. . . The past several months at *Carriage House Studios*, Stamford, CT saw such varied acts as *Al Di Meola*, *David Johansen*, *Rick Derringer*, *L. Shankar*, film scores for *Invasion U.S.A.*, *Missing in Action I*, *Silver Bullet* and much more. . . At *Inner Ear Recording* in Queens, NY, *Khan Films Ltd.* has started scoring a new musical due for release at the end of the year. The composer *Lalit* is arranging the score. Engineering is by *Steve Vavagiakis*, assisted by *Matt Schottenfeld*.

## SOUTHERN CAL

At *The Complex* in L.A., Studio C hosted *Ry Cooder* on mixing the film score of the motion picture *Crossroads*. Cooder produced, *Mark Ettl* engineered and *Sharon Rice* assisted. . . Lots of activity at *Capitol Recording Studios* in Hollywood, including *Miles Davis* working with producer *Tommy LiPuma* and engineer *Peter Doell*; *George Benson*, working with the same team; and *Joe Cocker* recording with engineer *Wally Traugott* and various engineers. . . At *Conway Recording* in Hollywood, *Burt Bacharach* and *Carol Bayer-Sager* finished their cuts for MCA Records' *Patti LaBelle*. *Mick Guzauski* engineered with assistance from *Daren Klein* and *Richard McKernan*. . . *Bob Knox* has been producing *Don Garneau* at *Lion Share Studio* in L.A. . . At *Group IV Recording* in L.A. *Shadowfax* layed tracks for their new Windham Hill LP with producer *Chuck Greenberg* and engineer *Harry Andronis*, assisted by *Andy D'Addario*. . . Restless Records recording artists *The Fibonaccis* were in at *Music Grinder* in L.A. with *Ron Goudy* producing the film score for *Terror Vision*; and Capitol Artists *Missing Persons* were in with producer *Bernard Edwards* working on a new album with *Josh Abbey* engineering. . . A&M recording act *Orchestral Maneuvres in the Dark* were in L.A.'s *Larabee Sound* working on their contribution to the soundtrack for *Pretty In Pink*. *Tom Lord-Alge* was at the board assisted by *Sabrina Buchanek*. . . At *Galaxy Sound Studios*, Hollywood, *Dynasty* collaborated with *The Deele* on a song for their latest album project with *William Shelby* and *Kevin Spencer* producing.

Engineer was *Jon Gass*. . . Producer *George Duke* was in Mama Jo's, North Hollywood, mixing his newest LP for Elektra Records with engineer *Mick Guzauski* at the controls and *Steve Ford* assisting. . . Activity at *Advanced Media Systems* in Orange, CA included a single mix for *Samson* featuring Iron Maiden vocalist *Bruce Dickinson* for Capitol Records with *Jo Julian* and *Bob Brown* at the board. . . *West Oak Recorders* in Westlake Village completed work on new albums for Maranatha!/Word Records. *Bill Cobb* recorded and mixed the new *Tom Howar* album, called *The Hidden Passage*, and a new *Harlan Rogers/Smitty Price* album, both to be released on Compact Disc as well. Also, *Christina Tanner* was in finishing new album vocals, produced by *Richard Klender*. . . Producer/engineer *Gordon For-dyce* was in *Preferred Sound* (Woodland Hills, CA) working with *Shay*, a local rock and soul band, on a six-song package. *Bill Thomas* also engineered. . . Recently at *Lion Share* (L.A.) producer *Ron Nevison* did mixing on *Heart's* singles, with *Mike Clink* engineering, *Laura Livingston* assisting. . . *Tierra* was in cutting an album at Santa Monica's *Sound Solution*, with engineer *Richard Jallis*, second engineer *Janine Cirillo*. . . Arista recording artists *Krokus* were in L.A.'s *Cherokee Studios* mixing their album, *Change of Address*, with producer *Tom Werman*. . . The Glendale-based *Truck* mobile recording facility provided 24-track recording interlocked to video for Australian singer *Jenifer Green*. The shoot was for a video demo for Green. . . Activity at *Master Control* in Burbank included *Stanley Clarke* doing overdubs for his next CBS Records release. . . *Randy Newman* returned to *Amigo Studios* (N. Hollywood) to record and mix tracks for *Three Amigos*, an upcoming Orion Pictures release. *Mark Linett* engineered in Studio E on the 3M 32-track digital system. . . Independent producer *David Kershenbaum* was in *Ground Control* studio in Santa Monica with *Boomerang*, formerly known as "The Coconuts" (of Kid Creole fame).

## STUDIO NEWS

*Giant Sound* in NYC has added some new outboard equipment to its racks: two Drawmer DS-201 dual gates, a UREI 1178 dual compressor/limiter and two dbx 160X single compressor/limiters. Additionally, a Macintosh 250 power amp was added for third reference monitoring. . . *The Rock Studio*, Norman, OK, has taken delivery of a new 32-input 24 subgroup mixer, and a new 24-track recorder manufactured by ACES Ltd. of England. . . *Steve Lawson Productions* of Seattle has added a room to accommodate its new advanced Kurzweil 250 digital sampler. In addition to its three studios, the facility now has a separate room full of MIDI equipment. . . *Sound Impressions*, Des Plaines, IL, has added recording engineer *Doug*

*Brand* to the staff. . . Along with the introduction of chief engineer *Dave Slagter* to Burnaby, British Columbia's *Inside Trak*, there have also been other major improvements, such as, an isolation booth, a 12-piece set of Ayotte custom drums with a five-piece Simmons kit, new monitor amplifiers, and an extensive array of new outboard gear. . . *Metro Studios* in Minneapolis, have brought in veteran *Tom Tucker* as a partner and chief engineer, and installed \$250,000 of additional gear, including a Trident 80 mixing console, and an Otari 24-track machine. . . *Southern Tracks Recording Studio* in Atlanta has made two appointments to its engineering staff, *Russ Fowler* and *Greg Archilla*. Chief engineer Fowler did stints with Stone Mountain Music and Cheshire Sound Studios in Atlanta. Archilla, assistant engineer, comes from Reynolds/Perry, a talent booking agency, and PMI, an international management company. . . *Encore Studios* in Burbank has completed substantial facility renovations, spearheaded by leading acoustical consultants, Lakeside Associates. A new hardwood floor replaced the absorptive, wall-to-wall carpeting, and the walls and ceiling were fitted with a fully motorized system of acoustic louvers. The Encore control room, originally designed by Tom Hidley, was left virtually intact. . . *In House Studio* in Cambridge, MA, has installed a 32-input Audioarts console with a fader automation module, and a 16-track recorder. They also added a lot of MIDI interfaceable equipment including six synthesizers, three digital sequencers, and three drum machines. . . Noted Nashville engineer *Mike Shockley* has joined the production staff of *Hayes Recording Studios* in Tampa, FL. . . *Digital Recorders*, a 48-track digital recording studio designed by Norbert Putnam opened in Nashville mid-winter. Digital Recorders has a Sony PCM 3102 2-track open reel digital tape machine, the first of its kind to be installed in a recording studio anywhere in the world. The studio also utilizes two Sony PCM 3324 24-track digital tape machines and a Sony MXP-3000 mixing console. . . GRP Records' in-house studio (NYC) *The Review Room* has added a Sony 1630 digital processor and a Sony digital editor to enhance the company's already burgeoning Compact Disc recording capacity. . . *Omega Recording Studios*, in Rockville, MD has purchased an Emulator II synthesizer and a Korg DW-8000 synthesizer, capable of being MIDI'd to their Yamaha DX7 and MIDI Bass. . . *Abbey Road Studios* in London has taken delivery of a Quad Eight Westar console to replace the Neve currently installed in Studio Three. . . *The Studio* of Kansas City, MO, has opened the first 32-track facility in town. It features digital mastering and a 48-in Amek desk. . . *Ayre Studios* in San Jose, CA, is under new management. *Jeff Sterling*, who came from a management position at K&K Music, has a background in analog and digital synthesis and recording, is now at Ayre and with him comes an Emulator II system and a complete MIDI system as well.



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PITCH CHANGE A BASE KEY = C 3	PITCH CHANGE B 1 FINE = + 8	PITCH CHANGE C L DLY = 0.1ms
PITCH CHANGE D F.B. GAIN= 10 %	ADR-NOISE GATE TRG. MSK= 5ms	SYMPHONIC MOD. DEPTH= 50 %
STEREO PHASING MOD. DLY= 3.0ms	CHORUS A DM DEPTH= 50 %	CHORUS B AM DEPTH= 10 %
REV 1 HALL REV TIME= 2.6s	REV 2 ROOM DELAY = 20.0ms	REV 3 VOCAL LPF = 8.0 kHz
REV 4 PLATE HIGH = 0.7	EARLY REF. 1 TYPE = RANDOM	EARLY REF. 2 ROOM SIZE = 2.0
STEREO FLANGE A MOD. DEPTH= 50 %	STEREO FLANGE B MOD. FRQ= 0.5 Hz	STEREO ECHO Rch F.B = +58 %
DELAY L,R Lch DLY = 100.0ms	TREMOLO MOD. FRQ= 6.0 Hz	DELAY VIBRATO VIB RISE= 1400ms
GATE REVERB LIVENESS = 5	REVERSE GATE TYPE = REVERSE	REVERB & GATE TRG. LEVEL= 65

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## WHAT'S DAT?

by Ken C. Pohlmann

Insider Audio? What's that? It's my new column, replacing Audio Applications, which joins Digital Discussions in the vaults of immortal audio journalism. Insider Audio is a new approach to the familiar problem of

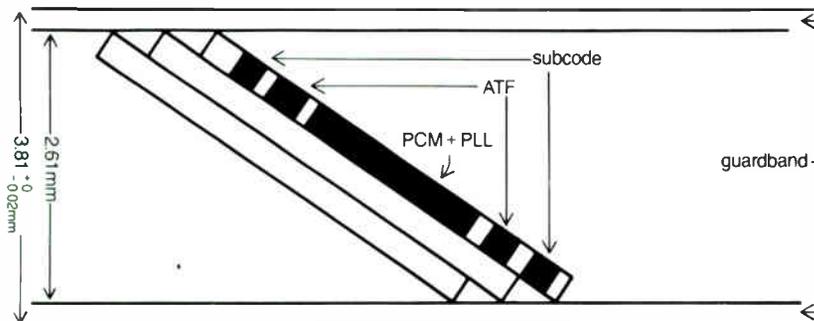
communicating new and meaningful (e.g. profit-making) information via the shortest and largest-diameter pipeline. That's an important concern in the audio industry, given the quickening evolution of product development and technique refinement. I don't know who said, "The more things change,

the more they stay the same," but he sure wasn't a veteran recording engineer, trying to figure out Macintosh MIDI software.

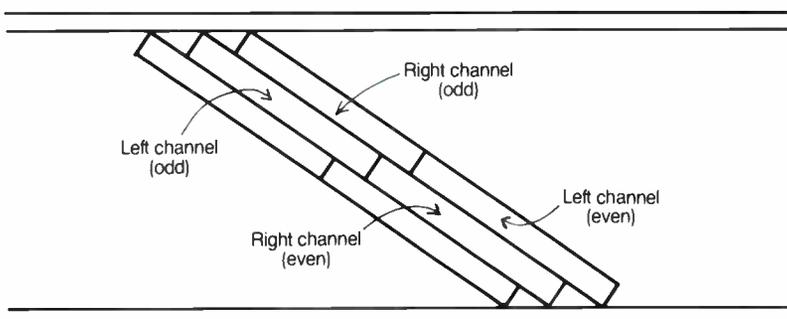
The key ingredients in this column will be information and change. Through Insider Audio, I'll try my best to bring you the information that's changing the fastest, and explain it in terms that are relevant. New products, new techniques, new theory, people with something to say, my personal speculation—they're all potential candidates. The only rule of thumb is: is it timely? In the interests of expediency, I'll have no qualms about going out on a limb with unofficial info. However, I'll use my B.S. filter to selectively separate the useful from the useless.

Finally, there'll be a special appended ingredient—rumors. When there's change in the wind, there's always gossip at the office water cooler first. In my quest to make you the first to know, I've appointed myself chairman of Audio Rumor Central. I'll gladly

**FIGURE 1** R-DAT data fields showing tracking correction blocks



**FIGURE 2** R-DAT data fields (288 bits)



**FIGURE 3** R-DAT data distribution

and confidentially accept any information, rumors, heresay or gossip (pertaining to the audio industry) that you'd like to see printed. The corporation you save could be your own; the corporation you ruin could be your competitor's. In addition to your secret satisfaction, I'll send a special *Mix* prize to the hottest tipster of the month.

Let's get to this month's topic. When it comes to digital audio technology, the professional tail no longer wags the consumer dog. The economics of digital technology dictates mass repli-

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cation of the integrated circuits and assemblies to repay high development costs. Thus professionals will wait until digital systems have been developed for the consumer market. The newest example is DAT (Digital Audio Tape). Although consumer acceptance is uncertain, manufacturers are forging ahead, and a rotary head version, R-DAT, should appear in stores within a year. Simultaneously, you should expect pro versions. Most technical details of the new format have now been standardized by the EIAJ.

As summarized in Table 1, R-DAT standards call for four record/playback modes, and two playback-only modes. The Standard record/playback, and both playback-only modes, called Wide and Normal, will be standard on every R-DAT recorder. All machines will have full digital inputs and outputs. The Standard mode offers 16-bit linear quantization and 48 kHz sampling rate. Both playback-only modes will use a 44.1 kHz sampling rate. Get the feeling that something is missing? You're right. The format outlaws 44.1 kHz recording, thus you cannot digitally record Compact Discs (from CD players with digital outputs) or prerecorded R-DAT tapes. In addition, every recorder has a watchdog circuit which prevents operation if any digital source has been copyguarded. While this

puts the whammy on piracy, it also creates a digital recorder with little or nothing digital for the consumer to record (more on this later), aside from live digital recordings.

Three other record/playback modes, called Options 1, 2, and 3, all use 32 kHz sampling rates. Option 1 provides two-hour recording time with 16 bit linear quantization, and option 2 provides four hours with 12 bit nonlinear quantization. Option 3 provides four channel recording and playback also using 12 bit nonlinear quantization. Despite their low fidelity, these options are actually compatible with something, namely direct broadcast satellite material, beamed earthside at 32 kHz. Fully digital recordings could be made, if you live in the satellite's footprint, in Japan, or parts of Europe. Not available in the U.S.

What is an R-DAT good for? What an analog cassette recorder has always done—record from prerecorded or live analog sources, or digital sources converted to analog. Or play back prerecorded digital tapes. In the Normal mode, prerecorded R-DAT tapes will be duplicated in real time; as with the record/playback modes, metal particle tape will be used. In the Wide playback mode, tapes can be duplicated at high speed using contact printing techniques identical to those

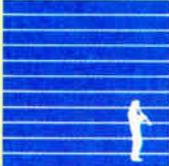
already used to duplicate video tapes. A blank tape is fast forwarded with a master tape; a focused magnetic field at the point of contact causes the blank tape to assume the magnetic characteristics of the original.

However, the resulting signal level is lower than that from real time dubbing, thus the Wide mode requires a track width wider than the other modes to compensate for the decrease in output level. Track width is effectively widened by increasing linear tape speed 1.5 times. Playing time is reduced to 80 minutes. However, since the recording square density is lower, regular ferric oxide tape may be used instead of metal particle tape, thus further lowering dubbing costs.

As its name implies, the R-DAT borrows a rotating head from video technology; this permits slow linear tape speed, but achieves high bandwidth. The R-DAT rotating drum has two heads 180 degrees apart and a tape wrap of only 90 degrees. Because of low wrap, tracking stability is said to be better than M-wrap and U-wrap video systems. This should facilitate design of portable and car R-DAT players.

To help tape tracking, a sophisticated tracking correction system, along with a good deal of tape area, is employed. As shown in Figure 1, part of

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each data track contains tracking data, labelled ATF. As each track is read, the head overscans the track width to read a small part of the adjacent tracks. While reading the ATF portion of the track, its intensity is compared to that on adjacent tracks. A difference causes the tracking correction servo system to adjust the head accordingly.

The PCM audio data is recorded with eight to ten modulation, and contained in 196 blocks per track. Other data blocks are used for subcode; as on the Compact Disc, this data is used for program timing, indexing, music selection, etc., as shown in Figure 2. As with any video-based system, time compression must be used to separate the continuous input analog signal into video fields prior to recording, then rejoined again upon playback with time expansion to form a continuous audio output signal.

To facilitate error correction, each data track is split into halves, between left and right channels, as shown in Figure 3. In addition, data for each channel is interleaved into even and odd data blocks, one for each head. If one head reads bad data because of dirty tape or a tape defect, data received from the other head can be used to perform interpolation on the missing data. All of the data is encoded with Reed Solomon error correction code, as on Compact Discs.

R-DAT cassette size is 73 x 54 x 10.5 millimeters, slightly more than half the size of an analog cassette, uses 3.81 millimeter-wide tape, equal to the 1/8-inch tape used in analog cassettes, and 13 micron-thick tape, equal to that used in analog C-90s.

That's about the size of the R-DAT, but what about its chances for success? As we've seen, although the R-DAT recorder will have full digital inputs and outputs, as well as analog varieties, 44.1 kHz sampling frequency will not be allowed in the format, thus direct-digital copying of CDs will be impossible. A pirate would have to take an analog output from the CD player and record that signal with the DAT, or wait until bootleg sampling frequency converters appear. (Probably not a long wait.)

While the R-DAT format's built-in incompatibility protects the digital nature of data on the Compact Disc, and prerecorded R-DAT tapes, and should please anyone making money from prerecorded sales, it cripples the DAT format; why should the consumer bother to buy a digital tape recorder if he has nothing digital to record? Sure, it's digital, but aside from that, the format offers little advantage. The analog cassette was a success because it offered a combination of features not present in any other format: it was



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recordable, portable, smaller and more convenient than other formats, and had potential for high fidelity. It was an entirely new recording format, a concept so strong that the cassette has become the dominant format for prerecorded music; when blank tape sales are thrown in, the numbers are staggering. The Compact Disc is another example of an original product destined to succeed; it incorporates portability, convenience, robustness, rapid access, and high fidelity.

The R-DAT does not offer a new concept in format. Aside from smaller cassette size, and chance at higher fidelity, it essentially duplicates the analog cassette and thus must compete head-to-head with the most successful format on the market. It will also suffer competition from the Compact Disc; prerecorded tape will probably cost more than a CD, will not be as robust, tape will wear out, heads will wear out, and the hardware will be more expensive, and not as portable. What does the R-DAT offer? It is a high fidelity sound carrier that is portable. But the analog cassette and Compact Disc already fulfill those criteria.

Sure, the R-DAT is better than the analog cassette because it is *digital*, and it is better than the CD because it is *recordable*. But does the consumer really want a digital recorder? Specif-

ically, what is he going to record? If he buys an analog prerecorded medium like cassette or LP, what is the advantage in copying it to a digital medium? A cassette is already portable, and copying it to a digital medium would not increase fidelity. And an LP might as well be copied to analog tape since it is cheaper than digital and captures the LP's fidelity. And if he buys a digital prerecorded medium like CD, why bother copying it (via analog conversion) to digital tape if car and portable CD players are cheaper? Even if digital recordability is desired, the write-once and recordable/erasable CDs compatible with regular CDs have been developed.

Even though digital recordability might not be that important to the consumer, R-DAT will probably succeed in time, simply because it is a newer technology supplanting an older one. Meanwhile, perhaps the professional will be the immediate benefactors of all that R & D. Pro versions of R-DAT are being prepared, and should sell for less than \$2000. Given two recorders and an editor, any studio can be fully equipped for 16 bit quantization, 48 kHz sampling, digital recording. The lack of 44.1 kHz recording capability is a complete pain for making CD master cassettes (or R-DAT master tapes) but will be accommodated with

sampling frequency converters.

Even if the consumer rejects the R-DAT (unlikely, I think), the professional will benefit from the resulting drop in the price of digital audio technology. Specifically, every recording studio will be able to afford digital recording. PCM-F1 owners—move over.

### Audio Rumor Central

Look for: Sony D-7 portable Compact Disc player with AM/FM radio built-in, VTRs with DASH format audio tracks, and increased production at Digital Audio Disc Corporation to 3 million CDs per month. Don't bother looking for: S-DAT. Most heroic job change award: Roger Lagadec, who trades chocolates for chopsticks, and never ceases to surprise almost everybody. Saddest rumor: Otari lost a major bundle in a patent infringement lawsuit. Most interesting infighting: Sony's complaints against Denon advertising for claiming to have invented digital audio. Or is it because of Denon's rumored entry into pro digital audio?

Do you have information or rumor for Insider Audio? Each month's hottest tip wins a special prize courtesy of *Mix*. Contact Ken Pohlmann, University of Miami, P.O. Box 248165, Coral Gables, FL 33124, Telex: UOFMIAMI CGCL or *Mix* at (415) 843-7901. ■

## R-DAT OPERATING SYSTEMS SPECIFICATIONS

	Recording and Playback Modes				Playback Modes	
	Standard	Option 1	Option 2	Option 3	Normal	Wide
Number of Channels	2	2	2	4	2	2
Sampling Frequency (kHz)	48	32	32	32	44.1	44.1
Quantization Bit (Linear/Non-L)	16L	16L	12NL	12NL	16L	16L
Recording Line Density (kB/in.)	61.0	61.0	61.0	61.0	61.0	61.1
Recording Sq. Density (MB/sq. in.)	114	114	114	114	114	76
Transfer Rate (MB/second)	2.46	2.46	1.23	2.46	2.46	2.46
Subcode Capacity (kB/second)	273.1	273.1	136.5	273.1	273.1	273.1
Modulation Method	Eight to Ten Bit Modulation					
Error Correction	Double Encoded Reed Solomon Code					
Tracking	Divided Area Alternate Tracking Fields					
Cassette Size (mm)	73 x 54 x 10.5					
Recording Time (minutes)	120	120	240	120	120	80
Tape Width	3.81					
Tape Material	Metal Particle					
Tape Thickness (microns)	13 +/- 1					
Tape Speed (mm/second)	8.15	8.15	4.075	8.15	8.15	12.225
Tape Pitch (microns)	13.591					
Track Angle	6 degrees, 22', 59.5"					
Drum Size (mm)	30 mm - 90 degree wrap angle					
Drum Rotating Speed (rpm)	2000		1000	2000		2000
Writing Speed (meter/second)	3.133		1.567	3.133		3.129
Head Azimuth Alt. Tracks	+/- 20 degrees					

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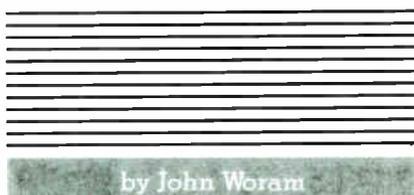
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**S**o, is this column going to be on audio nostalgia or audio basics? Well, how about a little of both? After all, while the over-cliched 'cutting edge of technology' keeps penetrating new frontiers, the basic theories don't change at all."

---

## Something Old, Something New...



I'm staring at a blank sheet of paper (that's poetic license: I'm actually peering into a monochrome screen). After all these hours, it should be displaying the first of a long series of complete articles on audio basics. But I only see three sentences, so something must be wrong.

The problem is, your editor (and now, mine too) decided *Mix* needed some entry-level material as well as all the good stuff that you'll find elsewhere in this issue. When the subject of who could write it came up, it turns out that Ken Pohlmann suggested me, as one who knew a lot about the subject. Of course I was delighted, but that was before I heard the rest of it: he said I knew a lot about it since I'd been trying to get started in the indus-

try myself for the last 25 years.

I protested immediately. "Hey, I taught Pohlmann everything I know."

"We know," said the editor. "He said it took you about three hours." A lie of course. It was more like five hours—and even then I didn't tell him everything. In fact, I left out quite a bit, in case I ever got another chance to write a monthly column somewhere.

Well the opportunity has come, and I've grabbed it. Now all I have to do is figure out how to get started. At the risk of sounding like someone who is dangerously close to being over the audio hill, I'd like to start in reverse by taking a quick backward glance.

By the end of the first half-century of sound recording, magnetic tape was the accepted medium, and every major studio was using monaural 1/4-inch tape recorders. But the studio business as we know it today still did not exist. The recording industry was a handful of major labels, each with its own in-house studio. There was no such thing as the studio down the block that could do it better, faster and cheaper. And even if there was, who would use it? An artist under contract recorded at the company studio, and was never seen in a studio belonging to the competition.

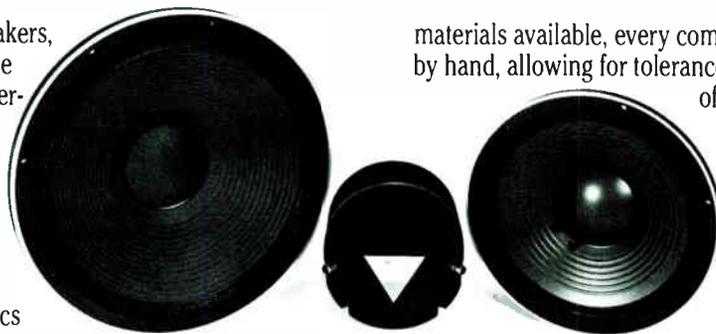
In fact, and not that many years ago, at least one group got, and gave, a little grief after cutting their first album at a newly-emerged independent studio. The album was subsequently sold to, and released by, a major label. The contract fine print obliged the new superstars to do their future work at the label's own studio. This was understandable, since the label was sitting on an expensive piece of real estate which they had built for just this purpose. On the other hand, the group was coming down off a hit record recorded elsewhere, and wanted to return to the scene of their first triumph. The resulting altercation was not pleasant. With a little wheeling and dealing, some behind-the-scenes negotiations and no end of bad feelings, the group was finally corralled into the company studio for the recording, while some of the mixing went on down the block at you know where.

How time flies. A recent news release describes the installation of a universal interface adapter at RCA's Soundstream Digital Editing Suite. The

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first use of the new system was to edit a Mahler symphony recorded in Vienna—by and for CBS Masterworks.

But back to those days of yesteryear. In the very late '50s, 2-track machines began showing up in the studios. It wasn't long before a third track and a new tape width (half-inch) showed up. This made it a lot easier to balance the soloist track against the two orchestral tracks. This didn't last long at all, for if you could put two tracks on 1/4-inch tape, why not put four of them on half-inch tape?

### How High The Moon

Then someone named Les Paul said something like "...better yet, how about eight of them on one-inch tape?" Fortunately for the rest of us, Les was more of a musician than an engineer, so he had difficulty following the "it just can't be done" argument. Les wanted it done, and so it was.

By the late '60s, the 16-track 2-inch recorder was pretty much an industry standard. In scarcely ten years, the recording studio had changed almost beyond recognition. For many of the major-label studios, it was the end of an era. They had made their fortune by doing things the old-fashioned way. But now there was a new-fashioned way, and some of the old-timers hadn't learned how to keep up with the chang-

"By mid-1986, enough years have passed so that many people making their living in the recording industry have never made a non multi-track recording. But this is not quite the same as never having flown with Wilbur and Orville."

ing times. And that meant more than using someone else's studio when conditions warranted it.

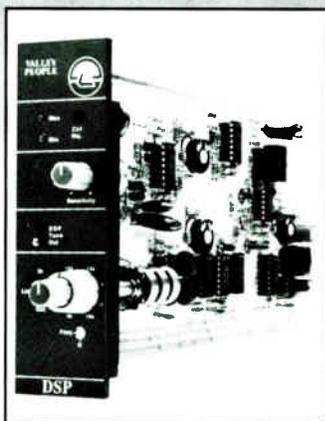
And now, back to the present. By mid-1986, enough years have passed so that many people making their living in the recording industry have never made (maybe never even heard) a non multi-track recording. But this is not quite the same thing as never having flown with Wilbur and Orville. Perhaps the Wright Brothers don't have anything to teach us about flying anymore. But some of the pioneers in audio do have a few things worth passing on to the recording industry jet set. For evidence, have a look at all the folks who are just now getting around to discovering stereo microphone techniques. But every time someone comes up with a new idea, it turns out that Alan Dower Blumlein patented it, about 50 years ago.

Unfortunately, Blumlein was forgotten during the period when everyone got infatuated with more tracks and fixing it in the mix. Although there were more and more tracks available, there were never enough to allow two to be used for something as unimportant as say, the soloist. We were all living in the age of multi-track mono. And many listeners were too young to know what they were missing.

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young to have not seen the first reviews. Although critics can usually be depended on to distrust anything new, much of what was said had validity. At last we could all hear just how bad some of our recording techniques really were.

OK, so that's unfair. The techniques were developed to suit another medium and some are simply not appropriate anymore. And so it became time to go back and re-examine our ways of doing things. Once again we see the industry being separated into two camps. This time around the old-timers can't figure out how Telarc gets so many awards.

So, is this going to be a column on audio nostalgia or audio basics? Well, how about a little of both? After all, while the over-clichéd "cutting edge of technology" keeps penetrating new frontiers, the basic theories don't change much at all. But then, neither does the law of gravity and some of the other foundations of the space age.

Oops, I just dated myself again. The space age was yesterday. Today we're supposed to be living in the information age. That last sentence makes a good place to begin a digression: information is a two-way process (I suppose I should say, is a bi-directional bus). In order to effectively pass out information, there's nothing like a little feedback (positive or negative) to know what sort of information is needed. From conferences and seminars here and there, I've picked up some ideas about what's of interest and what isn't, and what should be covered even if it's not the least bit interesting. But the *Mix* readership is a new audience for me, unseen and so far, unheard. And there's nothing like a little audience reaction to keep things moving. For more on this subject, refer to Johnny Carson on any off-night. But now, back to the original digression.

I'm a mic freak. After years of trying this one and that, I had my own ideas about how to record just about everything. I had my own list of favorites, modified somewhat to suit the music and the musician. But I was once asked what happens when the outputs of two of my old favorites are combined, with one output being out-of-phase.

Of course I knew it depended on their relative orientation: facing in the same direction the outputs cancel, while back-to-back creates a figure-8. But what happens if the mics are angled at say, 53.8 degrees? What is the resultant pattern?

For me at least, it took a little computer time to figure it all out. Since then, I've been boring everyone who will listen with the results. But now with renewed interest in stereo miking

techniques, such questions are no longer just another form of trivial pursuit in the studio. If you haven't got the bucks for a good stereo microphone, you can temporarily create one—perhaps with two mics already on hand. Or, you can whip up a cardioid mic that is totally dead in the rear, using just about any two mics that are convenient.

The answers to the 53.8-degree question, and to the method of creating stereo, or just about any other patterns, from a pair of mics, come easily to anyone who has taken the time and trouble to wade through some of the less-than-thrilling mathematics of the microphone. It's not the sort of thing you would want to do in the middle of

a busy session—at least not if you want to remain busy in the future. But a little up front homework will make it all seem easy, and may even wind up being useful some day when you're caught in an unexpected situation—which is just about every day in most studios.

Stop looking ahead: the answer is not in the next few paragraphs. In fact it's going to take at least a few columns to get to the bottom of this. Some of it will be dull, some historical and perhaps some will be both. For those interested in learning or re-learning some of the basics, I hope it will be worthwhile sticking around. For the others, go read Pohlmann and find out what's really going on out there. ■

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PHOTO: PAULA PARISI

Producer Steve Lillywhite at Right Track Studios in NYC.

## STEVE LILLYWHITE

### From Ultravox to the Stones

by Paula Parisi

Mention the name Steve Lillywhite at your next trade mixer, and you'll likely hear phrases like "brilliant," "booming drums," "demanding," and "self-indulgent" shot off in rapid succession. Speculation about this young British producer abounds. He's temperamental, so it goes, but precociously talented. He astonished members of the trade by landing behind the board of the Rolling Stones' latest album, *Dirty Work*, making him the first full-fledged producer the band has taken on in over ten years. Pale, thin and possessed of enough devil-may-care charm to be a Stone, Lillywhite spent the better part of 1985 with the group—first at Pathe Marconi Studios in Paris, later in New York. Other projects of the last few years include albums by Big Country, Simple Minds, U2 and Peter Gabriel.

At 30, Lillywhite has been producing records 13 years, since netting his first pro credit at the age of 18. He cut his teeth in the recording studios of punk era London, where he invented a style for himself by experimenting with in-groups of the moment—XTC, Ultravox, The Psychedelic Furs. His big, booming drum sound has been widely imitated. Through all its striking incarnations, what has the Lillywhite moniker come to mean? "It means, when you see his name on a record, you listen to it," as one metropolitan DJ put it. Working non-stop since he signed on as producer for his first LP in 1974, Lillywhite is finally taking time off to share his new found success with his wife, singer/songwriter Kirsty McColl, who penned the Tracy Ullman hit, "They Don't Know About Love," and young son Jamie (making very promising sounds with his xylophone, we're told). Lillywhite took time out to sip champagne with *Mix* while re-

working the Stones' first EP singles at Right Track studios in New York City.

**Mix:** After really establishing your sound with U2, what made you move on?

Lillywhite: It was great working with U2. I think Bono is truly one of the best singers in the world. He also writes some of the greatest lyrics. However, I don't think it's advisable for a producer to form a safe association with any one group. You become identified with a particular sound and that can be limiting. You get predictable. You fall into patterns. Bands tend to fall in and out of favor. Producers can generally weather the trends better if they don't become typecast.

**Mix:** It's true you ran a stick through the spokes of a spinning bicycle wheel and broke glass at the bridge of "I Will Follow." Any special effects on *Dirty Work*?

Lillywhite: Yes, we used artificial reverb (laughs). You've got to cater to the strengths of whatever clients you're working with. I thought that the strength of a Rolling Stones record would be to get it good and powerful and upfront. I produce all different sorts of music, and I'd like to think that I can take whatever project I'm offered and bring out what is best in that music rather than put my own stamp across it.

Mix: How would you define a producer's areas of responsibility on a particular project?

Lillywhite: Funny you should ask. At Right Track, where we did the mixing and overdubs, there was this room with a telephone and a conference table right next to the control room, and it's called "the producer's room," which is typical, really. I happen to think a producer belongs behind the board, not off somewhere wheeling and dealing on the blower all evening. Of course, there are those who would disagree.

Mix: To what degree did your authority actually extend on this record? Did you ask The Rolling Stones to change arrangements and things?

Lillywhite: Of course (laughs). That's a producer's job. I didn't go around

"I saw more of the Rolling Stones while we were working on this album than I did of my wife, and I know the same is true of them and their spouses."

saying "play this chord, play that chord," and I'd certainly never ask them to change a lyric. If I was a songwriter... well, I'd be an artist myself. But it's bloody rubbish trying to tell

someone what is and what is not a commercial lyric. That's slightly overstepping the bounds. On this project—and I guess it's no secret—there was a certain amount of tension among varying parties, so an important part of my job was to keep things running smoothly, making sure things clicked. It was kind of like a Henry Kissinger role—the great diplomat. But you know, that element of tension can be good in a way, and is not to be discouraged entirely. It produces energy that can be channeled creatively.

Mix: It sounds like it was a great working relationship.

Lillywhite: Yes, well, it's like any other relationship. When you're around anyone that much, it's bound to get a bit dodgy at times. Like a family, you know, the little day to day difficulties... I certainly saw more of the Rolling Stones while we were working on this album than I did of my wife, and I know the same is true of them and their spouses.

Mix: It must have been a challenge to keep things in perspective, especially when you've got three guys who all want to play bass on the same track.

Lillywhite: Yeah, we were pioneering a new recording technique—"bass-

—PAGE 114

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# The FUTURE of AUDIO CONSOLE DESIGN

by Colin Sanders, Douglas Dickey  
and Chris Jenkins

## Editor's Note:

Several months ago, British console manufacturer Solid State Logic published a report to the recording, post-production and broadcasting industries on "The Future of Audio Console Design." The report was designed to help establish a broader dialog between the purchasers and users of advanced control room equipment and those involved in its design and manufacture.

Although based on SSL's own research and observations about these matters, the material in the report is non-product specific, addressing issues of universal concern to the professional audio community. For this reason, the editors of *Mix* have decided to republish this report in its entirety over the next several issues.

Our thanks goes to Solid State Logic for permission to reproduce this material and for their assistance in preparing the manuscript for these installments.

## INTRODUCTION

The central objective of audio console design is to develop systems that efficiently serve the creative and technical needs of the audio production industries. Generally, the future goals that the industry has set for console manufacturers are both clear and demanding:

- Perfect the audio performance.
- Increase the number of available inputs and outputs.
- Reduce the physical dimensions.
- Extend the creative capabilities afforded by the device.
- Extend the flexibility of the device to serve a broader range of applications.
- Devise systems that are easier and faster to learn, operate and maintain.
- Improve reliability and standardization.

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*The central issues of future console design are the physical separation of the hardware, and the reliability and sophistication of the data networks and software that integrate the resulting systems.*

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- Reduce obsolescence.
- Realistically optimize the cost/performance ratio.

It is relatively easy to implement advances in any one of these areas—or even in combinations of two or three areas—providing that it is acceptable to do so at the expense of other performance aspects. In a limited number of specific applications, this may be the case. But generally, the requirement for future devices is that they must *at least* maintain the present performance standards achieved by contemporary analog consoles in *all* of these areas, while introducing any additional benefits that may be afforded by new concepts and technologies.

This comprehensive requirement is what the art of console building is really all about. The way in which the console designer handles each aspect may have far reaching implications for every other aspect.

This report is primarily concerned with the ways in which various approaches affect that critical balancing act. The discussion encompasses standard analog consoles, fully digital systems and various interim stages. It is broadly organized into four sections:

- Audio Processing (Analog and Digital)
- Controls and Displays
- Control Computers
- Automation and Storage

These subdivisions are more than a convenient device for managing the subject matter. The central issues of future audio console design are the physical separation of the hardware used to accomplish these functions, and the reliability and sophistication of the data networks and software that integrate the resulting systems.

## AUDIO PROCESSING

One of the difficulties in discussing audio console design is that new concepts and new technologies have generated a new and largely unfamiliar vocabulary. To help alleviate this problem, any generally unfamiliar terms used in this report will be explained when they first occur. It is necessary to start with several definitions:

**Audio Processor:** In the context of this report, an audio processor is a device used to switch and/or modify audio information. An analog audio processor handles this information in the form of analog audio signals; a digital audio processor handles it in the form of digital codes.

**Control Set:** A control set consists of one or more controls used by the operator to instruct an audio processor. It also includes any directly related displays used to indicate control value or position. For example, a control set might consist of a rotary knob with a pointer, surrounded by numbers; or a pushbutton with an LED indicator or alphanumeric readout. It might consist of a touch screen, or an illuminated keypad, or any other control/display combination.

**Programmable:** An audio processor is said to be "programmable" if it is



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capable of being remotely controlled, rather than being dependent on mechanical linkage with its control sets.

This last term is very important. The FET switches already used in most analog consoles are programmable devices. The VCAs and servo-motors used in fader automation systems are also programmable devices. However, the majority of *variable* functions performed within analog consoles are still dependent on mechanical links between their control sets and audio processors.

Complete freedom from this restraint is a prerequisite for substantially advancing state-of-the-art. The development of a flexible and *fully* programmable audio processing architecture is an essential key to the future of audio console design. From this understanding, we can proceed to define the three broad categories of audio console architecture:

**Standard Analog Console:** A console employing analog audio processors in which the majority of variable functions (panning, equalization, and gain or level controls other than faders) are *not* programmable.

**Fully Programmable Analog Console:** A console employing analog audio processors in which all switching and variable functions are programmable.

**Digital Console:** A console employing all digital audio processors. It is important to note that digital audio processors are *inherently* programmable.

The numerous variations on these three themes will be discussed in later sections of this report. At this point, it is necessary to briefly address only two of these variations, to further clarify the meaning of programmability.

### **Programmability**

"Programmability" should not be confused with "automation." In order to automate a function, a programmable audio processor is required—but increased automation is only one of the potential advantages of a fully programmable audio processor. Programmability should also not be confused with "assignability," which is a philosophy of control presentation in which common functions can be assigned to a single control set, or single control sets can be shared between diverse functions. This concept can be extended to provide more functions in less control area. While assignable control surfaces require programmable audio processors, they are just another one of many possibilities that programmability creates.

The main advantage of programmability is that it eliminates the need for mechanical linkages between the control sets and their audio processors. Programmability thus promises an un-

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## *The practical realization of a fully programmable audio processor for use in professional audio consoles is an international priority.*

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precedented degree of freedom for the console designer. Entirely new types of controls and indicators may be used. Control and display layouts can be optimized strictly for ease of operation and maintenance, without concern for behind-the-panel physical restrictions normally imposed by mechanically-linked audio processing components.

For these and other reasons, the practical realization of a fully programmable audio processor suitable for use in professional audio consoles is an international priority.

### **Analog or Digital?**

Digital audio processors are, by definition, inherently programmable. This would seem to be a great advantage. However, digital audio itself is still in its early years. Particularly in the context of audio console requirements, the present level of digital audio processor development poses considerable problems. Concerns about cost, reliability, serviceability and audio performance have, to date, limited the acceptance of digital console technology within the professional community.

As a result, attention has naturally been turned to the development of a suitable fully programmable analog alternative. This is an appealing idea. Drawing on many decades of continuous development and evolution, the circuitry employed in standard analog consoles is capable of an extremely high level of audio performance, reliability and functional sophistication. It seems logical to explore the possibility of retaining these advantages and economically coupling them with the promises of programmability.

As standard analog technology is a common reference point for most readers, this report considers the issues of programmable analog audio proces-

sors first, and digital processors second. It then goes on to discuss the control surface requirements implied by programmability, regardless of the audio processing choice.

### **PROGRAMMABLE ANALOG SYSTEMS**

While standard analog consoles are not fully programmable, they have a number of advantages to offset this. In comparison with their digital and fully programmable analog counterparts, they are relatively inexpensive. They are easy to service, and can be readily modified in the field. They consume less power, generate less heat and are highly reliable. Thousands of mixing engineers are familiar with their operation. Finally, standard analog circuit design is a mature science, providing superb audio performance and substantial creative flexibility.

Standard analog does have its drawbacks, however. The industry's need to handle greater numbers of inputs and outputs with more creative signal processing capability represents the greatest challenge. Because standard analog audio processors require mechanically linked control sets, this requirement translates directly into larger control desks. Beyond a certain point, this poses problems for the console operator, the acoustic designer and the space planner that cannot be solved by traditional means. This is particularly true in mobile audio environments.

The desire for greater automation capability is another challenge. The standard analog console relies on two basic building blocks—the switch, and the variable resistor. To achieve complete automation, programmable equivalents must be found for both of these elements.

### **Switching Functions**

Some programmability already exists in many standard analog consoles. Early consoles that used relays to trip a number of switches in response to the manipulation of a single switch were, in those aspects, programmable. When reliable and sonically acceptable FET switching became available, the circuit designer no longer had to be concerned with the magnetic radiation of relays or their comparatively large size, and further programmability became practical. The master status switching provided on most multi-track mixing consoles is an example of this.

Reductions in the cost of logic, and miniaturization made possible by thin and thick film hybrid technology, have completed this evolution. A programmable alternative to the simple mechanical switch now exists in a pack-

age that is sufficiently small, reliable, cost-effective and sonically acceptable for large-scale professional audio use. Today, it is possible and practical to build analog audio consoles in which all simple switch functions are both programmable and automated.

As the majority of front panel controls on a standard analog console are switches of some sort, it might appear that the industry is already more than half way towards the development of a fully programmable analog audio processor.

### Voltage Control of Variable Functions

To achieve full analog programmability, it is necessary to find some means of either remotely controlling variable resistance devices, or to develop a programmable replacement for them. To a limited extent, both approaches have been successfully implemented by a number of manufacturers as part of their dynamic level (fader) automation systems.

In these systems, control manipulation by the operator outputs a control voltage. This voltage may be converted into digital form for storage and modification by an external automation computer (and then re-converted to analog voltages), or it may be applied directly

to "remote control" the variable device used to accomplish the audio processing.

In one approach, the control voltage is used to instruct a servo-motor that moves the fader knob and its wiper, which are still mechanically linked with a variable resistance audio track. This is an example of remotely controlling the variable resistor, rather than replacing it with a programmable device.

In the other approach, the control voltage is used to instruct a VCA (voltage controlled amplifier) that provides the desired gain manipulation. In this approach, the fader knob is no longer mechanically linked with the audio processor it controls. This is an example of replacing the variable resistor with a programmable device.

As a solution to the present need for dynamic fader mixing automation, both of these approaches have gained widespread acceptance. Certain other functions, such as auxiliary sends, might also lend themselves to either of these approaches.

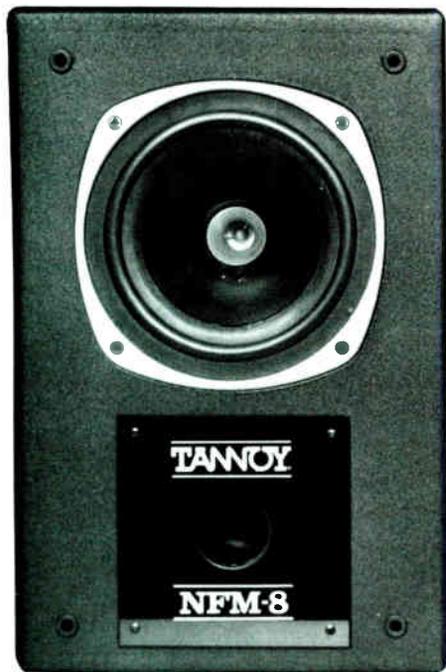
However, standard analog multi-track consoles may have as many as 56 or more primary channels, each having as many as 30 or more variable functions per channel in addition to faders. Many of these functions are

accomplished by rotating knobs that are linked with continuously variable potentiometers. In comparison with either voltage-controlled amplifiers or servo-motors, this is a highly compact, reliable and inexpensive arrangement.

The costs involved in replacing each of as many as 1600 or more standard control sets with VCA or servo-motor technology is staggering. Reducing the number of front panel control sets through some method of sharing has a negligible affect on this cost, as one programmable device per function is still required within the audio processor itself.

Moreover, many of these variable functions involve more than simple level control—they require the control of feedback around an amplifier. Problems involving control range stability (VCAs) and repeat-accuracy tolerances (servos) severely restrict the usefulness of either substitute in such arrangements.

Designs reliant on vast quantities of either voltage-controlled amplifiers or servo-motors pose myriad additional problems. Analog-to-digital and digital-to-analog control conversion, electronic and mechanical noise, the physical size of the components and their required support circuitry, routine maintenance and alignment require-



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ments, and data system support requirements all compound to make such designs impractical. Finally, the component industry's present inability to supply sufficient quantities of these devices with the necessary laws and tolerances places world-scale realization of such designs out of reach.

While this does not mean that the search for a programmable voltage-variable pure resistance device should be totally abandoned, it does strongly suggest that other avenues should be explored.

### Digital Control of Variable Functions

The next logical step is to examine the use of switched resistors. Provided that stepped controls are acceptable for a particular function, this move has many advantages. It eliminates the need to perform analog-to-digital and digital-to-analog control conversions. Instead of linking the control sets with potentiometers, they can be linked with shaft encoders or other devices that convert the operator's manipulations directly into digital code. These codes can be used to instruct logic gates in the audio processor, producing the required outputs to flip its switches.

Moreover, as FETs have already proved suitable for simple on/off switching, the designer already has a starting point for developing programmable audio circuits based on switched rather than continuously variable resistors. Of course, a number of switches will be required per variable function. The actual number depends on the degree of resolution required for each particular function.

### Resolution

By switching between various combinations of four fixed resistors, 16 different steps can be achieved. With seven fixed resistors, 128 steps can be achieved; with eight fixed resistors, 256 steps can be achieved, and so forth. In practice, a greater number of fixed resistors are required for functions requiring logarithmic scaling or specific combinations of values.

In determining the minimum number of steps required for a given function, two kinds of resolution must be considered—*static* resolution and *dynamic* resolution. Stereo panning provides a good illustration of the difference between these two.

Most researchers agree that a listener cannot pinpoint more than 15 discrete positions between hard left and hard right in a stereo field. Many put this number at nine discrete positions. The higher number safely determines the static resolution requirements of a stereo pan pot.

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*One goal of future console design is to gain advantage for the user without sacrificing existing analog benefits.*

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However, if one dynamically pans an audio signal from full left to full right using a processor that provides only 15 steps, the jumps between each of the discrete positions is clearly audible. The dynamic resolution requirements of a stereo pan control are, therefore, much greater than the static requirements.

As one goal of future console design is to gain advantage for the user without sacrificing existing analog benefits, sufficient dynamic resolution must be provided to emulate continuous variability for many functions. Practical numbers for achieving this are in the region of 64, 128 or 256 steps, depending on the particular control. To achieve this resolution with arrays of multiple FET-switched fixed resistors throughout the audio path, the designer must overcome an entirely different set of problems than those involved in simple switching networks.

### FET Distortion

One difficulty is that once more than a couple of FET switches are introduced into a given stage of an analog circuit, audible distortion arises. This is because the FET is not a perfect switch. (A "perfect" switch has infinite resistance when it is off, and no resistance when it is on.)

FETs have greater-than-zero ohms resistance when they are on, and less-than-infinite impedance when they are off. In addition, they are non-linear. With one or two FETs looking into an impedance of 10k $\Omega$ , this distortion is negligible. Typical "on" distortion of a single J-FET is in the region of 0.002 percent. Once the designer starts putting multiple FETs in a circuit however, the FETs comprise more of the total impedance of that circuit, and the cumulative "on" distortion becomes more evident.

One could raise the circuit's overall

impedance to compensate, so that the multiple FETs become a lesser part of the total impedance. This effectively reduces audible distortion when the FETs are on. However, raising the circuit's impedance dramatically emphasizes the other imperfections of FETs, which is their less-than-infinite impedance when off.

Simply stated, FETs "leak" when they are turned off—and in a programmable attenuator comprised of multiple FETs, distortion increases as each additional FET is turned off. This is due to non-linear leakage when the amount of reverse bias on the gate is modulated with respect to either drain or source. As circuit impedances are raised, the audibility of this defect increases. The effect also worsens as temperature increases. Typical distortion for an 8-bit circuit is in the region of 0.1 percent.

### Dynamic Distortion

The designer must also overcome the dynamic distortion products of FET-switched resistive networks. Dynamic distortion refers to the noises that occur as control values are being changed.

It has been given a suitably unpleasant name, "Glitch Noise," which approximately describes the audible clicks and rasps that can occur when switching between steps.

Measurement of these distortion products in small scale implementations may not reveal the extent of this problem. The accumulation of audible aberrations due to control system effects throughout multiple audio paths can vary unpredictably, depending on construction techniques, manufacturing tolerances and console format.

Under manual operation, it is unlikely that more than four or six controls would be in motion at any instant. In this case, it might be acceptable to simply *minimize* the dynamic distortion on individual controls. As two of the principal reasons for developing a programmable audio processor are to increase automation capability and to permit a greater number of channels, the problem is not that simple.

In such a totally automated system, there is no theoretical limit to the number of simultaneously occurring dynamic functions. Unless the designer is willing to artificially restrict use of the automation and limit custom configurability, the virtual *elimination* of all audible dynamic distortion on every control is required.

Dynamic distortion is a function of three properties: charge injection, non-zero crossing and potential difference.

Charge injection is a form of crosstalk between the switching signal and the audio signal. Typically, a switching

signal is in the region of plus or minus 20 volts. It is running within a few microns of an audio path carrying a signal that may be at -80dB, and it couples through. Charge injection is a product of the capacitance of the FET. This remains constant regardless of the impedance it is looking at. If the designer brings the impedance up (to reduce the distortion introduced by multiple FETs), the charge injection becomes more audible. It is a direct trade-off.

Charge injection can be minimized by switching to ground only, where fast "on" times and slow "off" times present the switching transient with low impedances for most of the time. This is what occurs in MDACs, which are discussed momentarily.

Attenuators using multiple fast switches must also be designed to prevent updates until the signal voltage crosses zero. If this is not done, instantaneous changes in level produce audible clicks similar to those caused by charge injection.

To minimize this distortion, it is necessary to maintain zero crossing within one degree phase correlation down to approximately -60dB over a bandwidth of at least 20 Hz to 5 kHz. The effectiveness of this is entirely dependent on the speed of the switch element.

The final factor contributing to glitch noise is potential difference due to gate current developed across the source/drain resistance. In essence, the problem created by potential difference is that the leading edge of the switching signal crosstalks into the audio signal. The only way to minimize the resulting glitch noise is to slow down the rise time of the switching waveform.

#### Resolution vs. Speed

While this "control slewing" effectively reduces glitch noise, it also slows down the switching itself. Because the audio processor must respond accurately to the binary sequences being output by the control set, this has serious implications for the mixing engineer. The following example will make this clear.

Consider a control set such as a rotary knob turning a shaft encoder, which outputs eight bits of binary code (on or off). This code is applied to switch eight fixed resistors in and out of the circuit in various combinations. Such a device would yield a resolution of 256 steps, which is quite a reasonable number—it could be a pan pot or an EQ knob or so forth.

If the operator turns the knob slowly, he or she will get all of that resolution. But if it is turned quickly—and the switching waveform has been slowed down enough to get rid of glitch noise—problems will occur. The code will

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arrive at the switches faster than they can respond. Some will be on when they should be off, and others will be off when they should be on.

Instead of a nice, smooth and click-free transition, these random and disallowed switching states will manifest as jumps in the audio at the very least. At worst, they will introduce the listener to an entirely new and extremely nasty kind of distortion. You might want this feature for your guitar, but certainly not on every control of an audio console.

### T-Switches

As it is unacceptable to have a mixing console with audio processing that requires the operator to work slowly,

some other method must be found to balance the trade-offs between distortion, charge injection, potential difference and control resolution.

For example, the distortion-while-off problems caused by FET non-linearity could be substantially reduced by using several FETs in a T-switch arrangement, creating a less "leaky" off condition. By replacing every switch with an array of T-switches using matched FETs that are timed perfectly and zero-crossed, the designer could substantially minimize these problems.

### A.O.T. Liability

Unfortunately, so much compensation has now been added to the circuit that it has become both large and com-

plicated. In manufacturing terms, this kind of circuit suffers from an extremely high A.O.T. liability. This means that the circuit requires a great many trim pots to optimize its performance, and each of these must be Adjusted On Test by the console builder.

This is the kind of labor intensive, time consuming work that modern production engineering techniques seek to avoid. It not only increases the cost of manufacturing, it may well imply higher than acceptable maintenance costs for the end user, because manufacturers' adjustments inevitably drift over a period of time.

This could create a situation similar to that encountered with early digital tape recorders, where the converters needed to be lined up regularly for minimum noise, except that in this instance, one would be lining up the console for minimum clicks.

### Hybrids

The A.O.T. liabilities could be resolved by producing the necessary T-switch arrays as a series of hybrids in which absolutely everything was optimized. While this decreases labor costs, that economy is offset by the dramatic increase in component costs. Further, no more than four such arrays (yielding a maximum of 16 steps) can be serviceably mounted onto a single Eurocard. The designer is thus faced with another trade-off, between resolution and physical size.

### Opto-FETS

In many respects, the optically-coupled FET is the best switch available today. It exhibits no charge injection other than a tiny photovoltaic effect on the order of a fraction of a millivolt. The Opto-FET provides almost total isolation between the control and audio signals. It is fast enough to allow zero-crossing and direct binary operation, and it exhibits extremely low distortion. On initial investigation, it appears quite promising.

Unfortunately, the drive current consumption of an opto-FET is on the order of 40 mA per switch. It also has a very low saturation current, approximately 0.4 mA, which necessitates high circuit impedances, thus precluding its use in microphone preamplifier stages. Opto-FETs generate a lot of heat and take up a large amount of pcb space. They are also the most expensive component considered so far, and are not presently available in the required quantities.

### MDACs

An MDAC (pronounced em-dack—short for multiplying digital-to-analog converter) is essentially a collection of

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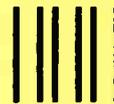
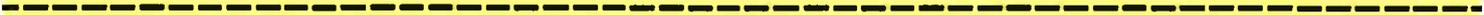
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# BEARSVILLE

## Getting Away From It All In the Backwoods of New York



PHOTO: JOHN BELTRY

*Bearsville's Studio B control room (pictured above) features a 48-input Solid State Logic 6000 console and Studer A800 multi-tracks.*

by Bruce C. Pilato

Although it has been a haven for artists and intellectuals since its founding in 1902, when the name Woodstock is mentioned most of us think of the great rock festival in August of '69 that brought 500,000 people together for three days of love, fun and music. Woodstock has come to symbolize an entire generation, and the sleepy community of roughly 7000 hasn't been the same since.

In the late 1960s, the town became home for a select few of rock's royalty, including Bob Dylan, The Band, and Jimi Hendrix. Since the festival, many more have settled there. Today, roughly ten percent of Woodstock's residents are professional musicians and/or members of the music industry. Only two hours by car from Manhattan, this scenic country town has become the perfect compromise for those who need to conduct business in the Big Apple but can afford to live in a comfortable rustic setting.

A mile-and-a-half west of Woodstock, tucked in a secluded sylvan setting just behind Turtle Creek, lies one of the most innovative and best equipped recording facilities in the world, Bearsville Studios.

From the time The Band recorded its *Cahoots* album there nearly 15 years ago, to the recent mixdown sessions for Journey's new LP, the studio has been the birthplace for many

classic rock albums. In its present incarnation, Bearsville has become a rock and roll playground for some of today's hottest record producers, including Neil Dorfsman, Jimmy Iovine and Bob Clearmountain (who has made it his current base of operations).

Although first opened a year after the great festival by rock mega-manager Albert Grossman, the studio has gone through two major overhauls, the most recent being last year. Now under the watchful eye of Steve Bramberg (former Polydor Records executive and ex-studio manager for Electric Lady, Media Sound, and owner of Boogie Hotel Studios), Bearsville has been updated to world-class status. And 1986, has, so far, been the studio's best year ever. The business (and the quiet village of the same name) however, were shocked by the sudden death of Grossman on January 25, en route to London for MIDEM convention.

During the '60s, Grossman was one of the most powerful and influential rock managers. An original supporter of the late '50s and early '60s folk movement, he organized the first Newport Folk Festival and managed the careers of numerous artists including Odetta, Ian & Sylvia, and Peter, Paul & Mary. It was shortly thereafter he met and befriended a young Bob Dylan. Grossman helped make Dylan a household word and encouraged his crossover into rock. He brought him to Woodstock to live, and put him

together with The Band, whom he also managed. His careful guidance also brought similar success for Gordon Lightfoot, Janis Joplin, Todd Rundgren and others.

But by 1969, Dylan had withdrawn from the music scene and severed ties with Grossman. Peter, Paul & Mary split up and the following year, Joplin died of a drug overdose. It was then that Grossman stopped managing rock stars and diversified his interests by purchasing real estate, opening two restaurants, forming the Bearsville record label, and most importantly, starting the studio.

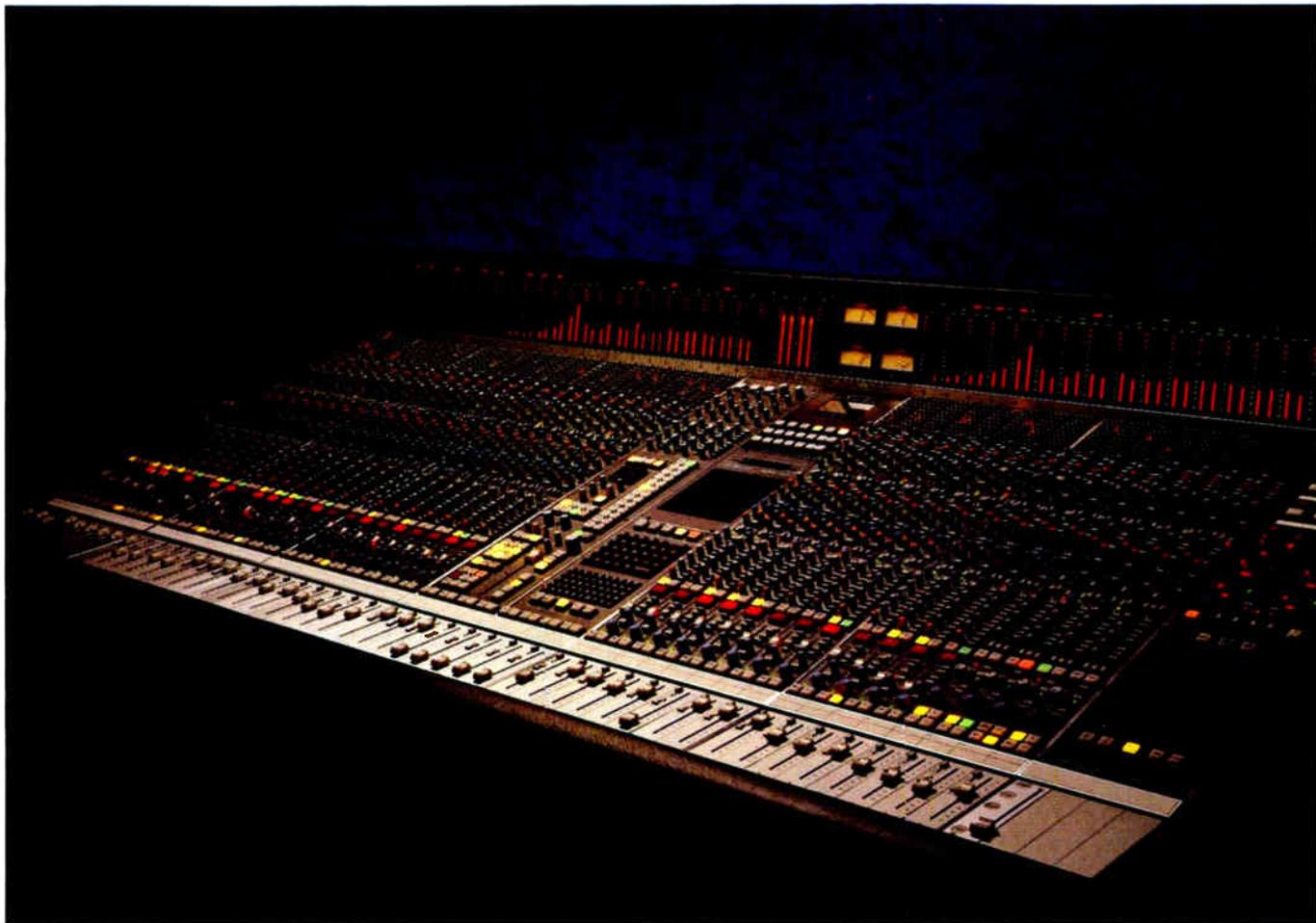
With its proximity to Manhattan, country setting, live-in accommodations and spacious design, the studio was the only one of its kind in the United States when it was built. Besides the Bearsville roster (which included Todd Rundgren, Jesse Winchester, Paul Butterfield, Foghat and others), the most significant albums to come out of the studio were a few platinum Isley Brothers records, Patti Smith's *Easter*, and a series of Rundgren-produced hits which included Meatloaf's *Bat Out Of Hell*, and The Tubes' *Remote Control*.

In 1982, Grossman realized his studio was not equipped to compete with the best rooms in Manhattan. He hired famed audio consultant George Augspurger to redesign the room and replace the hardware. Augspurger accomplished much in his efforts. He achieved optimum geometry between the monitor speakers and the board; convenient access to the tape machines and outboard gear; comfortable seating in the rear of the control room; and acoustic treatment that allowed for final tuning without rebuilding the room. He worked up four different designs before selecting the best one.

Soon after the '82 update, the studio became more active. Artists such as King Crimson, Peter Gabriel and several New York producers discovered the complex and began to use it regularly because of its relaxed atmosphere. But Grossman increasingly became less active in the music industry, and eventually folded the record label and let the studio slip behind the current state-of-the-art standards for that time.

Not far away, in Port Jefferson, Long Island, Bramberg was running Boogie

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PHOTO: CHRIS ISCA

**The spacious 40 x 60 studio can be segmented via moveable dividers and the semi-cylindricals hung from the ceiling provide additional diffusion.**

Hotel and attracting many of Bearsville's potential clients. "When I first bought the business from Foghat," said Bramberg, "I needed Albert's written permission to use the name Boogie Hotel, because he owned an album by Foghat called *Boogie Motel*. So, I got permission to use the name and it was at that time that he became aware of what we were doing. I modeled Boogie after the concept of Bearsville. For a while there, we were his major competition."

Grossman hired Bramberg in the fall of 1984, much to the dismay of his Boogie Hotel partners. ("They were not too thrilled," Bramberg says wryly.) Bramberg put his interest in Boogie Hotel up for sale and went to Woodstock to manage Bearsville. "I said to him, 'Look, if you want to be in the studio business, the only way to go is to spend money and update and have the latest gear,'" Bramberg says. "And Albert gave me that freedom. I told him: I wanted to get the studio together and go into the record business. And he said, 'Fine, let's start with the studio and go from there.'"

Grossman dove head first into the revitalization of Bearsville. He repainted, re-furnished and re-decorated all of the lodging. He expanded the recreational facilities to include saunas, a gym, and a gourmet kitchen, complete with chef. In addition to fixing up existing lodging, Bramberg persuaded Grossman to hand over a few other houses, so now the complex can accommodate up to 30 people at once.

The rehearsal barn sits a quarter-mile down the road from the main studio building, and in addition to the

four bedrooms on the second floor, it is permanently stocked with the audio equipment from the now-defunct Bearsville Sound Co., which Grossman used when his acts, such as Foghat and Rundgren, were touring. It was this barn that the Rolling Stones used to prepare for their last U.S. tour. The large open field across the road was used as a landing pad for their helicopter.

Next to the barn is a picturesque country house, one of the complex's main lodging units. Behind it are acres of wild wooded area and the pure-watered Turtle Creek which runs along its back porch. "This is the house where Chrissie Hynde and Jim Kerr

and their kids stayed at while Simple Minds were working on the album," says Bramberg. "Chrissie would sit in that rocking chair, just watching the kids play in the creek."

Spread out over 100 acres, it is not unusual for three different groups to be using Bearsville complex at once; two in the studio and one in the rehearsal barn writing songs or preparing for a tour. The studio itself needed less cosmetic surgery. The Augspurger design was quite sound, and with the exception of a remodeled loft overlooking the skylit Studio A used to record drums, most of the changes have come in the form of equipment upgrades and new staff.

The former chief engineer for Boogie Hotel, Robert Tis, was hired to oversee technical renovations for Studios A and B. Mark McKenna and Ken Lonas, longtime engineers at Bearsville, worked diligently with Tis to make the transition as smooth as possible. Through an equipment broker, Bearsville was able to purchase The Who's custom Neve 8088 console. The 40-input board was used for years by the group for both band and solo projects at their Rampart Studio in London. "It's a one-of-a-kind console," says Bramberg. "Neve had it built for The Who's and Townshend's needs. They did most of their classic albums on it."

"I did a lot of the last Simple Minds album on that board," echoes Bob Clearmountain. "It's undoubtedly one of the most functional Neves that there has ever been. What they did was buy this board and spend about six to eight months completely rewiring the entire thing. They put a lot of additional switching in there. I don't know how

**The studio's rustic exterior conceals the high-tech facility and blends with the countryside environment.**



PHOTO: CHRIS ISCA

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PHOTO: STEVE BRAMBERG

*Engineering ace Bob Clearmountain (second from left) poses with a few "friends" between mixing sessions on the new Journey LP.*

they found it; all I know is that they put an awful lot of work in it."

In addition, Bearsville purchased another 24-track Studer A800 tape machine to bring Studio A up to 48 tracks. In the other room, Studio B, they went one step further by acquiring an SSL 6000, 48-input console with Total Recall. That room is also 48-track Studer. Both control rooms have been equipped with the latest outboard gear, including Lexicon digital delays, AMS 15-80s DDLs, and the new Drawmer Vacuum Tube compressor/limiter. "We bought a tremendous amount of outboard equipment to complement the SSL," Bramberg says.

Both studios are also completely equipped to do audio-for-video work. This became important when Grossman added the large video complex formally leased from him and operated by Todd Rundgren. It has since become a division of Bearsville Recording. Bramberg says that the Grossman estate is not sure what the future holds for the video complex: it may be sold, or it may be updated to keep it as a viable video facility in conjunction with the audio studio.

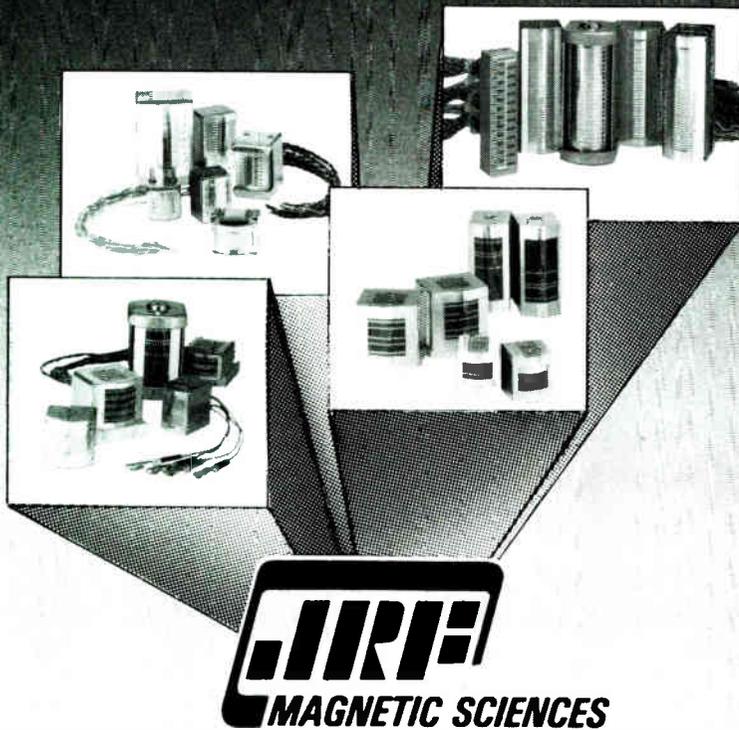
For Bramberg, however, the primary concentration remains in the audio division and in a production company. "People are flocking here now because of the equipment," he says. "You can't get any better than Neve and Studer and SSL. Secondly, Caribou burned down, and as far as I know, we're the only major residential live-in studio in the country." With more renovations and updating still to come, the price tag for this most recent improvement is approximately \$1 million.

"It's really amazing," says Clearmountain. "It's probably the best studio I have ever worked in." Clearmountain also cites the recent upgrades in Bearsville as a main reason why he now lives in the town of Woodstock. "It is convenient," he says. "Mainly, I don't like New York City. I've lived there and it's crazy. I really like living here because it's a lot more relaxed. It's really more than that. And of course, Bearsville is great. Studio A is a much bigger room than most rooms in New York; it's just got a great sound that I really like. And the control room in B is very comfortable and larger than most others."

Bramberg and Clearmountain are old friends who go back to the days when they both worked at Media

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Sound. Nearly two years ago, sensing Clearmountain's impending popularity in the music business, Bramberg and Grossman decided to outfit Bearsville with equipment that was more appealing to Clearmountain, especially the SSL.

Clearmountain now feels that Control Room B is the most accurate and clean room he's ever worked in. As a direct result of Clearmountain, another ace producer, Jimmy Iovine, was turned onto the studio. Together, they did Simple Minds, and Clearmountain himself mixed the new Journey LP with Steve Perry. Other projects recently completed at Bearsville include: Tommy Køene for Geffen; Joe Lynn Turner, with Roy Thomas Baker producing for Elektra; Joe Jackson; Blue Oyster Cult; a-ha; and Phantom, Rocker & Slick.

At press time, the most recent major label project to work at Bearsville was Epic's 'til tuesday, who were hard at work on the follow-up to their successful debut LP. Producing was Rhett Davies, best known for his modern work with the likes of Brian Eno, Roxy Music and King Crimson.

Davies wanted to work at Bearsville because he could live in the spacious apartment just above Studio A. "He wanted to be close to his work," adds Bramberg, "but also, he likes the idea



PHOTO: CHRIS ISCA

**Bearsville's "Turtle Creek Apartments" country house provides three separate living quarters for artists, guests and crew.**

of being able to come upstairs and take a nap whenever he chooses."

"We love this place," says 'til tuesday's Aimee Mann. "It's a great studio with an environment that is totally relaxing." Though many artists thrive off the energy that a place like New York or L.A. offers, most of the acts that work at Bearsville are in a mode that allows for better concentration. There are no press corps, record company executives or hangers-on popping in unexpectedly to distract them.

The sudden death of Albert Grossman apparently will not stunt the studio's expansion. His will gave very explicit instructions to have all his business ventures continued under the direction of his wife, Sally.

Bramberg says, "The next step is to make records again, but we're going to start with the production company, first. There are strict stipulations in his will for the business to continue. He provided for it, and it will absolutely continue and be better than ever." ■

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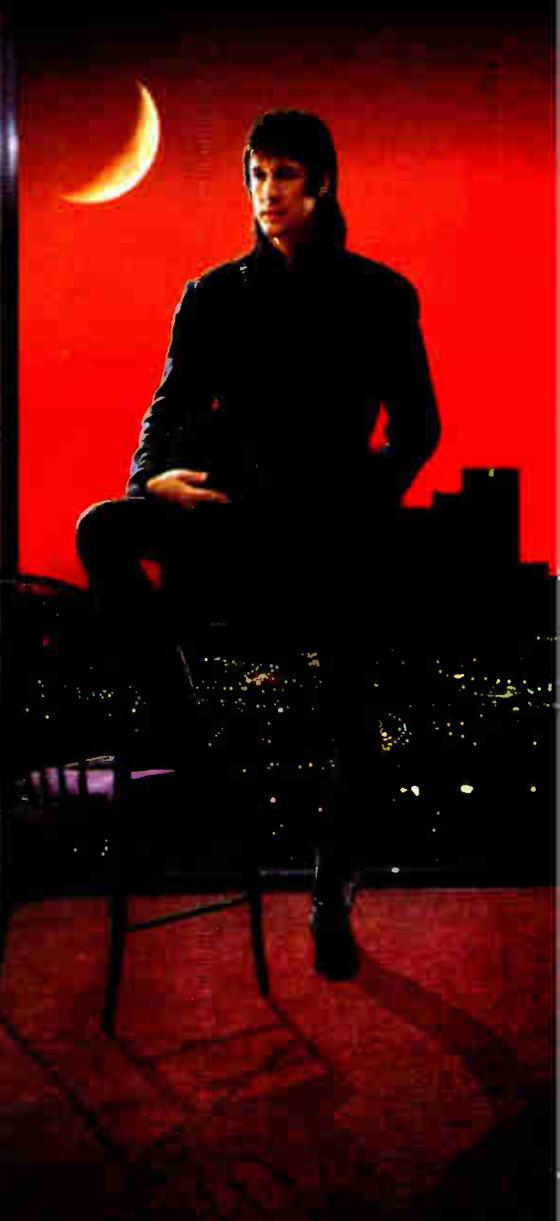
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## ...THE INDUSTRY STANDARD.

# THE MIX DIGITAL SUPPLEMENT

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*Cover photo: The EditDroid editing suite at Sound Works in New York City is tied into the facility's digital control room for complete audio/video flexibility. A SoundDroid console is slated for delivery later this year.  
Photo © 1986 by Mark Ross.*

# D · I · G · I · T · A · L NEWS



Otari DTR-900 digital 32-track recorder.

by George Petersen

## PROFESSIONAL DIGITAL: New Developments

Ever since the news broke about the PD (Professional Digital) digital recording format at last October's AES Convention in New York City, the three manufacturers involved—AEG, Mitsubishi, and Otari—have been caught up in a flurry of activity. Mitsubishi started it off with the formal unveiling of the X-850, their second generation multi-track, and recently announced that they have delivered over 50 32-channel recorders to date. Some recent X-850 purchasers include: George Massenburg (Los Angeles), Universal Recording Corp. (Chicago), Allied Artists (Los Angeles), Mike Posten (Nashville), Bruce Swedien (Los Angeles) and Manta Sound (Toronto). U.K. sales have also been strong, with machines going to Music Lab, Wessex Studios, Fooster Studios, Hilton Sound, EZ Studios, and Jacob's Studios.

U.S. deliveries of the new Mitsubi-

shi X-86 digital two-track are expected to begin this July, as are the first X-400 1/2-inch 16-track recorders. The X-86 will initially be available in two versions (7.5 or 15 ips); another model (X-86W), featuring 20-bit architecture and 96kHz sampling rate will debut late this year.

Otari introduced their DTR-900 32-track digital recorder at the AES Convention in Montreux, Switzerland two months ago, and plans to make the machines available this summer. Besides complete compatibility with other PD multi-tracks, the DTR-900 also features  $\pm 10$  percent varispeed, external RS-232C and RS-422 synchronizer ports, built-in SMPTE time code reader/generator, and 16/24 channel versions (retrofit expandable to 32-track). Otari expects to show a two channel machine later in 1986.

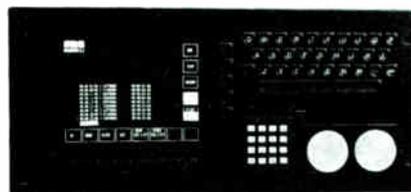
## AMS AUDIOFILE

It's been nearly two years since Advanced Music Systems (Burnley, U.K.) first announced the development

of the AudioFile, and after months of prototype testing at several European broadcast/post-production facilities, the first U.S. deliveries are scheduled to begin this month.

AudioFile is essentially a Winchester hard disk-based digital audio recording/editing/retrieval system, but with numerous hardware and software configurations available, the unit can handle a variety of production chores. Initial orders for AudioFile will be shipped with four output channel versions (expandable to eight), and each hard disk will hold about 25 minutes of mono audio information, which can be divided into a vast number of audio cues, all nearly instantly accessible. Stereo units are expected in the near future, and cue lists and operating software (including later manufacturer updates) are stored on floppy disks.

The basic AudioFile is priced in the \$40-50k range and is distributed in the U.S. by Harris Sound of Hollywood, California. Standard features include 16-bit linear PCM coding, 48.1 kHz sampling rate (switchable to 50/44.1/40 kHz), true 20-20k Hz bandwidth, over 90dB dynamic range, built-in synchronizing to analog or digital recorders, and RS232/RS422 control ports. Thirteen software-definable function keys and dual thumbwheels on the front panel simplify routine operations, while a complete QWERTY keyboard and numeric pad are provided for data entry.



AMS AudioFile

## CD FACILITIES UPDATE: "A Pressing Need"

It should be no surprise to *Mix* readers that an acute shortage exists in the availability of CD pressing plants worldwide, and the situation seems to be getting worse as a greater number of consumers turn to the new medium. Another complication, just now beginning to emerge, is the advent of CD-ROM data storage, which may put additional pressure on replication facilities.

There's some good news and some bad news concerning the situation. The good news is that a number of

domestic and foreign facilities are now under construction, such as the Denon plant in Madison, Georgia and the Philips/Dupont Optical facilities in Kings Mountain, North Carolina and France. The bad news is that nearly all of this increased production capacity will be used to satisfy the orders of their existing clientele, with little or no room available for custom and small label orders. Some comfort comes in the form of new technology, as the R&D efforts by companies such as Shape, ComDisc, Laser Logic and DOC-data are hopefully going to pay off with more efficient and less expensive Compact Disc production methods.

The following is a list of North American manufacturers, or U.S. agents for overseas companies involved in CD and optical disk replication. This list is by no means complete, as today there are dozens of venture capital groups and other concerns who are planning to open plants in the distant future. We encourage other manufacturers to contact us, to be included in our next facilities update.

**COMDISC**  
1510 Cotner Ave., Los Angeles, CA 90025  
(213) 479-0899  
Contact: Michael Wanless  
Minimum Order: 5,000-10,000

**On Line:** Mid-late 1986  
**Notes:** ComDisc is currently testing their revolutionary process for CD production on several major label projects. The system utilizes a long continuous strip rather than injection molding techniques.

**CTA COMPANY LIMITED**  
**Matrix Associates, Inc.**  
15115 Sunset Blvd. Ste. A  
Pacific Palisades, CA 90272  
(213) 459-6913  
Contact: Ed Koeppel  
Minimum Order: 3,000 initial, 2,400 re-orders.  
**Notes:** Matrix Associates is the U.S. agent for CD pressing by CTA's Kofu, Japan plant.

**DAIO KOSAN**  
**Matrix Associates, Inc.**  
15115 Sunset Blvd. Ste. A  
Pacific Palisades, CA 90272  
(213) 459-6913  
Contact: Ed Koeppel  
Minimum Order: 3,000 initial, 2,400 re-order.  
**Notes:** Matrix is the U.S. agent for Daio Kosan, a CD plant in Osaka, Japan. Daio Kosan also makes a line of "jewel" boxes for CDs, which are marketed through Matrix.

**DIGITAL AUDIO DISC CORPORATION**  
1800 N. Fruitridge, Terre Haute, IN 47804  
(812) 466-6821  
Contact: James Frische or John Page  
**On Line:** September, 1984  
Minimum Order: 500  
**Notes:** DADC, the flagship Sony/CBS U.S. facility, has been accepting custom orders since October of 1985. The plant is now expanding their production capability and they recently pressed their 10-millionth CD.

**DISCOVERY SYSTEMS, INC.**  
555 Metro Pl. N., Dublin, OH 43017  
(614) 761-2000  
Contact: Mary Perkins  
**On Line:** August, 1986  
Minimum Order: Prefer 5,000 and up  
**Notes:** Currently doing final testing on plant which should be fully operational by mid-August. Starting capacity is said to be six million discs per year. CD-ROM and interactive video services are offered in addition to CD replication.

**JVC DISC INC.**  
RCA Bldg. Ste 500, 6363 Sunset Blvd.  
Hollywood, CA 90028  
(213) 467-1166  
**Notes:** JVC's Japanese plants in Rinkan and Yokohama are booked with major label orders through 1986 and are not soliciting CD pressing business at this time.

**LASER LOGIC**  
222 Railroad Ave., Danville, CA 94526  
(415) 831-3646  
Contact: Richard Johnson  
**On Line:** Sept./Oct., 1986  
**Notes:** Laser Logic utilizes a new proprietary transfer system for CD and CD-ROM mastering that is said to significantly reduce errors. In addition to pressing facilities planned in southern California and Europe, a pre-mastering (sweetening, coding, editing) studio is slated.

**LASERVIDEO**  
1120 Cosby Way, Anaheim, CA 92806  
(714) 630-6700  
Contact: Wan Seegmiller  
Minimum Order: No minimum  
**On Line:** 1984  
**Notes:** LaserVideo offers both video (8- and

—PAGE 79

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# EINE KLEINE SAMPLING MUSIC:

## A NOT-SO-BRIEF EXAMINATION



The AMS Model dmx 15-80S was the first digital delay to include sampling capability.

### PART ONE

by Larry Oppenheimer

**W**hat is sampling? Is it a dark obsession that causes otherwise copacetic people to abandon healthy activity for endless binges of wandering around and pointing a microphone at virtually anything in an attempt to lock the world into boxes of small diskettes where it can do no harm? Or is it satori, nirvana, the ultimate artist's palette, the Godhead, a surreal rendering in bite-size chunks of our ears' perceptions of reality? In true Zen fashion, the master says nothing in reply to the question, pointedly illustrating the obvious answer that it is both and neither. Although I could go on to fill reams with such philosophical treatises, I shall graciously leave that task to others more worthy, and content myself with merely gazing upon the face of sampling and searching for words to describe it.

In fact, for this month's discussion, we refer to hexagram 69 in the *I-Ching*, "Sam-Pling," or "The Transmuted." The upper trigram is "What-Sis," "The Overview"; while the lower

trigram is "Con-Vert," or "Transformation." A moving line in the last page indicates that there are yet more juicy details to come in next month's *Mix*.

### Sampling Instrument Families

When trying to grasp a trend (and sampling is definitely a trend), it is helpful to classify things. But it is important to remember that most items you classify do not neatly fit into one class, but actually fall somewhere in the cracks between classes. That disclaimer made, we will proceed undauntedly to lump all sampling devices into three simple categories, which we will refer to as: drum machines, triggered DDLs/DSPs, and pitch controllable samplers.

Drum machines were the first sampling devices to find widespread use, starting with the Linn LM-1, and then the E-mu Drumulator and the Oberheim DMX. Soon the Japanese and a few European companies started in. Now things are so far out of hand that a sampled drum machine with decent sounds, a workable sequencer, and a very good MIDI implementation—the Roland TR-707—can be had on the street for about \$400. Most drum machines do not have user sampling (none until this past year), and some do not have any sequencer onboard. Some features a typical drum machine might offer are: eight or more sounds (mostly drum set) available from either a mixed output or individual voice outputs; some sort of mixing facility for the mixed output; a sequencer that can be programmed in real or step-time and is structured for programming in short patterns that are chained into songs; extensive clock interfacing (now virtually always including MIDI and sync-to-tape); a library of available sounds in chip, card, disk, or cartridge form; and tuning of individual sounds.

Triggered DDLs/DSPs are digital delay lines or signal processors that have the ability to use their delay memory as sample memory with triggerable playback. Features and sample time are most often more limited than keyboard samplers, but the audio quality

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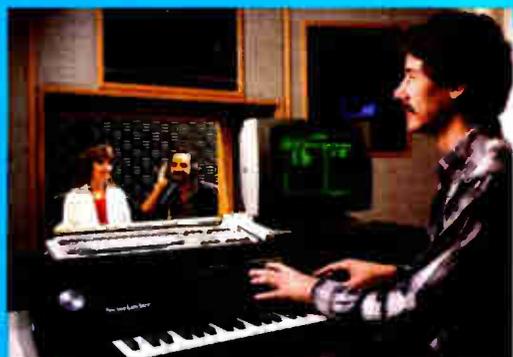
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### DENNY JAEGER

Synclavier expert and composer for films and TV, recent credits include *The Hunger* and commercial tracks for Levis, Dr Pepper and many others



### PAT METHENY

World famous artist who has used the Synclavier guitar extensively in performance recordings and his recent score for *The Falcon* and the *Snowman*.



### ALAN SILVESTRI

Film scorer who used the Synclavier extensively on many recent projects: *Back to the Future*, *Clan of the Cave Bear*, *Romancing the Stone*, *Delta Force*.



### ALBY GALUTEN

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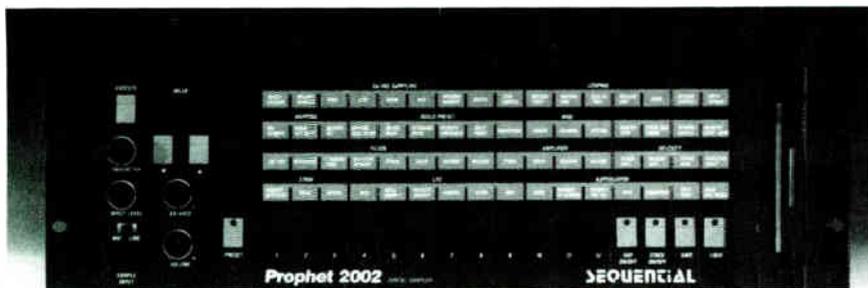
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*Sequential's Prophet 2002 offers the power of their Prophet 2000 digital sampling keyboard in a MIDI controlled rack mount unit.*

may be higher. Typically, only one sound can be recorded at a time and only a single voice of that sound can be replayed, but the start and end times of the sample can usually be edited, and it is possible to play the sample in reverse. The AMS DMX 1580-S was the machine that started it all, but there are now several other DDLs that do sampling, notably Korg's SDD-2000 and ADS/DeltaLabs' CompuEffectron. Digital signal processors with sampling include the Eventide SP-2016 and the Publison Infernal Machine 90. As could be expected, the DSP machines, being more powerful than DDLs, offer greater control and versatility.

Probably the most popular use of these devices has been for instrument replacement, particularly drums. Many engineers are discovering the winning combination of easy-to-deal-with sampled sounds and the superior feel of a real drummer by triggering sampled drum (or other) sounds from recorded drum tracks (which are typically gated first to avoid false triggering). To accommodate this application, some of the DDL/DSP samplers have the ability to accept audio tracks as triggering inputs. Since there is only one voice available on most of these units, retriggering the sampler, if allowed while a sample is playing, will result in the first sound being cut off to start the second.

Of special note is the new multi-sampling option for the Publison Infernal Machine 90. This significant upgrade to an already versatile signal processor adds pitch control, multisampling, 20 kHz bandwidth, long sample time, and extensive MIDI control, which takes it out of this class and into the next, where we will discuss it further.

The last class is pitch-controllable samplers. This includes both sampling instruments with keyboards, like the Kurzweil 250, Emulator 2, Prophet 2000, Ensoniq Mirage, and the recently introduced units from Roland and Korg, and rack-mount units with no

controller attached, like the Swiss MDB Window Recorder (distributed in the U.S. by Europa Technology), Akai S-612, Prophet 2002, and the Mirage Multi-Sampler. At this point, this class contains far and away the most powerful sampling instruments. We'll get to talking about these units, along with a few other notable machines—the Fairlight CMI and the Synclavier—in just a moment.

Most (but not all) of these units have user sampling, and allow extensive editing of the sample, including start and end times, looping, and reverse playback. Looping is a technique for sustaining a sampled sound that instructs the instrument to read through the sample and then repeat a portion of it for as long as a key is depressed. Some samplers offer the ability to create two loops for a sample: a sustain loop that repeats as long as the key is held down, and a release loop that repeats as the sound decays after the key is released. Finding looping points in the waveform that do not create ugly-sounding discontinuities can be quite difficult and is an art refined by much trial and error. Some pitch-controllable samplers, such as the Emulator 2 and the Prophet 2000, also offer analog signal processing (usually a VCF, VCA, and two envelope generators) on each voice for further modification of the sample. It is often possible to control this processing from the keyboard velocity, yielding additional dynamic and timbral expressivity and realism.

Most importantly, though, this class of sampler does pitch-shifting of the samples, a rather tricky process. Furthermore, most of these instruments are polyphonic/multi-sampling, that is, they are multi-channel systems. Both of these effects are difficult to achieve well, as discussed in detail below.

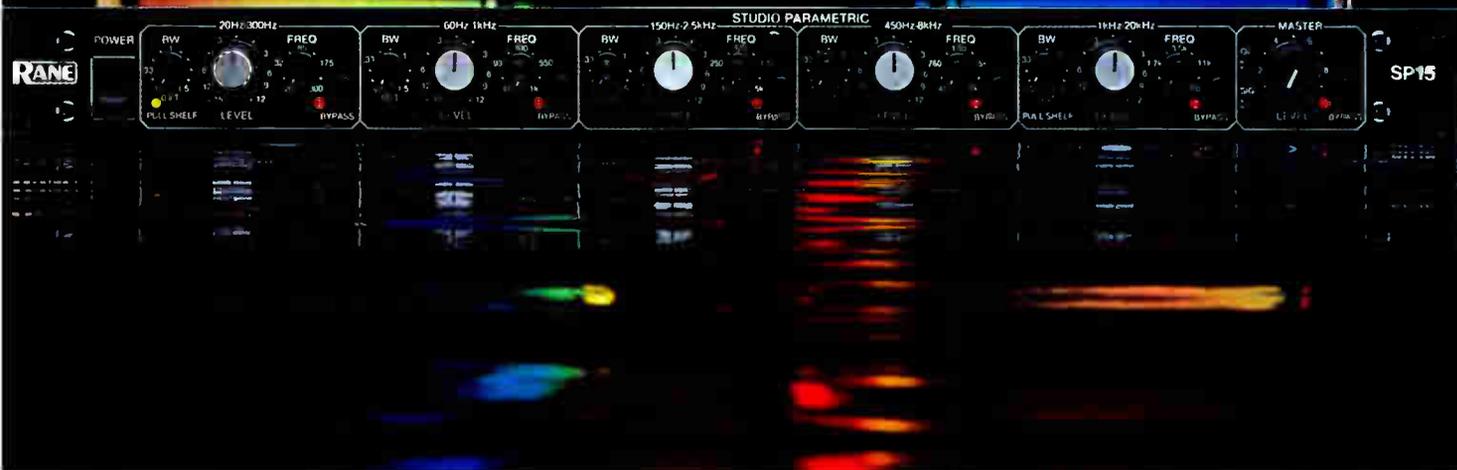
Some samplers in this category offer controllers, typically keyboards, and some are simply rack-mount boxes, such as the six-voice, 12-bit, MIDI-controlled Akai S-612. With the

former, weighted action and touch or velocity sensing are features often found, while the latter usually receive their pitch control via MIDI only, and hence will almost always have at least velocity sensing.

Other areas of special ability that some of these instruments have are sequencing, extensive interfacing, and digital signal processing. Interfacing almost always includes MIDI at this point, and, if there is onboard sequencing, sync-to-tape and possibly even SMPTE time code, a huge boon in video and film applications. The Emulator 2 includes an excellent 8-track sequencer that allows merging, overdubbing, in addition to being usable as a MIDI sequencer, and can be synced to SMPTE time code (which it both generates and reads). Fairlight software has all of those features, but will allow up to 80 simultaneous instruments to be controlled by employing the instrument's own 16 voices and four independent MIDI outputs that can control a total of 64 other independent instruments.

Perhaps the most interesting trend, however, is the ability of an increasing number of mid- to low-cost samplers to dump the actual sound data through either MIDI (which can be so amazingly slow in this application that Sequential has provided a special double speed mode in the Prophet 2000) or a computer interface like the RS-422. In any event, the point of such an interface is more than the ability to offload sound data onto disks, since the machines that have these interfaces more often than not have onboard disk drives. These ports are for dumping sound data into a personal computer where more detailed editing and digital signal processing can be performed. The first machine to realize this capability was the Emulator 2, which interfaces to a Macintosh computer running Sound Designer software from Digidesign, Inc. Sound Designer has two basic modes: a front panel emulator and the signal processor. The front panel emulator is a convenience that allows remote manipulation within a graphics environment of some of the instrument's onboard facilities. Of greater significance is the signal processor, which can do Fourier analysis of a sample displayed with a three-dimensional plot, cut and paste editing within and between sound files, pencil editing (for removing discontinuities and artifacts or waveform drawing), merging of sounds, parametric equalization, looping (which is much easier when you can see the waveform), mixing, and synthesis, all within a display that allows the waveform to be viewed and edited at any resolution down to a single sample. The program

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*New England Digital's Synclavier now offers a Direct-to-Disk™ tapeless multi-track recording option.*

is now available for the Prophet 2000 and a similar one exists for the Mirage. This opens up new doors for samplers and makes it feasible for musicians, studios, or producers, albeit relatively well-heeled ones, to have a single-user, powerful computer music work station constructed from popular commercial components. Of course, the Synclavier and Fairlight have pretty much all of these features onboard.

There are also still a few digital signal processing tricks which are established in computer music circles, but haven't yet reached the marketplace. Two of these are phase vocoding and linear predictive coding (LPC). LPC is a very powerful analysis/synthesis technique lifted from speech research, that models a sound as a series of filters being driven by a source waveform. Unfortunately, LPC is also rather hairy to perform, so it may be a while before you see this for your Macintosh. The phase vocoder, on the other hand, is like a Fourier analysis which retains phase information (FFTs do not). This is somewhat easier to implement than LPC, and may show up much sooner. The phase vocoder allows nifty stuff like changing duration of a sound independent of its pitch and vice versa without the objectionable artifacts of most current techniques used for pitch/duration modification, and shifting pitch without shifting the spectrum.

Now, let's talk about a few notable exceptions. The Korg SDD-2000 and the Publison Infernal Machine 90 are devices in the DDL/DSP category that both offer pitch-controllability via MIDI, but to very different degrees. The SDD-2000 allows a 4.3 second sound captured in memory to be played back over a three octave range with a 4 kHz bandwidth (or 1 second/1 octave/18 kHz bandwidth), monophonically only. Although this is not that spectacular compared with most keyboard samplers, at \$699, it's nothing to be sneezed at. The Publison, on the other hand, was already a powerful digital signal processor that could perform the same kind of sampling as the Korg, along with creating reverb, pitch shifting, time compression/expansion, and delay effects, when the

new multisampling option was introduced. The option allows up to 21 seconds of 20 kHz bandwidth, 16-bit linearly coded sound per channel to be sampled. This substantial chunk of memory (2Mbytes) can be partitioned so that several shorter sounds can be in memory at once. In fact, up to 64 sounds can be stored simultaneously and played back under MIDI control. The Infernal Machine's implementation makes it easily as powerful as most of the rack-mount samplers currently available. Coupled with the machine's other capabilities, the multisampling option justifies the \$12,500 price.

And now, we come, finally, to the Fairlight CMI Series III and the Synclavier 2. Both of these machines are high quality, full-featured computer music systems. Just about all of the capabilities mentioned above can be found onboard either of these systems. It would be inaccurate and a tragic understatement to refer to these deluxe models as merely sampling devices. It was the Fairlight, without doubt, which was the first machine to bring the bright spotlight onto sampling. The \$25,000 price tag scared everyone when it was announced in 1979, but some were sold, and it took only a few hit records before industry sharpies started to understand how the beast could earn its keep. Although capable of synthesis also, the Fairlight's forte was sampling, especially the fact that it was polyphonic. Finally, a replacement for tape-based beasts like the Mellotron and Chamberlin was at hand. As interest funded further development, Fairlight refined the machine, improved the audio quality, added more microprocessors, and expanded the features into a full computer music system. Of course, the cost rose accordingly, but in a few short years of existence the Fairlight and Synclavier proved that those with the capital to plonk down and the ability to learn the instrument (or hire a programmer, which was just as common) could make them pay. The Fairlight Series III, the current model, boasts hardware for up to 16 voices, 8-Megabytes of waveform memory (ex-

pandable to 14 Mb—better than 2.5 minutes), 16-bit stereo a/d conversion at up to 50 kHz sample rate, a 60 Mb hard disk and a floppy disk drive, MIDI, SMPTE, a QWERTY keyboard with touch sensitive graphics tablet, a 6-octave, touch-sensitive music keyboard with "virtual" wheels and controllers, and a video monitor, plus software for sampling, waveform drawing and synthesis, two different kinds of sequencing, music printing, Fourier analysis/resynthesis, and telecommunications; all controlled by a dozen microprocessors. Whew! And for the low, low price of \$60,000. Take it out of pocket change or break the piggy bank for this one. Suffice it to say, there's one clever group of Australians determined to remain the state-of-the-art in sampling.

The Synclavier, introduced in 1978, is sort of the other side of the coin, as it started life more as a synthesis machine, and slowly gravitated into sampling. Sampling was added to the Synclavier in 1980, but it had monophonic playback only until 1984, when New England Digital announced polyphonic sampling with great fanfare. Even though polyphony came late to the machine, the Synclavier's sampling was already noteworthy as being the first to be interfaced to a hard disk. In a number of ways, the Synclavier's no-compromise hardware and software packages are more powerful even than the Fairlight's more voices, higher sampling rates, wider dynamic range, etc. The Synclavier also has superior synthesis capabilities, that are helpful in analysis and resynthesis of samples, and for combining samples (such as vocals) with synthesized sounds. Of course, there are also extensive sequencing and compositional abilities in the Synclavier, including a nice compositional language which allows the creation of processes instead of simple sequences and patterns, a result of the Synclavier's roots at Dartmouth University. In the interests of space and continuity we'll skip a recital of features, but you may rest assured that they are certainly as impressive as the Fairlight's and fulfill the same functions, but are achieved with differences in approach and degree. If you want this toy in your attic, you'll have to sell your Rambo dolls into white slavery (where they probably belong), as the price can soar over \$100,000 with enough options.

Anyhow, at this point these two machines are still in a class by themselves as musical instruments, but with high-end work stations such as the Sound Droid, Compusonics, Lexicon RD-1 project, and other similar "digital studios" (one would presume that British digital audio firms like AMS and SSL are

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also at work in this area, as are Neve) nearing fruition on one side, and E2/Sound Designer-type systems encroaching on the other, Fairlight and New England Digital are going to be forced to go up or down, unless they can somehow stake out a middle ground. These folks aren't dumb; my guess is that the hard disk-based sampling systems that they are already turning into bona fide digital recorders will soon be expanded into work stations, perhaps in collaboration with other hardware/software manufacturers.

One other instrument that has taken the full-blown computer music system approach has been the German-made PPG, which recently performed an update to 16-bit sampling on the Waveform, the sampling/processing/display component of the system. The PPG was the first instrument to exploit the idea of performing synthesis with isolated portions of a wavetable, although some American and Japanese companies are now taking an interest in this technology.

Now that we've seen what is out there, let's examine how some of these tasks are accomplished, which will hopefully make some of the tradeoffs found in different instruments apparent. For assistance with the low-down, nitty-gritty messy little technical details of sampling instruments, I turned to Dana Massie, a design engineer at E-mu Systems with a strong background in digital signal processing. To get the poop straight on the Great American (or Australian) dream machines, I spoke with Will Alexander, technical manager at Fairlight Instruments in Los Angeles, and with New England Digital founder/designer/guiding light, Sydney Alonso (who was interviewed way back in *Mix*, September '84). All three were more than happy to spill the beans about their design choices and experiences while traveling the golden road to unlimited digitization.

A walk through a sampling system starts with a well-placed, high quality microphone or other transducer, as does any audio recording process. After placing the microphone and performing any mixing or processing that we wish to do on the sound to be sampled, we plug it into the sampler.

#### **Analog-to-Digital Conversion**

Whether a sampling instrument has user sampling or factory sounds only, all sounds must go through the a/d conversion process before they can be stored in RAM (as with user sampling), ROM (as with factory samples and some user sampling) or disk. Thus, the criteria mentioned here apply whether the sampling is done at the factory or in your shower stall. All sam-

pling systems to date use some form of PCM encoding.

A signal entering a sampling machine goes first through some rather straight-ahead analog input circuitry and then directly into the a/d conversion system. This does not mean that it goes directly to the a/d converter itself; if only it was that easy. First, the signal must pass through a low-pass filter to prevent aliasing, an ugly phenomenon that occurs when frequencies greater than half the sampling rate (SR) are allowed to pass into the a/d converter. Bad aliasing sounds akin to a strange sort of ring modulation (aliasing products are indeed sidebands). The characteristics of this filter are quite important. Specifically, if the cutoff slope of the filter is not steep enough it will not sufficiently attenuate frequencies greater than SR/2. But high order filters (the order, or number of poles, of the filter indicates the steepness of the cutoff, with each pole providing a six dB/octave increase in slope) can be tricky to implement well. Some less expensive sampling devices have poor anti-alias filtering, while others are on a par with the filters found in professional digital recording and processing equipment. The Emulator 2 and the Fairlight, for example, both use an eleventh order elliptical filter. In contrast, one other high-end sampling system uses no more than a standard, synthesizer-type fourth order Butterworth filter. The difference is clearly audible. As with other digital audio gear, however, some listeners believe that high order filters are detrimental to the sound, an effect usually attributed to excessive high frequency phase shift. New England Digital is so concerned about the characteristics of op-amp high-order filter designs (primarily phase coherency and component stability) that they have opted in the Synclavier to use lower order LC filters made with discrete components, and a higher sampling rate to raise the onset of aliasing well into the filter's stopband.

After filtering, the signal is sent to a sample-and-hold circuit, which then feeds the a/d converter (ADC). The quality of the a/d converter is possibly the single most important factor in the audio quality of a sampler. There are two crucial aspects that must be considered: sample rate, and coding. The sample rate will determine the maximum allowable bandwidth of the incoming signal, but it also will determine how well transients are captured. At too low a sample rate, sharp transients may be missed, resulting in a "mushy" or "grungy" sound on percussive material. Note that the bandwidth limitation on the incoming signal being sampled in a pitch-control-

lable sampler does not typically apply to the instrument's output bandwidth because the sampled signal may be pitch shifted up for playback, which also results, with currently popular technology, in an upward spectral shift. Sampling rates range from about 28 kHz for the Emulator 2 to a top limit of 50 kHz (stereo) for the Fairlight and the Synclavier 2. The latter two can go up to 100 kHz in some applications, and in these cases an anti-aliasing filter is often not even necessary. In fact, the Fairlight does allow its anti-alias filters to be switched out of the circuit entirely. Many samplers, however, offer longer sample time if you are willing to tolerate a sampling rate as low as 10 kHz or so, and a bandwidth of 4 or 5 kHz.

Dana Massie believes that coding is one of the most critical aspects in determining a sampler's fidelity. "The issue of coding technique is essentially dynamic range, and it's very crucial," Massie emphasizes. "You need good bandwidth to get good quality, but dynamic range is more important because distortion is a lot more noticeable than lack of bandwidth. But in digital audio, dynamic range is not sufficient to quantify a performance, you also need resolution. The resolution (number of bits used to code the sampled signal) determines the low-level performance of any ADC. When you have a low level sound, essentially you're in your lowest coding segment, and your resolution then determines the performance."

To elaborate further, the function of the a/d conversion system is to take a continuous signal and turn it into a series of discrete numbers approximately the instantaneous amplitude of the signal at the time of sampling. The idea, of course, is to make the approximation close enough so as to be undetectable by the ear when it is converted back to analog. The resolution sets the number of values that are available for the approximation, with each additional bit doubling that number. Eight-bit resolution yields only 256 values, while 16-bit resolution offers 65,536 values. In terms of dynamic range, each additional bit adds 6 dB, so an 8-bit linear system has a theoretical limit of 48 dB and a 16-bit linear system one of 96 dB. Note that this is a theoretical limit which is difficult to completely achieve in practice.

The fluctuations of a low-level signal may not exceed the size of the voltage step between consecutive values of a low-resolution ADC, consequently the value may not change enough to accurately portray the signal. Detail is then lost and distortion occurs. (To be technically correct, many a/d converters actually work with current, but



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the signal is typically measured as a voltage before a/d and after d/a conversion, so it is easier to refer to them in that manner.) One technique sometimes used in digital audio to help ameliorate these effects is dithering, in which a specific amount of noise is added to the input to sort of offset the sample value such that low level signals will cross step transitions more often and hence be more accurately coded. Although the idea of adding noise to improve the sound seems bizarre, remember that tape biasing is a similar process, in which an "unwanted" signal is added to create a more linear response. In order to gain even higher dynamic range, analog level processing is also often available.

Sixteen-bit a/d converters are still comparatively costly, however, and, as we shall see below, use more memory, which is also expensive. But there is always more than one way to skin a cat, as they say (although skinning cats has never really held much interest for me, if the truth be known). If the number of bits must be limited, more dynamic range can still be had by using a different kind of coding. So far, we have referred only to linear coding, where the step size is constant. The step sizes in a logarithmic a/d converter (also known as a u-law converter) are spaced exponentially. With this scheme, detail is preserved and dynamic range is greatly improved.

"Basically, the step sizes on a u-law DAC get smaller for smaller amplitudes," explains Massie. "With larger inputs and large step sizes, the distortion, which is proportional to the signal, size, remains roughly constant. The idea with a logarithmic DAC is that as you decrease the size of the signal the distortion remains roughly the same until you get to very small signals. You can look at it as a form of instantaneous companding. In that sense, because it's instantaneous, it handles transients just like a linear DAC would. The sampling rate is what will determine how the system is going to respond to transients.

"But resolution can be a separate issue from dynamic range," Massie points out. "The resolution of a floating point DAC, or a non-linear DAC, for example, is much less than the dynamic range. With an eight bit u-law DAC, which is used in telephones and almost every drum machine except the new SP-12, you get the equivalent of 12-bits of dynamic range, but you only get 8-bits of resolution.

"The logarithmic DAC is similar to floating point coding in computers. In 32-bit floating point, which is common in computers, you have a 24-bit mantissa and an 8-bit exponent. You only get 24-bits of resolution which is equiv-

alent to 140 some dB, but with an 8-bit exponent you get 1500 dB of dynamic range, so you're moving this resolution up and down in the dynamic range. It's the same with an 8-bit u-law DAC: you're getting 72 dB of dynamic range, but you're only getting 48 dB of resolution at any given point."

This is the system that was used in the Emulator 1. (The Emulator 2, an instrument that is generally considered to have good sampling quality, uses a proprietary extension of u-law coding that improves both resolution and dynamic range by about two bits.) Yet in the SP-12, a sampling drum machine, E-mu went with 12-bit linear coding. The explanation for this choice lies in the nature of the sounds which the instruments were expected to record. "The Emulator coding scheme works because the statistics of musical signals are rather predictable," Massie says. "As you get towards pure white noise, the Emulator coding scheme tends to go down in the number of bits (being used in the coding). Drum sounds are highly uncorrelated signals, that is, they have tremendous amounts of noise and high frequencies. They're also a highly transient phenomenon. It makes the most sense of all for a drum machine to have a linear coding scheme, because it's unbiased as to the statistics of the signal. Some people have said that because drums have such noise content you don't need good DACs, and that's been the justification that I've heard for 8-bit companding DACs in drum machines. White noise does tend to mask quantizing noise, nevertheless, for a drum machine we found that 12-bit linear coding was the most appropriate. The difference between the SP-12 and all other drum machines is very

noticeable. At the recent NAMM I did see a few machines with 16-bit linear coding, notably the Wendeljr, and it sounded great. But the SP-12 is a user-sampling machine (Wendeljr is not), and that's a critical distinguishing factor."

In the Fairlight Series I and IIx, coding linearity was improved by using the upper 8 bits of a 10-bit linear ADC, and analog companding was used to increase dynamic range. Sometimes tradeoffs in other areas can allow the use of higher resolution ADCs, as in the Prophet 2000, a newer instrument that uses 12-bit linear conversion, but does not have as much memory or other fancy features like sequencing, as the E2 does. Meanwhile, the high-end machines like the Fairlight Series III and the Synclavier 2 use 16-bit linear coding because they don't care to make any tradeoffs in that area. Besides the obvious advantage of higher fidelity, it is also very easy to perform math operations, i.e. digital signal processing, on 16-bit linear data. In fact, DSP programs for samplers that do not use 16-bit linear conversion must first transform the incoming samples into a linear format before they can be used. The MDB Window Recorder claims to have 18-bit coding, although questions about the audibility of greater resolution than 16-bits remains a hot topic of discussion in the digital audio field.

And speaking of hot topics of discussion, next month this techno-spiritual theology will conclude with glimpses of memory demand, mass storage and digital editing in samplers, along with a revealing look at the challenges of pitch shifting and polyphony. ■

*Part II will appear next month.*

### *Fairlight Series III in the studio.*



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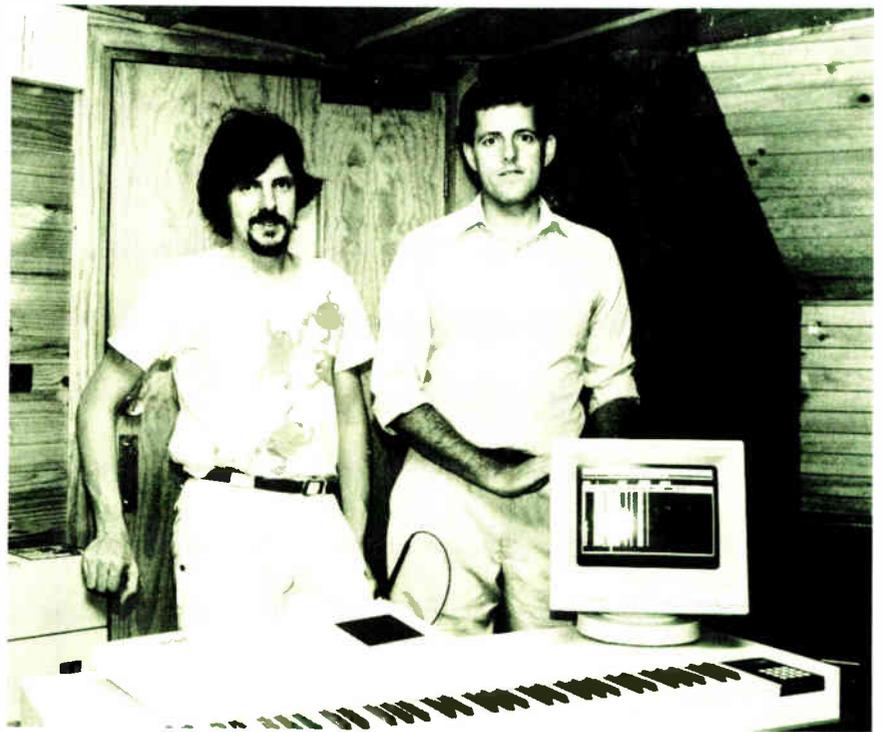
# ELECTRONIC INSTRUMENTS

## AND THE TAPELESS STUDIO

It's been ten years since Fairlight Instruments was formed, with the intention of exploring the possibilities presented by applying microprocessor technology (then quite new) to music synthesizers. At that time, most synthesizers were monophonic, and musicians with sufficient dedication to create music using them had to be committed to much overdubbing on multi-track tape. Even chords of the same sound had to be built up by overdubbing, and degradation through track bouncing quickly became a limiting factor. The advent of digitally-controlled synthesizers, notably the Sequential Circuits Prophet-5 and its imitators, was a step towards more real time recording and hence more efficient track utilization.

A major breakthrough came with the first "intelligent" sequencers. Unlike previous analog sequencers, these microprocessor-based devices allowed complex music to be programmed one part at a time, and played back with real time polyphony. The Roland Microprocessor could program up to eight parts, and using its voltage-control outputs, could drive eight monophonic synthesizers at once. By synchronizing to multi-track, this scheme could be used to put down eight voices at a time, and impressive orchestrations were possible, even using an 8-track tape recorder. The main catch was that the sounds available were limited by the capability of whatever synthesizers were hooked up, so the end result was always "synthesizer music" to some degree.

The significance of the trend, however, was that musicians began yearning for the day when synthesizers and sequencers would offer enough "tracks" on their own to eliminate the



*Authors Peter Vogel (left) and Kim Ryrie, Fairlight founders, pose with the new Series III instrument.*

need for multi-track at all when recording electronically-originated music. With the ability of computers and synthesizers to play exactly as programmed by the musician each time, it is as if the wheel has come full turn from the days of "direct to disk" recording, avoiding the inherent limitations of tape. The advent of Compact Discs has made this approach even more attractive, although modern production techniques make this impractical in most cases, except where computer-based sequencers are used.

When Fairlight introduced "sampling" technology in 1979, the sonic limitations of synthesizers were largely eliminated. Using this technique, it became possible to reproduce any instrument sound, as well as synthesizer sounds, within the capabilities of fidelity and note duration inherent to the technology of that time. The Fairlight also reduced the complexity of using synthesizer/sequencer combinations, by combining the two functions in a wholly integrated package. Interfacing problems were eliminated and flex-

by Kim Ryrie and Peter Vogel

Wasting



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About the same time, the Synclavier II was released, which also offered the ability to compose and perform on the one computer-based instrument. The main distinguishing feature was that the Synclavier initially used FM synthesis techniques as its basis for sounds (sampling came later), while Fairlight put most of its efforts into the sampling side, with Fourier synthesis as a secondary technique.

Although there are significant differences between the Fairlight and Synclavier, the philosophical foundation of the two systems is similar, and we will center our discussions on Fairlight products about which we can speak with some authority.

Of course, both these instruments are definitely "high tech," and their cost makes them inaccessible to most amateur musicians with a home studio. The principle of having a large range of sounds available simultaneously, under control of a central multi-channel sequencer, was an obvious drawback, and many other manufacturers moved into that area with low priced "modular" systems. The trend towards hooking together a selection of synths was accelerated with the introduction of MIDI, the Musical Instrument Digital Interface. This interface standard specifies an electrical and logical protocol designed to allow keyboards, sequencers and synthesizers of various manufacturers to talk to each other digitally. It has been widely adopted and is reasonably effective, given its low cost. While MIDI does suffer in some cases from speed limitations, and the risk of incompatibility between protocols of various manufacturers, it forms a convenient standard that can be used to advantage by set-ups ranging from small Casios to large integrated systems.

Any potential headaches of MIDI are largely offset by the ability to connect synths to a variety of personal computers running sequencing and compositional software. The most significant is that while a MIDI network is good for composing and playing standard synth sounds, it was not designed for efficient sound creation or manipulation that requires complex parameters specific to each instrument. In the case of sampling-based instruments, where very large amounts of data must be manipulated, the speed of MIDI data transfer is far too slow.

To date, no high-quality sampling boxes designed as a "slave" in a MIDI network are available. It is unlikely that such an item will even become popular, since to do sampling properly, it is essential to have large amounts of disk storage, plus computational power and controls required for ma-

nipulation of sounds. Once these are provided, it no longer makes sense to have such a powerful instrument controlled by a sequencer. The logical conclusion is to use it as the control center, using the sequencing and sourcing MIDI code to drive any other synthesizers desired. This allows more intimate control of the sound generation process in real time.

Now that both Fairlight and Synclavier offer 16-bit sampling and enormous amounts of waveform memory capable of storing a whole song at CD quality, the "tapeless studio" is becoming a reality. Both systems can be expanded to perform many different voices at once, and can either be synchronized to SMPTE code if multi-tracking is required for further polyphony or overdubbing vocals or other live instruments. Synclavier recently announced a hard disk recorder capable of limited multi-track recording; more about that later.

Using sampled sounds of individual or massed acoustic instruments, powerful systems such as these can produce music of traditional orchestration quality and Berlin Philharmonic proportions.

The need for a large number of tracks for additional recording ceases to exist in studios where a system such as these is installed. Of course, if a 24-track is available, quite extraordinary results can be achieved using a much less costly system of maybe four voices.

As well as impacting the number of tracks required, the advent of digital sampling synths is causing a re-assessment of the optimum recording medium. Despite the advances of analog tape technology, the problem of noise and distortion remains. Digital tape seemed the logical progression, although its high cost is currently a serious disadvantage. At the time of writing, digital tape recorders are available only in 2- or 24+ tracks, the multi-track units starting at about \$100,000.

Given the trend of electronic music recording away from multi-track, some manufacturers are looking towards providing digital recorders offering just enough tracks to handle the odd acoustic overdub. The latest approach has been to use large hard disks, which have the advantage of random access, eliminating spooling time of both analog and digital tape. The big problem here is backup, since, unlike tape, disks can't be simply spooled off and put away for future use. There are ways around this: Synclavier uses fixed disks with tape backup, which is effective but fairly slow. Lucasfilm's SoundDroid uses large removable disk packs, which has the advantage of speed but incurs a significant media cost.

Fairlight has been considering the alternatives for some time, but feels that the ideal technology has yet to become available. Hot contenders at this time are optical disks, which promise large amounts of storage on small removable media, or, more likely, the new breed of "vertically recorded" floppy disks, which store large amounts of data in an economic, removable format. Each track might cost around \$2000, and any number of units could be synchronized together. Both options are currently under evaluation by our own R&D team and no doubt many others. These technologies are still very new, and it is uncertain exactly when they will become commercially available.

The picture should become clearer by the end of this year, but already CompuSonics Corporation has demonstrated a recorder that stores about four minutes of high quality digital audio on a 6.6 Megabyte floppy. Such drives will soon be available from Kodak, who have also announced a 13 MB version. Other manufacturers are even talking about 25 MB floppies in the future.

The new Fairlight Series III includes a hard disk, with streaming tape available for backup. Although intended primarily for storage of instrument voices, sequences and programs, the

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hard disk offers the benefit of being able to record several minutes of CD-quality music, edit it if required, and play it back. This is an integral part of the instrument and is used in applications such as editing, rather than as an alternative to other recording media.

Until the future of non-tape recording is clearer, analog tape still seems

to be a viable choice and low cost, high quality 8- and 16-track machines will no doubt find growing acceptance, synchronized with digital synths. The tape recorder's contribution to the end result becomes a small percentage of the total, since a final mix might contain 16 channels direct from the instrument, plus perhaps a few from SMPTE-synched tape. The possible shortcomings of the tape are less significant than if all tracks were coming off tape in the conventional way.

### Console Considerations

Able to live at last without the necessity of massive multi-track recorders, using either integrated instruments like the Fairlight or a battery of MIDI synths, many musicians/engineers have started to look suspiciously at their mixing consoles. Having been designed for mixing multiple mics or tape tracks, most consoles are not optimized for today's electronic instruments.

Mic preamps are largely redundant, since synths generate a healthy line level. Only a few high quality preamps are needed in the electronic music studio, for live overdubs and for sound sampling.

The number of mixing channels required will depend on the number of synthesizer voices. In practice, a modest 24 channel console allow for 16

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voices of Fairlight or MIDI instruments and a few tracks of tape to be mixed down with minimal noise problems, in effect providing a whole orchestra of instruments "live." It is desirable, of course, that a console in this application be inexpensively expandable to accommodate more channels as the repertoire increases.

The main limitation of conventional consoles is that the treatment of each channel might need to be quite complex to realize the full advantage of new and developing synthesizer technology. For example, real time control of equalization and effects sends opens up new realms of creative possibilities. Going beyond even the concept of automated or "Total Recall" mixers,

the real requirement is a "dynamic control" console. This will allow parameters such as EQ, sends and pan to be dynamically swept, changed or enveloped, on a note-by-note basis, under control of the digital instrument from which the music is originating.

Being computer controlled, such a mixer need not have physical knobs and switches for most functions, being conveniently operated via one set of "virtual" controls that can be assigned to any channel or group. With all functions under software control, the new console will offer many unique features of particular value in studios focused around either high-end integrated systems or MIDI combinations.

For example, the Fairlight Series III

allows up to 128 different sounds on each channel, so using even the standard 16 voice model, a huge array of sounds are available "on-line," with the proviso that no more than 16 of these play at once. The capability to reconfigure the console on a note-by-note basis is invaluable when using an instrument such as this, with the ability to produce many different sounds from each channel.

Once the console approaches this degree of sophistication, the application of digital signal processing (DSP) comes into consideration. Although DSP has the potential to replace all analog technology, overcoming many of its limitations, it has so far found favor only in digital recorders and some effects, notably reverberation. This is largely because DSP technology is only just within current technology, and is still tricky and expensive.

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"Our vision of the ideal production environment encompasses a fully integrated sound and composition system and a dynamically controlled virtual console."

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In the future, developments in VLSI (very large scale integration) and parallel processing devices, such as transputers, will no doubt lead to DSP becoming a cost-effective alternative to analog or analog/digital hybrids. But for the next few years at least, the limited speed and complexity of programming inherent to current DSP designs limits its application to cases where there is no alternative.

Our vision of the ideal production environment encompasses a fully integrated sound and composition system allowing optional use of extra MIDI instruments, live performance recording on removable digital media and a dynamically controlled virtual console. Inherent is the assumption that Compact Disc defines the technical standards and that a low entry price and a rational growth path are accommodated. ■

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

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THE TASCAM MS-16 SIXTEEN TRACK



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to modern post production facilities.

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unit is comprised of a CRT, keyboard, computer housing and hard disk drives.

It serves several functions in the video post-production environment. As a digital disk recorder, it has a 20 to 20,000 Hz range and a S/N range exceeding 92 dB. A basic system comes with a single 143-Megabyte hard disk capable of holding ten minutes of stereo or 20 minutes of mono. Audio signals are recorded to disks as a 16-bit linear audio signal at a 50 kHz sample rate, and as such can be manipulated like any other computer information.

Additional hard disks can boost the system's storage capacity to nearly five and a half hours of stereo or 11 hours

of mono. The DSP-2002 also features the patented CSX encoding system that can double its storage capabilities through data reduction with no quality loss.

As an editing device, the DSP-2002 first calls for the creation of "soundfiles" which consist of any sound that an editor wants to store or manipulate. These are recorded on the disk, then labeled by the editor with a word or number. Soundfiles then serve as a random access sound library for on-line use. For any sequence, edit or crossfade, an "editlist" is created and built from these soundfiles.

To run the system, editors summon soundfiles, which appear as a list of numbered names on the CRT. Editors

then specify the order, length or SMPTE time code sync point of the desired edit, then execute the edit. The on-screen controls are in simple English, i.e., "play," "stop," "record," and are executed with single key-strokes.

Because the editing process is taking place wholly in the digital domain—the computer is number-crunching, not shuttling tape—all editing including trial edits takes place without the "original" being touched. Because the sound is in a random access memory and not on tape, tape shuttle time is eliminated. Actual edits can be more precise than hand-cut pieces because the editor is essentially adding or subtracting numbers.

Butt splices are done with a key-stroke and cannot be distinguished from unedited material (assuming, of course, that the original material allows for a clean splice). To extend or stretch a sound—for ambient noise on a sitcom, for example—a sound may be put into a tape loop of any size or duration.

Liftin noted that the unit spent a year being used in production since its introduction in 1984, and the company has had the opportunity to work out the bugs that usually surround the introduction of new technology. While pleased with its performance thus far, he has worked with the company in developing new software and interfaces that further enhance its usefulness and practicality. For example, he has been urging the company to develop serial interface protocols that will allow the DSP-2002 to work cooperatively with other pieces of studio audio gear, particularly edit-controllers. The company recently announced it was in the process of developing protocols in SMPTE/EBU and other formats.

Based on these types of developments by the company, as well as on the swift-moving integration of computers into all phases of audio production and post-production, Liftin predicted that "two years from now, we'll view this unit the same way we view the personal computer today."

Liftin saw the machine demonstrated at the AES show last year in Anaheim, but was unwilling to buy it until he heard it demonstrated in his New York studio: "I told [CompuSonics president David] Schwartz, 'If you will bring this machine to my studio in New York, all I need is two to three hours. I want to record something on it and play it back. If this thing can record and play back [with quality in a recording studio environment], then I'll give you a check. I'm dead serious.'

"That was my major concern. I wasn't worried about software; I was more

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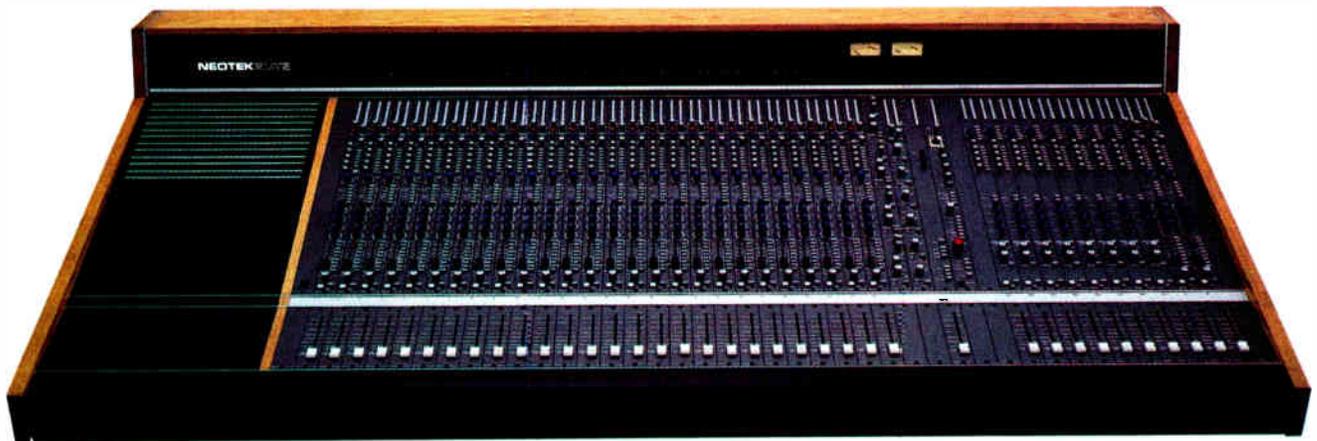
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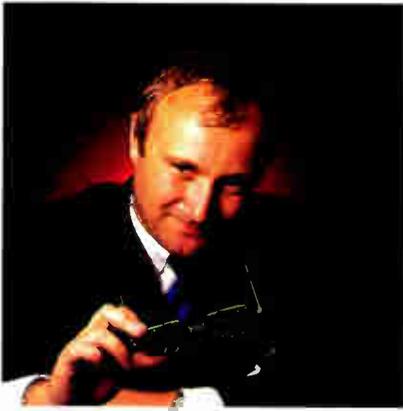
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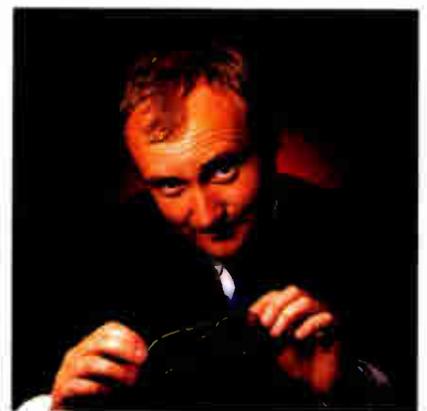
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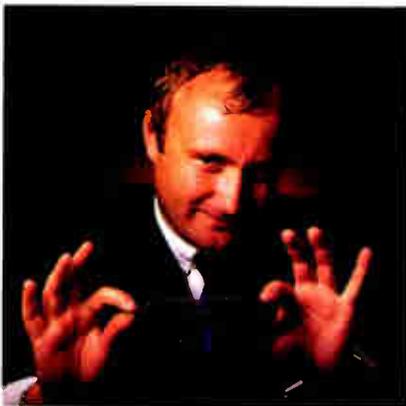
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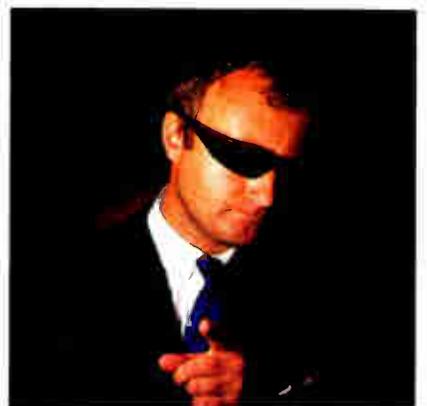
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concerned about whether this unit could record on a hard disk and be reliable."

Since its installation, Liftin has found that the unit reduces certain time-wasting chores to a minimum in a number of practical applications. In posting audio for commercials, Liftin has found that the DSP-2002 makes butt-splicing almost a pleasure. "The company will kill me for saying this, but when they first brought the machine in you could only trim the beginning or the end of a sequence," he said. "You could put things together but you couldn't butt them together. You can butt-splice things together now because of some new software."

In doing commercials, Liftin will record several takes of a 30-second voice-over, then work with the producer to locate specific sentences, even fragments from one take to another that can be patched together to form an ultimate take. Because the DSP-2002 can pull together sections of audio instantly that were recorded far apart in real time, the time spent in assembly is cut virtually to nothing. That applies not only to the final edit, but to trial edits as well. "You can't do that with any tape-based recorder," he said, "even those with time code."

In laying in prerecorded music for shows such as soap operas, precise edits can be accomplished instantly. Should Liftin or a music producer want to relocate a music segment by only a few frames for dramatic effect, an expensive and costly adjustment when sweetening high-volume productions, the DSP-2002 requires only that the new frame number be entered from the editlist and the move is executed with a keystroke.

Similarly, should music need lengthening because a scene has been stretched, the unit has a tape-looping feature that can repeat a sound for an indefinite period of time to fill in the hole.

Liftin is currently rerecording his sound effects library onto the DSP-2002 as an efficient way to hold sound in storage until needed. Once the audio is in the unit's memory it may be manipulated like any other computer data. (For studios creating digital audio libraries with the Sony PCM-1610, the DSP-2002 is digitally interfaceable).

While Liftin enjoys the idea of implementing new technology, as a studio owner he is aware that new "toys" must start paying for themselves virtually from the time the unit comes out of the box. "The only way we can compete as recording studios is to be able to provide services to producers that get less expensive as time goes by, and that new technology must help us be more productive and efficient,"

he commented. "If we don't update our technology but still go with the old horse and buggy ways, we'll be in serious economic trouble."

By entering the all-digital domain, and by using a random-access system, Liftin believes that certain costs can drop considerably, such as tape costs. Eliminating tape shuttle time can save huge amounts of studio time over the space of a year, and allow more opportunities for studio bookings. For editing a commercial narration, Liftin estimates the DSP-2002 could pull phrases together from separate takes and produce a final edited version in under ten minutes. "If you could reduce the time of recording and editing," he said, "and you could cut it down in terms of

time and saved dollars, the machine would pay for itself in less than a year."

Even as Liftin discussed how the role of an audio computer can change the time and efficiency levels of post-production, he was eyeing the stacks of carts that had been assembled for the MTV awards: two for every song nominated for the music video awards extravaganza that were required for a redundant fail-safe on-air mixing chore. "If I had to get records or tapes for all these pieces of music [and use them during the show] I'd be here for a month. Now I have all this music on tape. I dial in a number on the tape and I'm all cued up.

"But imagine for next year if it was on the CompuSonics and..." ■

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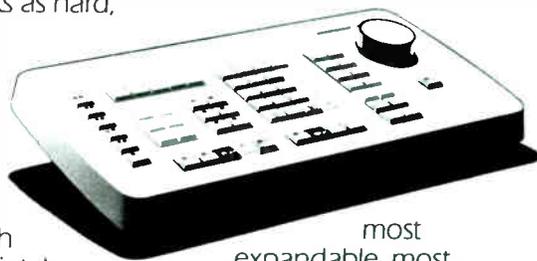
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# EXPLORING NEW BUSINESS



*Author Jim Pace with Sony DAE-1100 editor and K-1105 digital mixer.*

*Digital can generate new sources of income, either through diversification or as new profit centers within existing facilities...*

by Jim Pace

**I**n just a few short years, digital recording has gained widespread acceptance throughout the industry. The growth in Los Angeles has been especially strong, with many of the cornerstone facilities expanding to meet new digital requirements, while a number of new digitally-oriented companies have been launched. Those responsible for developing these new businesses have shown keen foresight and the courage to invest in the new digital technology. Some immediately

embraced the change, some gradually evolved into its use, while others cautiously entered this new era.

I originally became involved with digital as a means of better learning the entire process of audio recording. In the early stages of digital development I was fortunate to cross paths with some of our industry's finest minds—brilliant people who were quick to praise digital's heavenly qualities, and also quick to point out its faults. The period of infancy is over now, though, and we've moved into an era of solid growth, innovation, educated scrutiny and further refinements.

The prime reason for such dramatic growth is, as always, an economic factor. Digital can generate new sources of income, either through diversification (such as Compact Disc preparation in mastering rooms) or as new profit centers within existing facilities (such as editing suites in digital equipment houses). Record companies using digital for cassette duplication, CDs, international exchange and EQ'd copy distribution have made investments of \$50-100K turn a profit with one week's work per month. The increased use of digital in the visual media, added to its use in mixing, mastering, live jazz and classical recording, and for archival storage translates as a healthy return for investments. In this article I'll briefly describe some of these new L.A. operations and discuss why their people decided to embrace the new technology.

## **Digital in Mastering Rooms**

By and large, Sony continues to be the standard system throughout the world for almost all CD mastering facilities. The typical recording/mastering system from Sony includes a PCM-1630 2-channel digital proces-

sor, one or two BVU-800DB U-matic videocassette recorders (or the new DMR-2000 or DMR-4000 VTRs), and usually a delay line for disc preview. Sony manufactures the DDU-1520 for this purpose, but recently, Harmonia Mundi Acoustica, a German label/manufacturer, has developed a delay line and stereo D/A converter modules for their BW-102 system.

Capitol Records chose to expand their inventory of digital processors and VTRs in early 1984. The digital work load had grown so quickly that the sizeable rental expenditures justified the major purchase necessary to set up their own facility. Wally Traugott, senior mastering engineer, had become familiar with the operation of various equipment because of the numerous sessions brought in by outside clients. With this background, expansion was an easy and natural progression.

MCA Whitney, under Gene Wooley and Pat Weber (both Capitol alumni), modernized not only the recording and mastering studios, but also the cassette manufacturing operation. From their past experience, they felt confident that digital technology would suit their needs and also fortify quality control. Their digital operation began in mid-1984.

Future Disc saw an opportunity to expand into digital in late 1984 be-



*Future Disc's Steve Hall*

cause of increased label activity. Under the direction of Gary Rice and Steve Hall, whom I had first met during the mastering of the *E.T.* digital soundtrack recording, this relatively new business had little trouble in justifying the financing for the expansion. Digital fit well with their high tech profile in the marketplace, and a system with a frame accurate editor for sequencing was easily integrated.

A&M Records' Marv Bornstein saw the need for digital in the spring of

1985. His requirements were a little different, in that his large staff required formal tutorials in the use of the videotape format. An educational program insured a common work procedure, which is very important in quality control, and served to standardize the use of digital at this label. The staff continues to work closely together to refine their methods and resulting product.

Kdisc, at about the same time, was getting a lot of digital activity in their studio, but all of it was going to outside rentals. Veteran engineers Bill Lightner, John Golden, and Ken Perry quickly became acclimated to the digital environment and a full system was installed. Later on, they added a digital audio tape checker (DTA-2000) to their inventory, which provides a hard copy backup of error detection statistics.

Bernie Grundman Mastering had early experience in digital audio, and outfitted their operation to service label requests and clients who came to them with digital master tapes. Bernie and associate Carl Bishoff have since expanded the entire operation by opening a second room with Brian Gardner, and digital has been available in both rooms since the summer of 1985.

In the fall of 1985, Precision Lacquer acquired a full system, coinciding with the introduction of the PCM-1630.

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*Ken Perry (left) and John Golden of Kdisc.*

Larry Emerine and Stephen Marcusen had done many digital projects (including work with Stevie Wonder), and felt the new processor and DMR-4000 VTR with a newly added "confidence" head to allow simultaneous playback while recording (RAW) was a valuable time saver. They also installed a Harmonia Mundi Acoustica BW-102 "Tonemeister" to provide preview delay for their Sony system and other formats. The BV-102 provides level adjustment, some filtering and processing, and EQ in the near future, all done in the digital domain using a compatible 24-bit data Eurobuss.

## Editing Suites and CD Preparation

The typical editing suite includes a Sony DAE-1100 editor, two VTRs, and a PCM processor. The recent introduction of the DTA-2000, a digital tape analyzer, provides error correction status of pre-recorded tapes using the PCM's status port.

My first experience with digital audio editing was in 1980 while on the staff of Digital Magnetics, under the tutelage of Bruce Botnick and Armin Steiner. DigMag, the first full digital editing suite in town, was the proving ground for all the new Sony products. It continues to be a leading digital facility and acquired the first digital audio console in the West. Their business is almost entirely digital, including a healthy amount of digital audio for video. As in any digital editing suite, CD preparation is a fundamental function.

Capitol Records' studios, under the direction of Charles Comelli, opened their own editing room in early 1984 with the concept of focusing the label's various needs in an in-house "digi-center." A number of digital projects

had previously passed through their mastering rooms, notably those for Angel Records, the classical label. As part of the EMI international family, they are able to take advantage of the interchange with a common digital system (there are over 400 Sony 1600/1610/1630 systems worldwide). Larry Walsh, who is chiefly responsible for the product from their rooms, converses with the existing CD manufacturing facilities and will soon work closely with the new plant EMI is building in the south.

JVC has a dual format suite enabling them to provide a wide range of tape preparation services, including those destined for CD manufacturing in Japan. Dan Hersch has both the JVC 900 Series and the Sony PCM-1610/DAE-1100 editing system operating side by side in one suite.

Kdisc Mastering decided that music editing was a service necessary for their clientele. They felt (and correctly, as it turned out) that the ability to edit on the spot would improve their entire mastering operation.

Amigo Studios needed only an editor (DAE-1100) to complete their entire recording chain. Chet Himes had digitally recorded and mixed the landmark Christopher Cross project there when it was the Warner Bros. Records studio. Since the summer of '85, Amigo has offered complete recording, mixing, editing and mastering in both the analog and digital formats.

CMS Digital recently decided to expand their rental service to offer dual format (JVC and Sony) editing. John Cadenhead, Fred Mitchell, and Gene Shivley have accumulated a very diversified inventory of digital equipment from almost all of the manufacturers, including some modified consumer processors. They also offer conversion between formats.

New construction and expansion of existing operations is currently in the planning stages at CBS Records and A&M Records, among others. Digital projects comprise a large portion of their business, and will continue to increase with the growth of the CD market, and later, with the introduction of the consumer digital cassette recorder.

As a consultant called on frequently to assist in digital installations, I have had the opportunity to observe the recent transformation of the L.A. recording community. The industry has gone through some big changes and there will continue to be new ways for studios to make money. Each studio has its own particular needs, and requires the right combination of equipment and training. The key is learning how to use the new technology to generate new sources of income for faster, better and more cost-effective operations. ■

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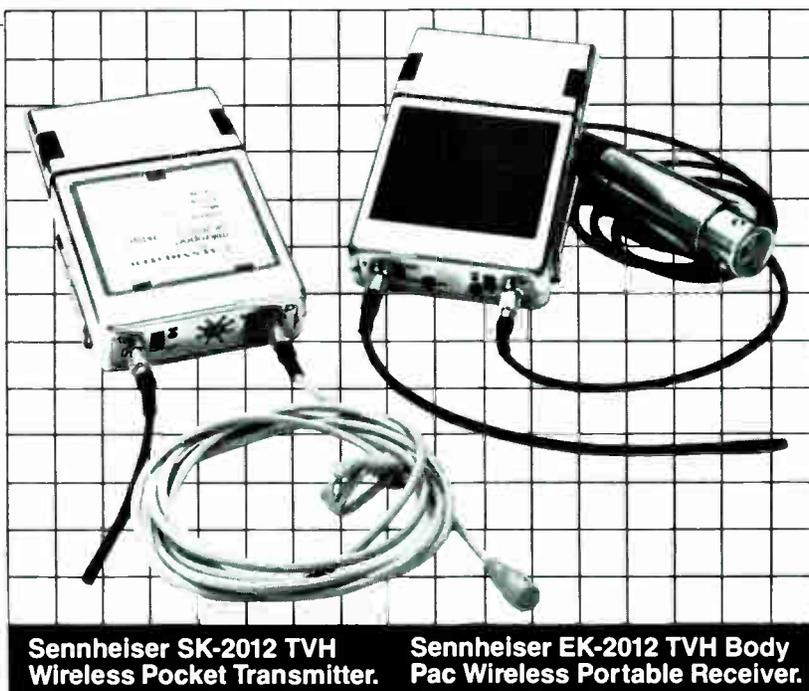
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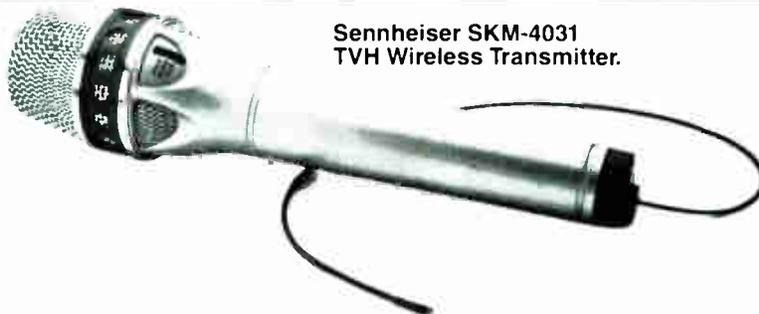
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# Building a SAMPLING STUDIO

*The most obvious requirement is a flexible environment for recording acoustic sounds.*

by Terry Fryer

**I**t sounds like something out of *Mission Impossible*, "your job, if you decide to accept it, is to construct a studio specifically for making samples for digital sampling keyboards." Having had the experience of constructing two other 24-track synthesizer rooms, it wasn't an entirely foreign concept. However, sampling has some peculiar requirements that had to be thought through—and that's where the fun started.

The original concept of the room is easy to state. Construct a studio that helps (instead of hinders) the sampling process. From this foundation, the first question is, "What physical requirements are there that are unique to the sampling process? The most obvious is a flexible environment for recording acoustic sounds. Certain things sound good when recorded in an ambient room. Other sounds require a very dead, anechoic setting.

The solution was to locate the studio in an old house. There was a large variety of acoustic spaces ranging from a 40-foot wood hallway to small, very live stone rooms. Some rooms were treated with carpeting and liberal doses of Sonex to achieve an anechoic setting, while others had their walls, floors and ceilings treated to increase reflectivity.

The second area in the physical

plant that required attention was the monitoring environment. For accuracy, a live-end, dead-end (LEDE) scheme was chosen. From the planning side, this simply meant finding a room that was long enough to allow the monitoring position to be far enough from the back wall (a little over 11 feet). Instead of going through an elaborate soffit arrangement, the speakers were hung with velcro straps to decouple them from the walls and ceiling. To compensate for the bass loss that occurs when the speakers are not flush mounted, near field monitoring was achieved by locating the main listening position four feet from each of the speakers. Sitting in the "sweet spot" gives the impression of being inside the world's largest set of headphones, sort of like the dinosaur scene in Pee Wee Herman's *Big Adventure* film.

The next area of concern is equipment. "Given this physical plant, what is needed to make samples?" The first answer is microphones. Over the years, I have built up a decent collection of vintage tube microphones. My first reaction was: no problem, this area is covered. As it turned out, those great old mics weren't always the right answer when it came to digital sampling. That nice, warm tube sound may have a bit too much distortion for a shiny new digital sampler. Also the hums and buzzes that weren't so noticeable (translated—added character) on lead

vocals sounded terrible when they were transposed up and down the keyboard. A consecutively numbered pair of Bruel & Kjaer type 4007 microphones took care of those problems, as well as a couple of Sennheiser 421s and 441s to round out the selection (especially when it didn't seem right to subject your vintage C12 to recording a rifle range.)

The question then arises, "How do you store the samples?" Dragging a number of sampling keyboards around to do location recording was quickly ruled out. Recording directly into the instruments also did not seem to be a great solution given the tendency of manufacturers to upgrade products and often make the upgraded unit incompatible with the older unit. Traditional open-reel tape recording was appealing because of the ease of tape assembly, quick location of individual sounds, and availability of backup and portable units. On the other hand, analog tape suffers degradation when stored for long periods of time or in hostile environments (back seats of cars and the like). Analog tape also suffers degradation through generation losses when making copies. The eventual choice was to use a Sony F1 with a companion half-inch VHS video deck. The digital format allowed a much wider dynamic range and was free of tape hiss. It also allowed unlimited copying without a corresponding loss in signal quality. Half-inch videotape has some problems that aren't found in its analog counterpart, the most annoying being the inordinate amount of time it takes to find things on a videotape/F1 system.

The solution to that was found by remaining in the digital audio realm. Three-quarter-inch U-matic decks are capable of shuttling back and forth at high speeds much like an analog open-reel deck. The eventual technique used was to copy all the half-inch video cassettes onto a 3/4-inch video format which was used as a library tape. This allowed a general reordering and cleanup of the original session. The PCM recording of samples was the one area in which very few problems cropped up.

The next area of concern was the

physical layout of the room. Studio ergonomics is a strange subject at best, but in a sampling studio it becomes manageable. The sampling process can be broken down into a number of discrete steps: gathering samples, in the field and in the studio; conditioning samples, through computer manipulation and equalization; and putting them into various digital sampling keyboards. From this description, the physical layout of the room became a little more straightforward. Much of the necessary outboard equipment including the 3/4-inch video deck was made rack-mountable. Racks were then constructed that housed the equipment for each of the three sampling steps. These racks were placed in different areas of the room to accommodate 6-foot folding tables that held the various computers needed to modify the samples, the digital sampling keyboards, and whatever auxiliary equipment happened to be around at the time. There was also a decision to suspend the entire cabling system from a grid suspended from the ceiling. This allowed quick and easy changes in the setup of the room that could be accomplished by one person in a minimum amount of time. Of course it tends to give the user the impression of working in a blue tinted

jungle, but nobody said it would be easy.

A couple of areas deserve special notice. One is the guaranteed incompatibility of any one item with every other item in the studio. This problem is especially acute when dealing with computers and computer-related equipment. A typical scenario goes like this:

"I want to use a computer editing system for my digital sampling keyboard."

Fine, you'll need this computer.

"I have the computer, now what?"

To hook the computer to the instrument you need a MIDI card for the computer.

"OK, now I have the card installed, but the graphics don't work."

Oh yeah, you need an 80 column card also.

"Right—now the 80 column card is in, the computer is hooked to the sampler, I have a display but can't get information to or from the keyboard."

That's easy, you need the special software for the sampling unit.

"Great, but it still doesn't work."

That's because your unit needs a hardware modification that we can order and get in three weeks.

"OK, it's three weeks later, my tech just looked inside the unit and it looks like the modification is already done."

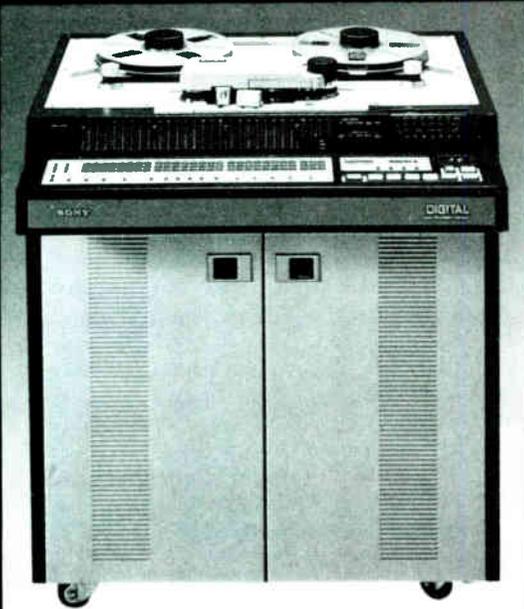
Well, I guess the factory only did part of the modification on your unit.

This is a true story, and things like this happened at every step of the way.

Another area of amusement was the first attempt at remote recording. The Sony F1 and half-inch video player both operate on batteries—very big, heavy, and expensive batteries. The pre-event check list was extensive. Extra cables with every conceivable type of adapter, spare batteries, plenty of videotape, several types of microphones, extra headphones for monitoring, plenty of suntan lotion, and on and on. Of course, nobody told us that the batteries would only last for 20 minutes, or that the cars at the Indianapolis 500 would be twice as loud as the headphones, or that all of this equipment weighs much more than an ordinary human can lug around a large racetrack.

Fortunately, all of these problems have solutions that a bit of experience and a lot of experimenting can take care of. The studio is through most of its growing pains and is fulfilling its goal of providing samples in the most painless way possible. Of course new means of torture are being developed by manufacturers every day, but with a little thought we can keep ahead of them. ■

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PCM-1630 Digital Audio Processor

## SONY PCM-1630

by Dr. Toby Mountain

**Editor's note:** At last October's AES Convention in New York, Sony announced the replacement of the industry standard PCM-1610 digital processor with the PCM-1630, a new version offering more features, yet priced at \$20,000—\$2,000 less than its predecessor. Since the Sony processors are not only used in digital recording, but also in the critical process of CD mastering, the importance of the 1630's sonic performance is paramount. Dr. Toby Mountain (owner/engineer at Northeast Digital Recording, a digital editing/recording company in Shrewsbury, Massachusetts) evaluates the new unit and comes up with some very interesting results.

...

Recently, the Sony Corporation introduced the PCM-1630 digital audio processor as an updated version of their PCM-1610. The PCM-1630 is totally compatible with the 1610 in all respects, i.e. tapes recorded on either machine are interchangeable. However, Sony claims to have made dramatic improvements in both sound quality and performance features.

First off, the 1630 is quite a bit more compact than its older counterpart,

weighing in at 57 pounds as opposed to 83 pounds, with a 30 percent reduction in height. This is the result of more efficient LSI design of the circuit boards and the use of a smaller linear power supply. The lower power consumption, now at 90W from 125W, allows the use of heat sinks in the back instead of a ventilation fan.

The most obvious feature missing on the 1630 is the SMPTE time code generator. I suppose this was both an effort to keep the cost down and to delegate the time code function to the tape machine itself, since their new DMR series video machines (developed solely for digital audio) all have time code functions. But for the 1630 user with a VO-5850 or BVU-800 the absence of the time code generator can create problems, particularly on remote dates. Tapes must first be pre-striped with SMPTE.

Most of the changes in features on the front panel are improvements over the 1610. Sony has dispensed with the swinging glass door which gave the 1610 a stodgy sort of microwave oven appearance. Switching of some of the internal functions like sampling rate, emphasis, and muting are now accessible after removing the front panel, but without having to pull out any of the circuit boards. I do wish, however, that they had left the "record mute"

switch on the outside.

One of the nicest improvements is the metering section. It seems that the 1630 designers have stolen a few ideas from their consumer division. Several of the metering features are direct copies of the PCM-F1: the wide bar graph meters with "cool" green LEDs (perhaps to relieve "digital stress"), the peak hold feature, and the change of absolute peak to 0 dB instead of +20 dB with "over" indicators to warn of any overloading. There are also handy reference markers that may be moved in 2 dB increments between -10 dB and -20 dB along with a selector switch which transforms the entire level meter into a fine scale for precision level adjusting. It's this sort of imaginative design that makes Sony a really classy audio manufacturer.

Moving over to the far left side, we find that most of the other functions are identical to the 1610 with the exception of a playback mode selector which allows you to switch between inputs of video machine A, video machine B, or RAR. RAR means "Read After Read," a bit of computer jargon, which requires the addition of the optional DABK-1630 board and the just-released DMR-4000 recorder. The DMR-4000 has two sets of heads, record/playback and playback, whose separate outputs can be sent simultaneously to the 1630. If an error is read from one output, then the 1630 can hopefully read a correct sample from the second output and avoid an error correction. The extra set of playback heads on the DMR-4000 also allow true simultaneous monitoring of program off the tape during recording, a feature Sony calls RAW, or "Read After Write" capability.

The connections on the back of the 1630 are identical to the 1610 except for two 8-pin "composite digital" connectors to either a DMR recorder or a BVU-800DB. Each accepts a single cable which provides both digital input and output. Another smart feature is the accommodation of the new AES/EBU proposed standard for digital audio transmission. With the installment of two optional circuit boards (DI-1 and DO-1) such a stereo digital signal may be routed through the left XLR analog input and output connectors!

Now to the guts of the machine. Sony has simplified several things in the analog input and output stages of



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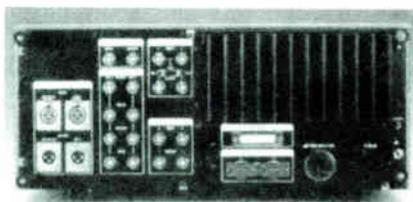
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the 1610. First of all, they have eliminated the presets for input and output gain, which is unfortunate, but not critical. All gain is controlled by the variable pots which peek through holes in the front cover. More radically, but perhaps in line with a purist's design, they have eliminated the switchable input and output transformers as well as the Jensen OP amps, which could be good or bad depending upon one's point of view.

Preceding the A/D converter are new active filters which compensate for phase non-linearity. On the other side before decoding, Sony has incorporated "oversampling" filters with FIR ("finite impulse response") to digitally remove the unwanted frequencies just



PCM-1630 back panel

above 20 kHz. This allows for less analog "brick wall" filtering after decoding and insures phase linearity and hopefully better fidelity in the high end.

It is the phase non-linearity debate which led digital's critics to claim that the 44.1 kHz sampling rate is too low, sending manufacturers back to the drawing boards to design "over-sam-

pling" into their CD players. Sony recently took this step by introducing their own proprietary 88.2 kHz oversampling scheme into their newest CD players. I suspect something similar is at work inside the 1630.

Are these changes audible, and is the 1630 "remarkably improved in tonal quality" as Sony suggests? I was quite anxious to put the 1630 to a test.

When Tom Cahill and Gary Rosen of Sony arrived with the 1630 demo at our editing facility, we set it up beside our 1610 and spent about an hour comparing the D/A conversion and outputs of the two machines from tapes originally recorded on the 1610. Despite their comments to the contrary, I was unable to detect any clear differences between the 1610 and 1630 for any of the music we listened to (classical, pop, jazz). So we decided that a fairer comparison would require a live recording situation.

With the help of Don Puluse, head of the Audio Engineering Department at Berklee College in Boston, we were able to arrange a live recording session the next day in their Studio A. Robin Cox Yeldam was teaching a class of ten students who were recording a Berklee saxophone quartet. We simply rolled the machines in, set up and began recording three pieces played by the quartet. Before we did any listening comparisons, there was a brief explanation about the differences in the machines, which, in retrospect, was perhaps unfortunate since it possibly influenced opinion.

We played back the first piece, switching back and forth between the 1610 and the 1630, while announcing which was which. Then we asked the students to leave the control room but not to talk at all with each other while I interviewed each participant in private. What follows are each of their comments verbatim:

"The 1630 added warmth around 200-300 Hz and the upper registers. The 1610 was a little more brittle around 3 kHz."

"In the high end there was a noticeable difference. The 1610 was somewhat brighter, the 1630 somewhat warmer."

"The 1610 was thinner but it had more warmth. The 1630 definitely had more bass response, emphasis on the lower mid range, 150-300 Hz. The depth was better with the 1630. It was edgier in the bass."

"Sometimes I thought I heard a difference. I think the 1630 sounded less digital and warmer, especially the soprano sax. The 1610 seemed a little fuzzy... almost like there were holes in it."

"The main thing was... I liked the 1610 a little better. I liked the high end.

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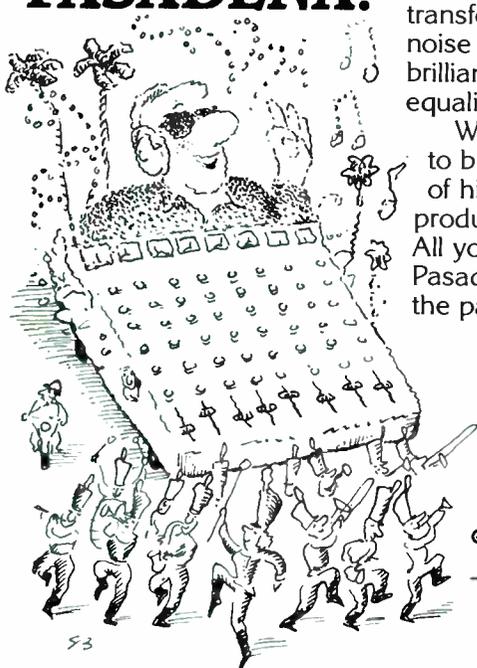
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It was duller on the 1630. The 1630 had a full sound that I liked but it missed that bite."

"The 1610 sounded the best. It had better command of the high frequency range... better defined, clearer."

"I liked the 1610 better. It had more high end. The 1630 sounded, not really compressed, but cut off in the high end. The 1610 held the high frequencies a little longer."

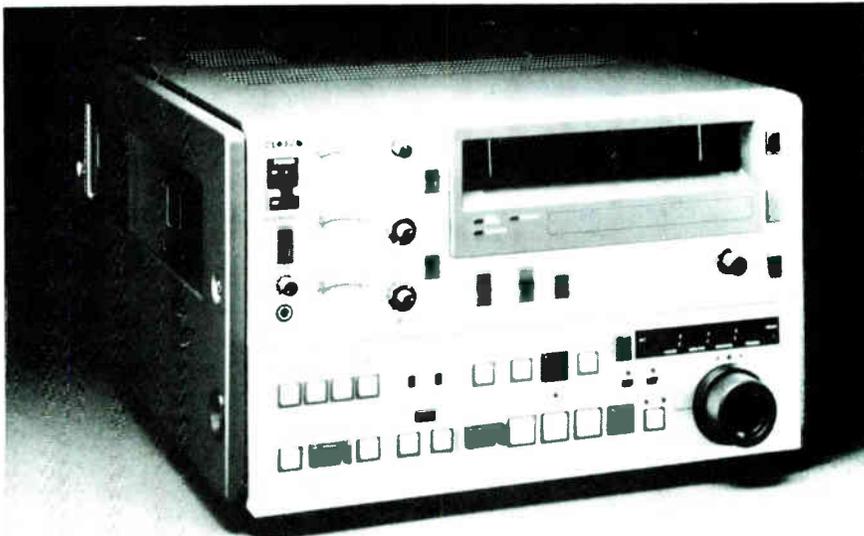
"It was very, very close. Hard to hear the difference. The 1610 had a more intense or metallic quality... a brilliance in the high end. Especially toward the end, a degree of brightness that wasn't on the 1630."

"There were slight differences. The 1630 was smoother on the high end. Other than that there was no difference."

"Nothing earth shattering... The 1630 seemed somewhat smoother, but after a while it was hard to tell."

For the second piece we did a blind test, where we switched between machines while announcing either machine A or B. Of those who participated, three guessed correctly while seven guessed incorrectly!

Obviously the tests were not terribly scientific or significant and I suppose one could argue that experienced "golden ears" and not students should be used for such a comparison. But to



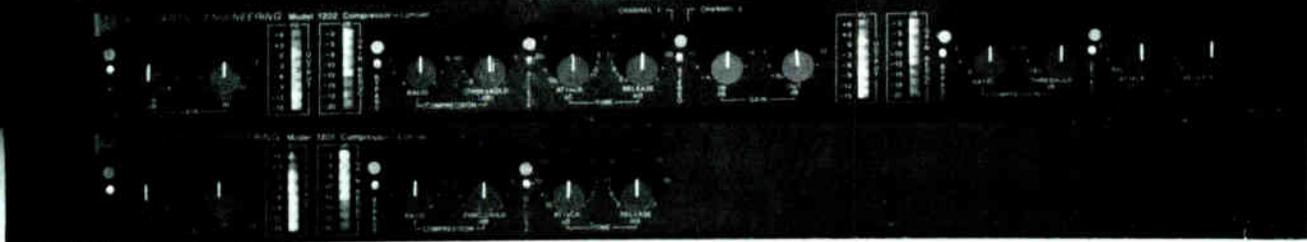
The DMR-4000 recorder is designed specifically for digital data storage.

me the comparison indicated that, although the 1630 may have a slightly more natural high end, the differences between the units is indeed minimal. In fact, I'm quite sure in most cases I could not tell the difference in a blind test. In talking with other engineers who have used the 1630 the typical response is, "Well, I think it sounds a little better." But my sense is that this "sounding better" has less to do with

reality and more to do with "knowing" that it *should* sound better.

All in all, the 1630 is a nicely designed package with some new features which make up for the things that were omitted. And it is reassuring to see that Sony not only continues to make a quality product, but that they continue to support a format (digital processor with video tape) which, in a way, started the digital ball rolling. ■

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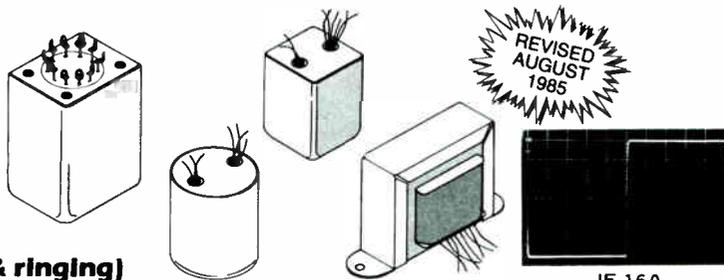
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## INPUT TRANSFORMERS AND SPECIAL TYPES

Model	Application	Impedance Ratio Pri-Sec	Turns Ratio Pri:Sec	20Hz Max Input Level <sup>1</sup>	Typical THD Below Saturation (%) 20 Hz / 1 kHz	Frequency Response (dB ref. 1 kHz) 20 Hz / 20 kHz	Band-Width <sup>2</sup> -3 dB @ (kHz)	20 kHz Phase Response (degrees)	Over-Shoot (%)	Noise Figure (dB)	Magnetic Shield <sup>4</sup> (dB)	Number of Faraday <sup>4</sup> Shields	Package <sup>5</sup>	PRICES		
														1-19	100-249	1000
JE-16-A JE-16-B	Mic in for 990 opamp	150-600	1:2	+8	0.036/0.003	-0.08/ -0.05	230	-8	<1	1.7	-30	1	A=1 B=2	65.25 71.73	43.59 47.92	30.07 33.06
JE-13K7-A JE-13K7-B	Mic in for 990 or I.C.	150-3750	1:5	+8	0.036/0.003	-0.09/ -0.21	85	-19	<2	2.3	-30	1	A=1 B=2	65.25 71.73	43.59 47.92	30.07 33.06
JE-115K-E	Mic in for I.C. opamp	150-15 K	1:10	-6	0.170/0.010	-0.50/ +0.10	115	-5	<7	1.5	-30	1	3	44.84	29.95	23.39

### MICROPHONE INPUT

Model	Application	Impedance Ratio Pri-Sec	Turns Ratio Pri:Sec	20Hz Max Input Level <sup>1</sup>	Typical THD Below Saturation (%) 20 Hz / 1 kHz	Frequency Response (dB ref. 1 kHz) 20 Hz / 20 kHz	Band-Width <sup>2</sup> -3 dB @ (kHz)	20 kHz Phase Response (degrees)	Over-Shoot (%)	Noise Figure (dB)	Magnetic Shield <sup>4</sup> (dB)	Number of Faraday <sup>4</sup> Shields	Package <sup>5</sup>	1-19	100-249	1000
JE-11P-9	Line in	15 K-15 K	1:1	+26	0.025/0.003	-0.03/ -0.30	52	-28	<3		-30	1	1	105.75	70.65	48.74
JE-11P-1	Line in	15 K-15 K	1:1	+17	0.045/0.003	-0.03/ -0.25	85	-23	<1		-30	1	3	42.69	28.53	22.27
JE-6110K-B JE-6110K-BB	Line in bridging	36 K-2200 (10 K-600)	4:1	+24	0.005/0.002	-0.02/ -0.09	125	-12	<1		-30	1	B=1 BB=2	63.98 74.05	42.75 49.47	31.37 34.13
JE-10KB-C	Line in bridging	30 K-1800 (10 K-600)	4:1	+19	0.033/0.003	-0.11/ -0.08	160	-9	<2		-30	1	3	43.45	29.03	20.03
JE-11SSP-8M	Line in / repeat coil	600/150-600/150	1:1 split	+22	0.035/0.003	-0.03/ -0.00	120	-9	<3.5		-30	1	4	168.39	112.50	77.61
JE-11SSP-6M	Line in / repeat coil	600/150-600/150	1:1 split	+17	0.035/0.003	-0.25/ -0.00	160	-5	<3		-30	1	5	85.11	56.86	39.23

### SPECIAL TYPES

Model	Application	Impedance Ratio Pri-Sec	Turns Ratio Pri:Sec	20Hz Max Input Level <sup>1</sup>	Typical THD Below Saturation (%) 20 Hz / 1 kHz	Frequency Response (dB ref. 1 kHz) 20 Hz / 20 kHz	Band-Width <sup>2</sup> -3 dB @ (kHz)	20 kHz Phase Response (degrees)	Over-Shoot (%)	Noise Figure (dB)	Magnetic Shield <sup>4</sup> (dB)	Number of Faraday <sup>4</sup> Shields	Package <sup>5</sup>	1-19	100-249	1000
JE-MB-C	2-way <sup>3</sup> mic split	150-150	1:1	+1	0.050/0.003	-0.16/ -0.13	100	-12	<1		-30	2	3	36.22	24.21	18.89
JE-MB-D	3-way <sup>3</sup> mic split	150-150-150	1:1:1	+2	0.044/0.003	-0.14/ -0.16	100	-12	<1		-30	3	3	63.35	42.32	33.04
JE-MB-E	4-way <sup>3</sup> mic split	150-150-150-150	1:1:1:1	+10	0.050/0.002	-0.10/ -1.00	40	-18	<1		-30	4	1	98.99	66.13	45.62
JE-DB-E	Direct box for guitar	20 K-150	12:1	+19	0.096/0.005	-0.20/ -0.20	80	-18	<1		-30	2	6	45.46	30.38	23.71

- (dBu) Max input level = 1% THD; dBu = dBv ref. 0.775 V
- With recommended secondary termination
- Specifications shown are for max. number of secondaries terminated in 1000 ohm (typical mic preamp)
- Separate lead supplied for case and for each faraday shield
- Except as noted, above transformers are cased in 80% nickel mu-metal cans with wire leads.

### PACKAGE DIMENSIONS:

- |                   |                               |                  |  |                  |                  |
|-------------------|-------------------------------|------------------|--|------------------|------------------|
| 1 = 1 1/16" Diam. | 2 = 1 1/8" x 1 3/16" x 1 1/8" | 3 = 1 1/8" Diam. | 4 = 1 1/2" x 1 3/4" x 2 1/2" w/ solder terminals | 5 = 1 1/8" Diam. | 6 = 1 1/8" Diam. |
|-------------------|-------------------------------|------------------|--|------------------|------------------|

## NICKEL CORE OUTPUT TRANSFORMERS<sup>6</sup>

Model	Construction	Nominal Impedance Ratio Pri-Sec	Turns Ratio Pri:Sec	20 Hz Max Output Level <sup>7</sup> across (n) windings (dBu)	600 Ω Load Loss (dB)	DC Resistance per Winding	Typical THD Below Saturation (%) 20 Hz / 1 kHz	Frequency Response (dB ref. 1 kHz) 20 Hz / 20 kHz	Band-Width <sup>2</sup> -3 dB @ (kHz)	20 kHz Phase Response (degrees)	Over-Shoot (%)	Package	PRICES			
													1-19	100-249	1000	
* JE-11-BMCF	Bifilar 80% nickel	600-600	1:1	+26	1	-1.1	40 Ω	0.002/0.002	-0.02/ -0.00	>10MHz	-0.0	<1 <sup>9</sup>	7	65.36	43.66	30.12
* JE-11-DMCF	Bifilar 80% nickel	600-600	1:1	+21	1	-1.0	38 Ω	0.004/0.002	-0.02/ -0.00	>10MHz	-0.0	<1 <sup>9</sup>	8	48.74	32.56	22.46
JE-123-BLCF	Quadfilar	600-600 150-600	1:1 1:2	+32	2	-1.1	20 Ω	0.041/0.003	-0.02/ -0.01	>450 170	-1.9 -4.0	<1 <sup>8</sup>	7	64.57	37.71	26.02
* JE-11SS-DLCF	Bifilar split/split	600-600 150-600	1:1 1:2	+27	2	-1.0	19 Ω	0.065/0.003	-0.02/ -0.01	>10MHz 245	-0.0 -2.5	<1 <sup>8</sup>	8	46.38	30.98	21.37
* JE-11-ELCF	Bifilar	600-600	1:1	+23.5	1	-1.1	40 Ω	0.088/0.003	-0.03/ -0.00	>10MHz	-0.0	<1 <sup>9</sup>	9	30.21	20.18	13.93
* JE-11-FLCF	Bifilar	600-600	1:1	+20.4	1	-1.6	58 Ω	0.114/0.003	-0.03/ -0.00	>10MHz	-0.0	<1 <sup>9</sup>	10	23.66	15.81	10.91
JE-112-LCF	Quadfilar	600-600 150-600	1:1 1:2	+20.4	2	-1.6	29 Ω	0.114/0.003	-0.03/ -0.01	>450 205	-1.2 -3.2	<1 <sup>8</sup>	10	26.68	17.82	13.08
JE-123-ALCF	Quadfilar	66.7-600	1:3	+26.5	3	-1.3	8 Ω	0.125/0.003	-0.04/ +0.06	190	-4.6	<6 <sup>8</sup>	8	44.09	29.45	20.32
JE-11S-LCF	Bifilar w/ split pri.	600-600 150-600	1:1 1:2	+30	1 (sec)	-1.7	63 Ω	0.058/0.002	-0.02/ +0.01 -0.02/ -0.05	>10MHz 155	+1.1 -4.1	<1 <sup>8</sup>	8	44.09	29.45	20.32

- Multifilar construction has no faraday shield; cannot be used as input transformer. All specifications are for 0 Ω source, 600 Ω load.
- Max output level = 1% THD; dBu = dBv ref. 0.775 V
- Source amplifier -3 dB @ 100 kHz
- Source amplifier -3 dB @ 200 kHz
- Output transformers are horizontal channel frame type with wire leads, vertical channel frames available. PC types available.

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Prices shown are effective 8/1/85 and are subject to change without notice. Packing, shipping, and applicable sales taxes additional.

—FROM PAGE 45, CD FACILITIES

—CONTINUATION OF "LASERVIDEO" (12-inch) as well as CD pressing. Other services include CD-ROM and glass masters for computer applications. The company will open a second facility (in the southeast U.S.) in late 1986.

**PRAXIS TECHNOLOGIES**  
950 Verbena Rd.  
Mississauga, Ont. Canada L5T 1T6  
(416) 673-9544  
Contact: Eric Johnson  
Minimum Order: 1,000  
On Line: April, 1986

Notes: Also offering analog-to-digital transfers, coding, printing of boxes and inserts, blister-pack or long box packaging available.

**SANYO ELECTRIC INC.**  
1200 W. Artesia Blvd.  
Compton, CA 90220  
(213) 537-5830  
Contact: H. Nakai  
On Line: 1984

Notes: This office processes all U.S. CD requests for Sanyo's plant in Gifu, Japan. Complete pressing, printing and packaging services are offered.

**SHAPE OPTIMEDIA**  
P.O. Box 366, Biddeford Ind. Pk.  
Biddeford, ME 04005  
(207) 985-3388  
Contact: William Peck  
On Line: Late 1986  
Notes: Shape, best-known in the audio industry

try as a leading supplier of high quality cassette tape shells, is using their expertise in plastic molding and plant automation in an intensive R&D effort in CD manufacturing technology. They expect their CD facility will be operational by the end of this year.

**SUNKYONG INT'L. INC.**  
201 Rt. 17 North, Rutherford, NJ 07070  
(201) 438-8787  
Contact: D.C. Lee  
On Line: October/November, 1986  
Notes: Sunkyong International is the U.S. arm of Sunkyong Chemical Ltd. Their CD plant in Chunan, South Korea becomes operational this fall.

**TECHNIDISC**  
2250 Meijer, Troy, MI 48084  
(313) 435-7430  
Contact: Sheryl Zachary  
On Line: 1983

Notes: Technidisc, a subsidiary of Producers Color Service, (Southfield, MI) is currently only doing videodisc replication, but eventually plans to do CD audio and CD-ROM pressing as well.

**3M OPTICAL DISC PROJECT**  
1425 Parkway Dr., Menomonie, WI 54751  
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Contact: The above number, or your local 3M sales rep.  
Minimum Order: No minimum  
Notes: 3M's Menomonie plant has been producing videodiscs for several years now, and has been doing audio CDs and CD-ROMs since October 1985.

CD production at Digital Audio Disc Corp. in Terre Haute, Indiana.



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# DANNY O'KEEFE

## YESTERDAY AND THE DAY TO DAY



PHOTO: MR. BONZAI

**Bonzai:** Do you give responsibility to the producer?

**O'Keefe:** I give a lot of it. On the last album, I worked with two great producers—Matthew McCauley and Tony Peluso. It's sometimes difficult to give it up, but if you actually conceive the form well enough, you have to accept some randomness—just in the colors that other players will bring. Otherwise you have to labor as the director and the omni-arranger. If you can communicate specific parts to people, that's OK, but if you're asking players to come in and bring their own minds with them, your song is going to change in some ways. As long as you're satisfied with the basic form, and the musicians don't play wrong notes—assuming that there are wrong notes—it creates a real get-off when other people bring something to a project.

**Bonzai:** Is *The Day to Day* still available?

**O'Keefe:** Yes, for about 20 or 30 bucks, and the price is going up. Maybe it's reverse record business: make no money and make the album virtually unavailable in order to boost the price in the collector's market.

**Bonzai:** Well, how do you make a living? Did you marry rich?

**O'Keefe:** No, but that may be the next thing. I'm getting better all the time—anything is possible.

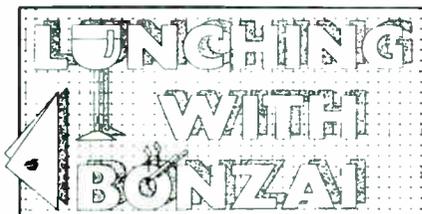
**Bonzai:** You certainly create an impression of confidence and success—

**O'Keefe:** That's just the reward of many strings of wonderful moments. Playing for people is a thrill that came somewhat late for me. I was self-conscious and didn't like doing it for a long time. And one of the mistakes that I would always make would be to take people on the road who were funny, though not necessarily great players. I had to learn everything the hard way, but that's an essential part of the nature I'm working with, what teaches me the most.

**Bonzai:** You sing of the dangers of living and still give a pep talk—almost like a preacher—

**O'Keefe:** Junkies and preachers—two things we don't need.

—PAGE 82



by Mr. Bonzai

ie woogie men and striking women. An original songsmith with a unique blending of poetry and melody, O'Keefe is an artist with evolving power.

For this lunching, Keiko fired up the tabletop range and put on a pot filled with oysters, salmon, tofu, Napa cabbage, and shungiku, which simmered fragrantly as we sipped miso soup. Danny has the hard lines in his face that testify like a Phillip Marlowe monologue. Fortified with a splash of beaujolais and a cedar cup of sake, I tried to crack the walnut of his soul. The hard lines easily changed to crow's feet earned in amusing life. Our conversational dance shifted from ballroom musing to fox trot philosophy arabesques of musical survival.

*"Put on the dog, put out the cat—  
We're steppin' out tonight."*

**Bonzai:** Do you stay in touch with the changes in studio technology?

**O'Keefe:** Enough to be aware of what's going on, but I don't get into it too deeply—it'll drive you crazy.

**D**anny O'Keefe, "Good Time Charlie" himself, paints his songs with the primary colors of love, guts and pain, and with the secondary shades of imagination, hope and everyday terror. Known mostly for just one song that bronzed him like baby shoes, he has a gold mine of nuggets in his catalog. Check out his *Breezy Stories* LP and drift through an underworld of dark portraits, sunny landscapes, boog-

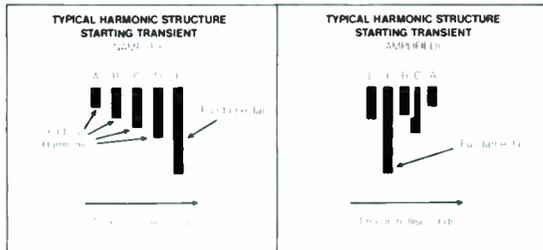
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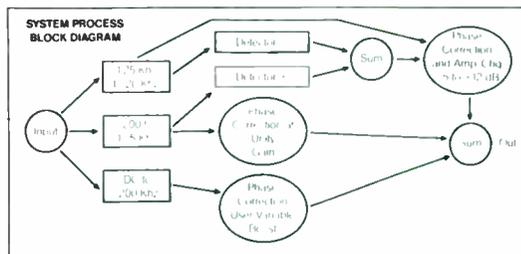
themselves become distorted in both amplitude and time. The result? Muddiness, poor imaging and pinched, colorized sound that lacks the presence and punch of the real thing.

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—FROM PAGE 80

**Bonzai:** But you tell people to watch out—

**O'Keefe:** Right, the sucker punch is the worst of all.

**Bonzai:** And you sing of revving up the engines of optimism—

**O'Keefe:** Hope is a thing like courage, that can be assimilated almost at a chemical level, if you understand the processes. For instance, depression can come from chemicals that hang in your system, but you can drive them out. You can attenuate their effect with other chemicals you can create physically. That's what working out is all about, and you begin to feel better about yourself. If you're a fearful person, the more density you have, the stronger you feel within your environment. Sometimes there is a liability, though—you may think you're a little too big and you step in where you should step out. But armor is essential in a hostile environment. It's a tool, and you must find the armor that is least damaging to yourself.

**Bonzai:** You write about survival in the city, and you live on a small island in Washington state. Isn't this a Jekyll and Hyde existence?

**O'Keefe:** So is writing and perform-

ing. All of the internal processes that produce a song are radically different from the ones that produce a great performance on stage.

**Bonzai:** Inspiration happens in private?

**O'Keefe:** Even more than in private—in privation to a certain degree. One of the worst things that happens to a lot of people is that they get paid way too much for what they do. It can create the equivalent of a slack in the line, so that when you think you don't have to worry, you don't worry creatively.

**Bonzai:** Is worry a part of inspiration?

**O'Keefe:** Absolutely. It doesn't have to be paranoia—that is entering delusion. But if you can use the states that you produce, rather than acting at their whim with something controlling you, well, that's adjusting to the situation. I love the idea of adjustment. Screw normality—someone else's idea of what you should be, an unnecessary code. But adjustment—

**Bonzai:** Is that success on the everyday plane?

**O'Keefe:** I don't know if you can ever do that. That's why the album is called *The Day to Day*—getting through each day is the toughest shit in the world.

**Bonzai:** Man Ray once said that he made useless things with useless titles—

**O'Keefe:** Useful meanings as well. I'd love to have the portrait he did of Anton Artaud, a flat-out madman with an often interesting and unique sense of self. It allowed him to appreciate the world in the special way that he did. It was like New Wave at the time, like Baudelaire before him, and others who said, "What are the limits within our society, and how far can we stretch them and still talk about them effectively?" There was no discipline in his life, so there is no "one thing" that he did. There's a place in Mexico that he wrote about, where the Tarahumara Indians live on damn near nothing—mostly corn. And the adults take peyote. They are remarkable people, famous for being great runners. They run for miles and miles up and down the mountains and before you can get a stethoscope on them, they are back to normal. They're genetic runners, developed through austerity and an understanding of their environment. Artaud, being in a full schizophrenic madness, clearly saw the symbols of the world. He produced beautiful works, became a logo. He was appreciating his own madness—if you don't, you go mad.

**Bonzai:** Ah, some food to bring us down to earth—how 'bout some Japanese Cioppino? But, about these mad speculations of yours, don't they frighten most people?

**O'Keefe:** But what are they doing with religion? Letting others make their decisions for them—most people never get into a contemplation of the truths that they say they believe in.

**Bonzai:** Do you have any musical heroes?

**O'Keefe:** I have influences, people who I like to listen to and have listened to for a long time. Who do I play over and over again for some sonic, aural meaning? The most important one is Miles Davis. *A Kind of Blue* is one of those albums I would want with me if I was stranded on an island alone, with a very long extension cord, of course. But I couldn't say how he's influenced my writing—it's so diametrically opposed. He's a master of funk in his own way.

**Bonzai:** What do you think of the poetry of lyrics?

**O'Keefe:** I don't think people have fully analyzed the new lyrical contexts. Folk music was very lyrical, and writers were more specific in what they were allowing themselves to talk about—a very new thing in song. Be-

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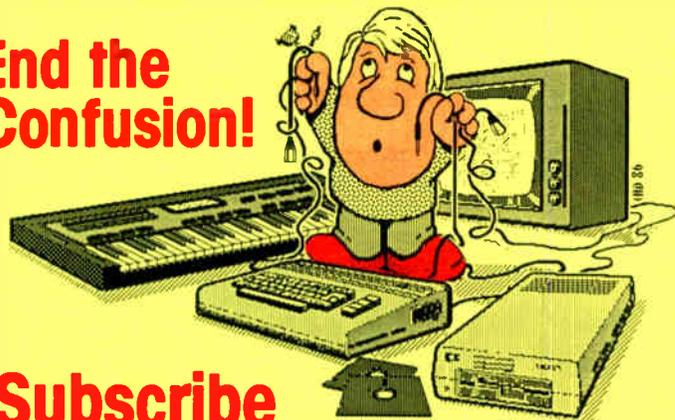
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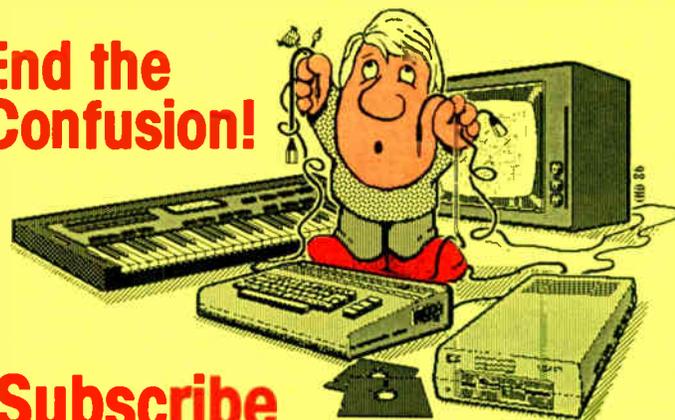
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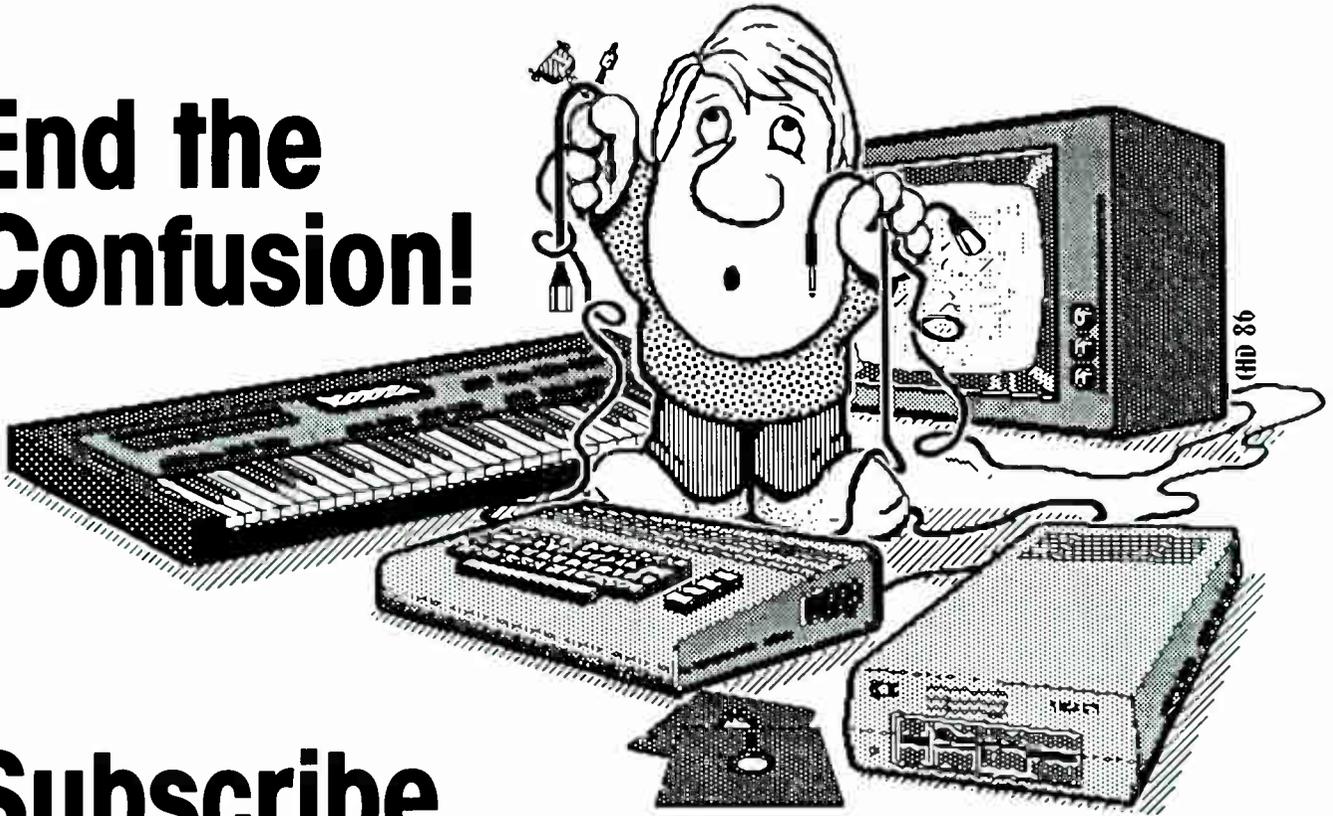
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fore that, a lot of the great songs were ones that winked. The wink is the most important part of a song if it gains acceptance on a cult or inside level—it's a recognition of style.

**Bonzai:** Although you perform solo with your guitar, your albums have big productions—

**O'Keefe:** One of the so-called laws in the modern music business is that the words are appreciated last, but they are in fact the final payoff on the record. If the listener doesn't think in those terms, then the rest of the record is the payoff—how it rocked, how the choruses repeated in a way that make you remember and reapply the meaning of the words. Much of what songs achieve is in reapplication—you hardly ever get what the author intended.

**Bonzai:** What was the biggest triumph of your career?

**O'Keefe:** A Triumph Bonneville 650—a great bike. I bought it from a friend who was a musician. I was 22 at the time, a boy in the world alone, leaving Minneapolis where I had gone to high school and lived. I drove out over Stevens Pass, high in the Cascades, going at excessive speeds. I pulled a U-turn on the other side of the pass and the engine died while I was in the middle of the road facing a line of traffic. A woman had pulled out to pass, and hit me going about 60. I was just stuck there, figuring out how I was going to die. My leg was completely shattered in the accident.

**Bonzai:** It's OK, now?

**O'Keefe:** It's good—different, but good. It was an experience that changed my life. Before that, I was into punk motorcycle gang activity—an attempt to find the hippest thing.

**Bonzai:** You hadn't seriously considered being an artist?

**O'Keefe:** I had played coffee houses, but I couldn't think about it in big terms. You would have to have such skill and presence that it would be obvious. While you're learning your craft, you reside in moments of hope, or memories of moments of hope—unless you're lying to yourself, you know that you're not good enough until you really are.

**Bonzai:** Who decides—you or the audience?

**O'Keefe:** Both. If the audience keeps telling you that you aren't any good, you better take a close look. But if they keep telling you you're good, or if you think you're about as good as they tell you—well, you at least have recognizable cues. You have to decide how good you can be within the abilities

---

“...words are appreciated last, but they are in fact the final payoff on the record.”

---

that you have.

**Bonzai:** What does the average guy know about Danny O'Keefe?

**O'Keefe:** If I mention “Good Time Charlie” to someone from the broad cross section, he'll buy me a cup of coffee. It's good for something—a lot of tickets on a roll.

**Bonzai:** The song brought a sudden leap into the limelight—

**O'Keefe:** They liked me. It's just that I haven't had anything else that was quite like that, something that people sat down and got. Maybe I've had some potential hits, but they've been so far apart. Everybody knows that particular song, but not so many know me. There's a club audience, but the song has an anonymity factor—it may have something to do with why the record still plays so well.

**Bonzai:** What is it that you find interesting in people?

**O'Keefe:** A sense of confidence in who they are, whether it's a bricklayer, a sculptor—the title doesn't matter, it's that sense of self, which is an acquisition. That's the thing I value most in people.

**Bonzai:** Do you have any records that are readily available?

**O'Keefe:** *Breezy Stories* is still around. I think it's a good record. It was released in '73 and has lots of fun players on it: Donny Hathaway and Dr. John on keyboards, Bernard Purdie on drums, Gordon Edwards on bass, Hugh McCracken, David Bromberg, Airto, and Arif Mardin, who produced the album. The sessions were wonderful, primitive in some ways. The album has some songs that have hung around, “Magdalena,” “Angel Spread Your Wings.”

**Bonzai:** How will you continue your life as an artist?

**O'Keefe:** Write more songs—write other songs.

**Bonzai:** Who has sung your songs?  
**O'Keefe:** Jackson Browne, Leon Russell, Elvis Presley, Cab Calloway, God bless his soul—

**Bonzai:** So you've touched some of the heroes of music—

**O'Keefe:** Heroes that touched me, which is the great reward of being a songwriter. “Good Time Charlie”—to a certain degree I am a one trick pony in the commercial world.

**Bonzai:** Is it a burden to live with?

**O'Keefe:** No, it's a true joy, in upper case, that someone like Cab Calloway, who lives in the mind like Blind Lemon Jefferson, Louis Armstrong, John Hurt—one of the pantheon of music's grandfathers—to have one of them be contemporary enough and think that my song was appropriate to their way of thinking. Lovely, lovely, lovely. And to have Elvis think that it was right for him—

**Bonzai:** To get back to your Jekyll and Hyde existence—

**O'Keefe:** It only appears that way to you. It didn't appear that way to Jekyll and Hyde.

**Bonzai:** What a thought. Aren't you getting a little heavy for a recording industry magazine?

**O'Keefe:** You've got the best audience in the world. Nothing's too good for them. Mavens read *Mix* magazine. The '80s is mavenhood.

**Bonzai:** What's your strongest characteristic?

**O'Keefe:** A whimsy for the perverse.

**Bonzai:** Is there something in the dark night of your soul that only you deal with?

**O'Keefe:** I'm just dealing with what everyone has to deal. It's extremely complex, and to the degree that you can recognize the complexity, it's a burden imposed.

**Bonzai:** Danny, I find it hard to believe that you are a part of the popular music scene—

**O'Keefe:** Do you think I am? Is someone starting rumors about me again? I'm not mainstream yet.

**Bonzai:** Are you still working on it?

**O'Keefe:** Absolutely.

**Bonzai:** Would you like to be a chart topper?

**O'Keefe:** Well, sure, if people liked something that I did, and it was something I was proud of. What an extraordinary compliment from your culture. It's the brass ring that everyone goes for in this business. But trying to

make a life work in the music business is a suicidal situation. It never lasts more than ten years—which is part of the thrill of it. Look at the guys who end up being masters of the business for the period they endure. They're interesting fellows—savages, but interesting. The appreciators have leverage that the performers don't have.

**Bonzai:** But they don't have the recognition, the ego stroke.

**O'Keefe:** The sense of self is—ego sometimes gets a perjorative ring, which is bad. It was not the original conception. A lot of Freud's work was virtually poetry that when translated into scientific English, got reduced to something that cracks and decays.

**Bonzai:** What did you gain from your parents?

**O'Keefe:** A whole DNA/RNA structure that is time coded, a time-based piece of hardware. One must always deal with that, as one deals with the gifts. My father's gift was a knowledge and a feeling for the world of flies and trout. He was a master at making split-cane rods. To be able to make a fly that looks more interesting to the trout than the real thing, and to be able to cast in a certain way—that skillful touch is the same, whether playing guitar or painting a picture.

**Bonzai:** You're a fighter, aren't you—

**O'Keefe:** Yeah, but not necessarily a good one. Fighting, in the long run, is a matter of resilience—at least in the music business. It's how well you endure.

**Bonzai:** What about art?

**O'Keefe:** It's still endurance. Making the right decisions on the middle path, while others fall off on either side.

**Bonzai:** Have you been making the right decisions?

**O'Keefe:** Someone else has to make that decision.

**Bonzai:** Will you make another record?

**O'Keefe:** I'm doing 'em all the time. It's just a question of whether I can get the players and the money and commit myself to the task. It's expensive—the last one cost about 45 grand, and that's very cheap. And it takes a great deal of concentration, and mind, to do your homework before you commit to the work.

**Bonzai:** What's a good song?

**O'Keefe:** "When You Wish Upon a Star" is my favorite song of the moment. ■



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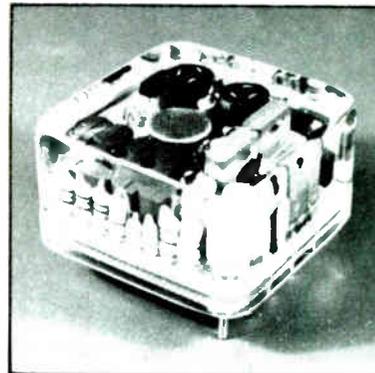
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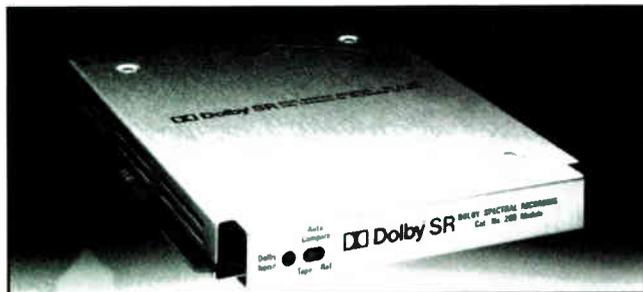
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# PREVIEW



## Dolby Spectral Recording

At the recent AES Convention in Montreux, Switzerland, Dolby Laboratories, Inc. unveiled a new professional master recording process called Dolby spectral recording, designed to combine the most important advantages of digital and analog recording. The system is intended for use with all professional analog tape machines, and is available in the form of single channel plug-in modules (priced at \$750 each) to fit existing and new Dolby mainframes.

Dolby SR exploits the spectral diversity of audio signals, utilizing a powerful new coding algorithm sensitive to variations in signal spectrum as well as level changes, in contrast to noise reduction systems, which respond primarily to level variations. According to the manufacturer, the new technique gives professional analog tape recorders a useful dynamic range equal to or greater than that of 16-bit digital recording systems, and at the same time suppresses modulation noise and other effects introduced by conventional analog recording. Since Dolby SR is based on analog recording, studio procedures such as tape handling, editing, duplication and interchange can be carried out using standard equipment and methods.

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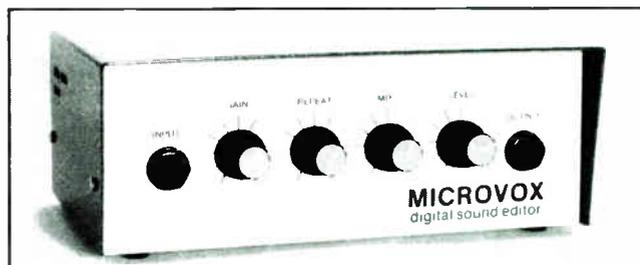


## Fostex 260 Multi-tracker

The Model 260 from Fostex, Norwalk, California, is a four channel cassette/mixer featuring four mic/line inputs and two additional line inputs that can be used as tape returns or synth/drum machine inputs. Each of the unit's input channels has a straight-line fader, mute button, 50dB range trim control, parametric EQ, two aux sends, and individual pan and gain pots for the monitor mix. Other features include 3.75 ips operation for improved performance, built-in switchable Dolby-C noise reduction, mixer/recorder-selectable LED bar graph meters, convenient top-panel patch bay, automatic stop with

two position memory and automatic monitor switching for "rolling" punch ins. The Fostex Model 260 is priced at \$995.

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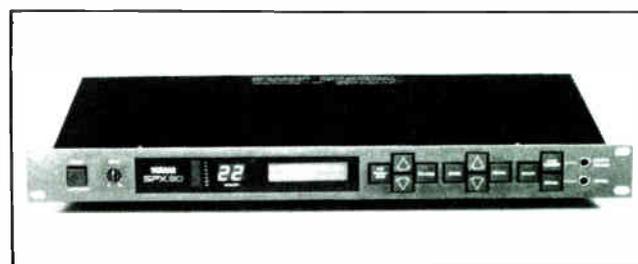


## Microvox Sampler/Editor

The Microvox Digital Sound Editor is a low-cost, yet high performance sampling system designed for use with Commodore 64 or 128 computers with disk drive. Using 8-bit linear AD/DA converters, with an internal companding system for effective 10-bit resolution, the unit offers eight sampling times ranging from 0.95 seconds at 20kHz bandwidth to nearly 20 seconds at 1kHz. Other features include a waveform editor to change the sample (or play it backwards) through the computer keys or any MIDI keyboard, with a four octave control range. A digital delay is also standard.

The Microvox is priced at \$429.95, and is distributed by Skyles Electric Works of Mountain View, California. Options include the Microvox Pro upgrade package, for generating other effects such as harmonizing, phasing and flanging, as well as auto-looping and velocity sensitivity.

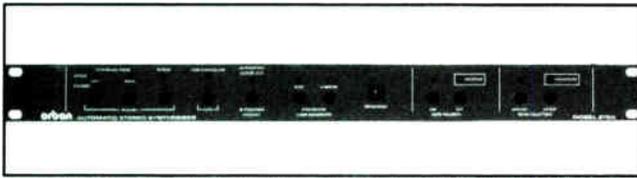
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## Yamaha SPX90 Digital Multi-effects

The SPX90 Digital Multi-Effect Processor from Yamaha utilizes LSI (large scale integration) technology to provide 30 preset effects—including delay, echo, modulation, gate, pitch, freeze, pan, vibrato, parametric EQ, and reverb—as well as 60 user-created effects stored in random access memory for instant recall. Each effect type has a selection of programmable parameters for custom tailoring sounds to specific user needs, and a front panel utility key accesses the unit's MIDI control functions. Other features include: a high contrast LCD display of program name and parameter values, 1/4-inch mono input/stereo out jacks, MIDI in/MIDI thru terminals, bypass footswitch jack, and gate/freeze program footswitch control jack. The Yamaha SPX90 is priced at \$745.

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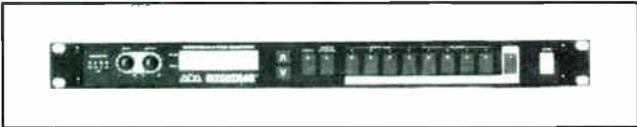


## Orban Automatic Stereo Synthesizer

The Model 275A Automatic Stereo Synthesizer from Orban of San Francisco, is a stereo in/stereo out unit that incorporates two methods of recognition to determine when to synthesize mono to stereo and when to bypass true stereo in television broadcast applications.

Features include complete mono compatibility to mono receivers, a choice of narrow or wide synthesis modes, built-in single-ended noise reduction with bypass, and automatic polarity detection for correcting out-of-phase conditions. Inputs and outputs are fully balanced +26dBm, front panel switches are recessed, a user control interface port is provided for automation, and a 19-inch rack mount remote control panel is optional. The 275A is priced at \$1,895; the remote unit is \$295.

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## ADA Pitchtraq

ADA Signal Processors, Oakland, California, have introduced the Pitchtraq, a studio quality pitch transposer featuring complete programmability and instant access to

any program. The unit produces harmonizing effects within a two octave range, including harmony lines, octave shifts, synthesized textures, de-tuned chorusing and harmonic alteration. ADA has incorporated PCM circuitry into the audio chain for improved sound quality, and other features include a 15kHz bandwidth, a self-diagnostic program, and an LED display of pitch change in cents, ratio, or standard musical interval. The Pitchtraq is priced at \$599.95, and an optional footswitch controller is available.

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## ASC ASCMX-2S Expander

Audio Services Corporation, North Hollywood, California, has introduced a two channel add-on mixer for its popular ASCMX-4S stereo location audio mixer. The two channel unit can also be used as a stand alone mixer in applications where space is at a premium, and is built to the same rigid specifications as the four channel mixer.

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by Bruce Nazarian

Taking a brief break from our ongoing SMPTE-MIDI discussion, this month we'll focus on how recent developments in drum machines have opened the door for new programming techniques. We'll pick up our SMPTE saga again in the coming months.

### New Drums, New Sounds

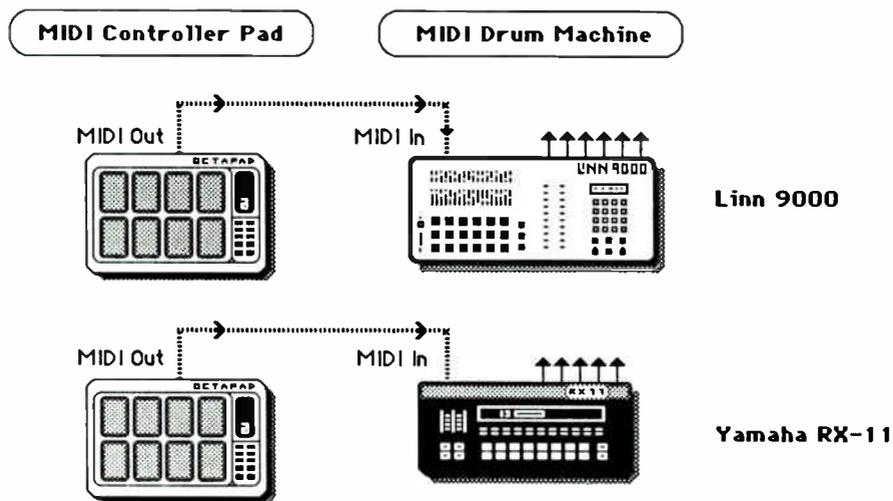
The past year has seen many improvements in drum machine technology and many new features. The sound quality of the new generation

"Now with the advent of MIDI drum pads and sophisticated sequencers, we can 'plug the drummer in,' too."

of digital drums is amazing, as is their ever-decreasing price. We have also seen the introduction of new rack-mount drum modules like the Roland DDR-30 and the J.L. Cooper Sound Chest, as well as the continuing development of the many different electronic drum sets, heirs apparent to the Simmons legacy. One of the really exciting developments, though, has been the integration of MIDI control into drum machines. By this, I mean the ability to actually play a drum machine's sound by a MIDI note event.

Newer drum machines, like the Linn 9000, Yamaha RX11, E-mu SP-12 and Roland TR707 and 727 offer a "MIDI Drums" mode. In each machine, drum sounds are assigned to specific MIDI note numbers, and the incoming MIDI note events can trigger the sound with dynamics! That's right, *with dynamics*. In fact, with the TR707 and 727, the only way to put dynamics in the drum sequences is to program with velocity from a MIDI keyboard! Now I know that the idea of bashing away on your DX7 to program a drum fill might seem somewhat silly, but it is possible. But before you start beating on your keys with your 2Bs let me show you another way to pound out the groove...

# M·A·R·C·H·I·N·G TO THE M·I·D·I·D·R·U·M·M·E·R·



**Fig. 1 - Two Examples of MIDI Pad/Drum Machine setups**  
In each setup, the MIDI Note Configuration of the Controller Pad must match the note values assigned to the drum machine's sounds.

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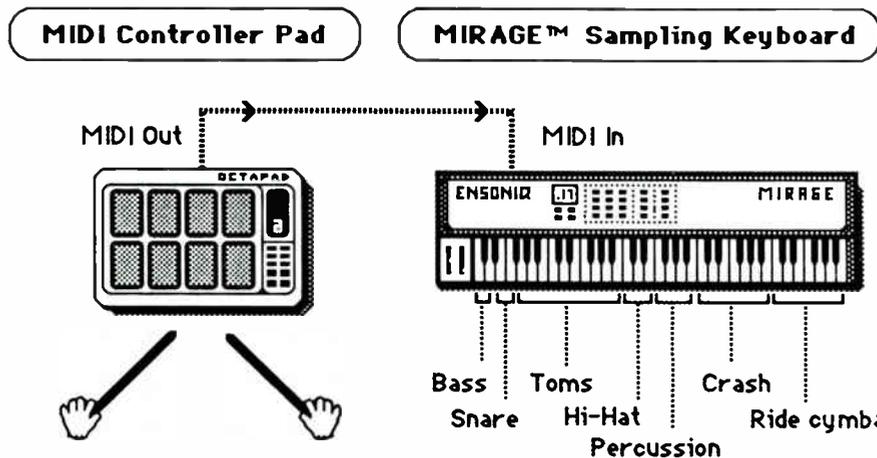
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**Fig. 2 - Using a MIDI Pad To Play Drum Samples**

In this setup, the MIDI note events generated from the pad are used to play the drum or percussion samples stored in a digital sampling unit.

—FROM PAGE 88, *IN-SYNC*

### Midi Sticks?

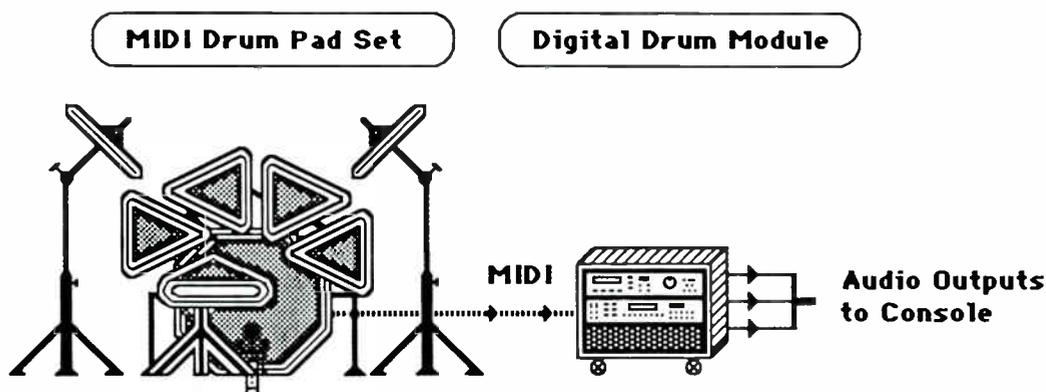
No, no one has invented MIDI drumsticks, yet... (give 'em time), but the recent introduction of MIDI drum pads (like Roland's Octapad), is making MIDI drums the happening thing! Simply put, a MIDI drum pad is a device that translates drumstick "hits" on its sensing pads into MIDI note events, with dynamics. When connected to a MIDI-capable drum machine, the MIDI note events you generate will trigger the drum machine's sounds just like hitting the drum machine's tap switches (Fig. 1). The ability to program drums using drumsticks is really an improvement over the tap switches. (Plus, it satisfies a deep-

seated psychological urge to actually *hit* something to make noise... but I'll save that story for my analyst!) Using drum pads to program can actually help you create better drum fills because it allows you to approach the instrument more like a drummer would. (It also curbs the tendency to use the repeat button for those oh-so-impossible 32nd-note bass drum fills.) And because the MIDI pad translates the varying dynamics as you play, it helps you put in the subtle dynamic changes that blur the difference between real and machine. Drum machine programmers have been finding ways to deliberately add small amounts of rhythmic or dynamic imperfection to their programs, to make

them more "humanistic," if you will. Usually this involves time-consuming step-by-step program editing. MIDI pads can help you achieve those same results without all the fuss and bother.

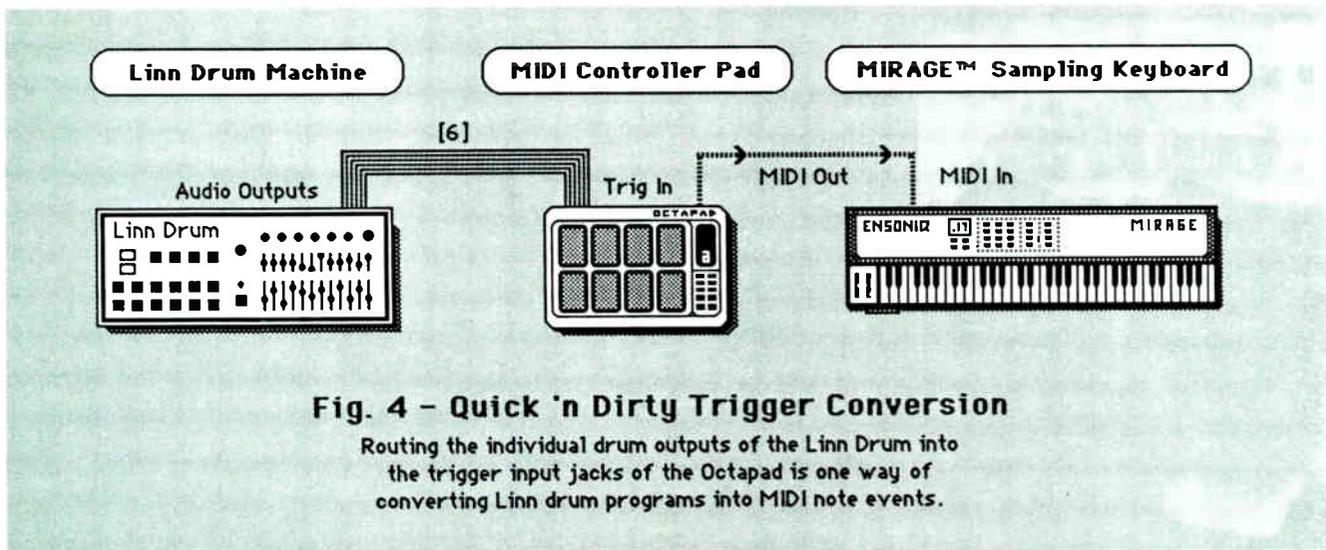
### Getting a Free Drum Machine

MIDI pads also allow you to create drum sequences even if you do not own a drum machine. How? It's easy... Most sampling keyboards now have several multi-sampled drum sets available in their sound libraries. Using a MIDI drum pad, you can create a MIDI note sequence that will play the sampler's drum sounds instead of a drum machine (see Fig. 2). To accommodate sampler setups or drum machines that differ from the



**Fig. 3 - "Let the Drummer Have Some Fun"**

The MIDI drum pads send their outputs to the Drum Modules in the rack. Used with a MIDI sequencer, a drummer can record his own playing as MIDI note events, which can be used to play the module later.



**Fig. 4 - Quick 'n Dirty Trigger Conversion**

Routing the individual drum outputs of the Linn Drum into the trigger input jacks of the Octapad is one way of converting Linn drum programs into MIDI note events.

default MIDI drum note setup, the Octapad has provisions for setting the MIDI note number of each of its eight pads individually.

**Real Drummers Can Program, Too!**

Drum pads can also be used with MIDI in another way. (Fig. 3 shows something that looks suspiciously like a set of Roland PD10 and PD 20 drum pads, driving a DDR-30 digital drum module). By providing a drumset-like

environment to play on, pads allow drummers to get in on the MIDI fun. This can really pay off for you in your music productions: you can have the best of both worlds (human feel with superb sounding sampled drums) by using a real drummer to help create the drum sequences. You may want to try using drum pads and record the drummer's "events" into a MIDI sequencer, instead of recording the acoustic drum sounds. Later, the drum performance can be analyzed, quan-

tized (error corrected) if necessary, and used to play drum samples or a drum module. An analog variation of this technique has been used for quite a while now. A drummer is hired to play a session to a click track... his ideas are analyzed and then programmed into a drum machine. With careful programming, the net result is a nice combination of technology and soul. Now, with the advent of MIDI drum pads and sophisticated sequencers, we can "plug the drummer in," too.

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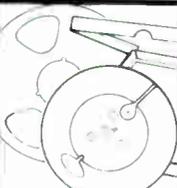
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**Other Uses**

If you don't have access to a full set of MIDI pads, you can use existing electronic drum pads (Simmons, Tama, etc.) or even acoustic drums to generate MIDI note events. The trigger input jacks on the back of the Octapad are designed to process an "impact" pad output and convert it into MIDI events. Though originally provided for connecting Roland's own pads, in theory you should be able to plug in any electronic drum pad and make it work. For acoustic drums, there are a variety of small microphones whose outputs can be used to drive the trigger input jacks. There are also several different types of contact mics and trigger transducers that are designed expressly for this purpose—to generate a signal suitable for triggering drum sounds. (You could probably even use something as traditional as a Shure SM57 placed close to the drum head.)

**Using a Non-MIDI Drum Machine**

If you have an earlier generation drum machine that doesn't have a MIDI drum capability, you aren't out of the game by any means! You can generate MIDI notes from the output of any non-MIDI drum machine by routing its individual drum outputs into the trigger input jacks on the Octapad (see Fig. 4). The same circuitry that processes a pad output will process a drum sound. (In fact, if you put the "Simmons Trigger" chips into a Linn, it's likely that the Octapad won't even know the difference between it and a real Simmons pad!) Here's something you should remember: acoustic trigger inputs like to see a nice sharp "click" to work properly. If you are getting sloppy triggers or double-triggering, raising the pitch of your drum sounds can help. If you can install custom sounds in your drum machine, try using a sound with sharp attack like clave or sidestick, again tuned up. In severe cases, you may find it useful to equalize the sound before you route it to the Octapad's inputs. Rolling off the low frequencies and boosting the midrange can help accentuate the attack transient of the sound, resulting in a cleaner trigger pulse. Whatever way you do it, you'll find that experimenting with MIDI drums can open up some new sound possibilities for you. Have fun exploring!

**Tip-of-the-Month**

This month's handy tip has to do with loss or corruption of the SMPTE or sync track on your multi-track master tape. As I mentioned a few columns ago, once you commit to a computerized production, you really are at the mercy of your sync track until

all the computer parts are finalized. Occasionally the sync track may get erased by mistake, or a tape dropout may occur that results in an unusable sync track. It's not too big a problem if you are using SMPTE. If the time code track accidentally gets erased, you can re-record the SMPTE on the same track, and experiment until you find the new offset point (i.e., the new time code value for your original offset point). It may take you a few tries to zero in on the correct offset, but it should be possible.

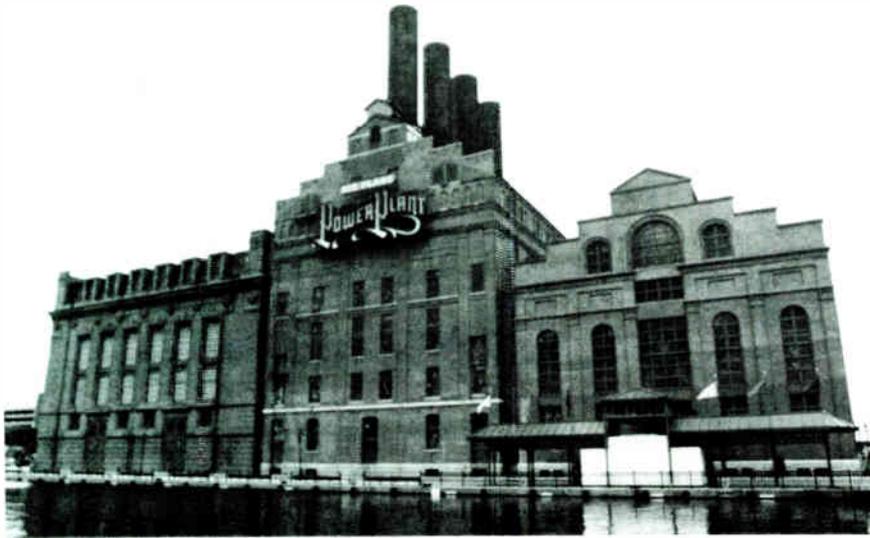
Losing a TTL or FSK sync track is another story entirely. Your ability to sync depends heavily on being able to read the very first sync pulse and every pulse thereafter. Since it's almost impossible to re-record a sync track that will start at exactly the same spot on the tape and run exactly the same speed, the best you can hope for here is a near miss. Once the original sync track is blown, your only alternative is to try reconstructing it by recording a new one of the same pulse density (24,48,96 ppg), and the same tempo. Cue up the master tape and mark the spot (if you can still find it) where the old sync track began. Note the number on the tape counter and start recording the new sync track just a bit before that number, no more than a few seconds. Then, using our old trick of running the sync track through a digital delay, dial in an appropriate delay to synchronize the new drum tracks with the old tracks. You can do this by listening to the new snare drum along with the previously recorded snare drum. Adjust the DDL time until they are tracking exactly with each other (listen for the phase cancellation). Once you've found the correct delay time, jot it down for future reference. You'll need it every time you want to sync up to this track again. I hope that this tip helps you out sometime.

**Time To Go**

Well, it's time for me to get back into the studio for another month of MIDI magic. Don't forget, if you have a great solution to a sticky problem or you want to share your insight with other In Sync readers, drop me a line care of *Mix* magazine, 2608 Ninth St., Berkeley, CA 94710. (Remember, though, I can't answer letters individually.) In Sync has a new "computer mailbox," too... if you are a subscriber to the IMC computer network, you can reach me on-line, as they say. Just address your E-Mail to GNOME-U.S. (Ah, the marvels of the computerized world!)

Next month, we'll take a closer look at triggering samples (especially drums), and explore using samples in other ways! 'Til then, stay In Sync! ■

# SOUND ON STAGE



*The Six Flags Power Plant entertainment complex.*

## **QSC Amps Power the Power Plant**

After four years of planning and a 30 million dollar investment, the Six Flags Baltimore Power Plant entertainment complex finally opened last summer. Unlike other Six Flags parks, the Power Plant is an "indoor entertainment facility," located in the old Power Plant building that provided the electrical power for the city in the early part of the century.

On the shores of Baltimore Harbor, the complex's attractions are built around the original boilers and smoke stacks, which sharply contrasts the

high-tech theater presentations featuring automated multi-media shows with robots as the main characters.

The complex audio system was designed and specified by Martin Collins (who was involved in the Disney EP-COT Center design), and the installation was contracted to Maryland Sound Industries and Landmark Entertainment Group. The three main theaters use over 60 QSC amplifiers while the balance of the facility is fitted with an additional 50 QSC amps. According to Rich Sweet of Six Flags, "The QSC amplifiers are everything we need. They are compact, sound great and have been trouble free."

*A few of the 100-plus QSC amplifiers used in the Six Flags' installation.*



## **NSCA 1986: A Balance Between Business and Technology**

The 1986 conference and exposition of the National Sound and Communications Association is expected to draw over 2,500 sound and electronics contracting professionals to the Sahara Hotel in Las Vegas from April 29 through May 1, 1986. NSCA executive secretary F.C. "Bud" Rebedeau sees prosperity in the coming months for the over-500 contractor and manufacturer members in the organization. "My fearless forecast is that business is going to be good for another year," Rebedeau predicts. "With interest rates going down, there will be a lot of rehab, retrofit and new construction, which is good news for our industry."

Another reason for the apparent health of the contracting industry, Rebedeau notes, is diversification into new areas. "Those contractors that started out in pure sound and sound reinforcement are finding that they can flatten out the business curves by diversifying: from pro-sound, they can go into other kinds of sound, or electronic security and things like that. By being diverse, we're not as single-industry dependent."

Keeping with this theme, a wide range of seminars are planned during the three-day event, including How to Deal with a New Generation of Buyers, and Fiber Optics & Other New Technologies. At press time, over 150 suppliers of equipment for electronic systems contractors had signed up to exhibit their wares, and a special hands-on session will provide a better understanding of new technologies being introduced to the industry.

Rebedeau finds that the changing character of the association's membership is reflected by the overall theme of the 1986 NSCA Expo and Conference: a balance between business and technology. "The association is only four or five years old, but we're evolving with the membership—there's a lot more interest now in costs-of-doing-business surveys and sales/compensation surveys. Many of our members started out as technicians, later went into business for themselves, and are now finding that the importance of being good businessmen is as important as staying technologically current."

For more information, contact the National Sound and Communications Association, 501 West Algonquin Road, Arlington Heights, IL 60005, phone (312) 593-8360. ■

by Craig Anderton

Only a couple of years ago, some people were predicting that MIDI would change the way we compose,

using their computers for musical applications. Now, it is common to see a computer set up in a studio or rehearsal room, typically one of the new 68000 machines (like the Mac) or an older 8-bit machine (e.g. Commodore-64).

software is pretty much a modular medium, with each "module" teaching the computer to do a different task. Systems can be built on a modular basis, which is sort of like buying on credit but without the interest. And MIDI gear purchased now will remain useful for as long as there's a widely-accepted MIDI spec.

MIDI has had a tremendous impact on the recording process. There are now "MIDI studios" where you bring in pre-produced sequences and play them back through expensive MIDI sound generators. In fact, much pre-production occurs at home or "pro" MIDI studios, with traditional recording studios used more for track transfers and mixing. Synchronizing MIDI sequencers to tape recorders offers an instant way to expand the number of tracks available in a given studio, and layering keyboards via MIDI avoids the need to record doubled or tripled parts with slight tuning offsets. The use of MIDI "virtual tracks" can also greatly improve fidelity by dumping electronic instrument outputs directly on to the 2-track master.

The recording studio also figures prominently in MIDI's future. With more MIDI-controlled audio signal processors, we can expect automated MIDI mixdown (timbre as well as level) to become commonplace.

A MIDI update would not be complete without a mention of the MMA (MIDI Manufacturers Association) and IMA (International MIDI Association). Both organizations are working so that the MIDI spec grows in an intelligent, controlled manner. As people come up with new ideas and the MIDI spec wanders off into gray areas, these organizations do what they can to come up with the best possible answer for how to further define the spec. For example, right now there are a lot of questions involving the song pointer message, and hopefully the manufacturers will be able to pin this part of the spec down with a little better precision.

Although MIDI has only been with us a few years, it has made its mark. The question is no longer whether MIDI is here to stay; the question is how much more will MIDI accomplish during its stay. Whatever the answer to that, MIDI has certainly come a long way—from a tentative connection of two keyboards, to an all-encompassing system for musical electronics. ■

## What Hath MIDI Wrought?

perform, and record music. Now that we've lived with the MIDI spec for a while, let's update its progress and see whether it has fulfilled those predictions.

One of my first observations is that MIDI hasn't changed the *sound* of popular music in any particular direction. In other words, what came over the radio in the pre-MIDI days is not that different from what we're hearing now. I think one could make a very convincing case that sampling technology and the DX7 have had far more sonic impact than MIDI. But scratch below the surface and you'll find that MIDI has made some profound changes, some of which are being felt right now and some of which remain to be felt.

Composition is probably where MIDI has had the greatest effect. The combination of a MIDI sequencer, tape recorder, and some of the newer synthesizers gives the composer unprecedented control over both the editing of a composition and the available timbres. Many hit films and songs are being scored, right now, by people who use SMPTE and MIDI technology to synchronize an entire composition (which might also include sound effects) to film or video. In bands, musicians can use the huge track capability of some MIDI sequencers (e.g. 64 tracks) to each lay down a part and combine the best sections from the various parts. MIDI has given us the chance to work with music on a very detailed level with a relative degree of ease.

MIDI has also encouraged musicians to take computers seriously. Prior to MIDI, only pioneering electronic musicians and computerphiles were

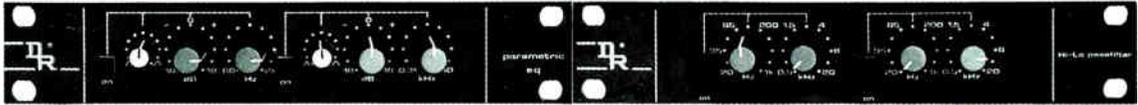
Part of the acceptance of computers is that they are multi-purpose devices. In other words, one computer can run individual programs designed to do individual tasks (such as MIDI sequencing, MIDI filtering, digital delay, voice editing to simplify your life when programming synthesizers, and more). Musicians who have computers are also more likely to become involved with more "traditional" computer activities, such as word processing or telecommunications.

When it comes to signal processing, MIDI has not had much impact yet due to the limited availability of devices to select MIDI programs. However, Peavey, Ibanez, and others are now making program change foot-switches, which allow guitarists and other musicians to select signal processor programs via MIDI. What this means is that effects settings can be planned out in advance and stored, then recalled while playing, with no knob-twisting required. I think there's a good chance that signal processing setups will be one of MIDI's next "hot topics."

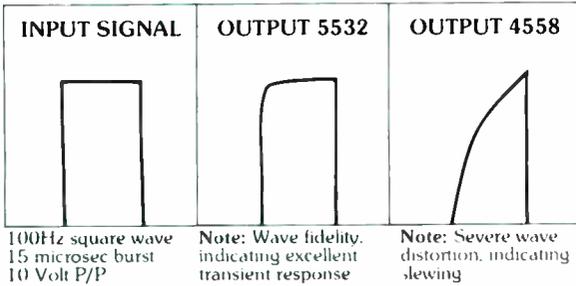
MIDI has helped to modularize electronic systems. You used to buy a complete synthesizer; now you can buy a single "mother" MIDI keyboard (or guitar, drum, woodwind, bass, or voice MIDI controller) and simply feed MIDI rack-mount sound generators. There are also numerous MIDI data processors you can insert in the MIDI stream to alter data—filter out particular types of data, merge two MIDI data sources into a single composite output, send a single MIDI output to multiple MIDI inputs, add echoes, rearrange MIDI system configurations, and so on. Even

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**CONCLUSION:** The world's most expensive signal processing is too expensive !

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Josef Zawinul

## Josef Zawinul: "Sound Is Everything"

by Josef Woodard

To all outward appearances, the legendary jazz group Weather Report is a worldly enterprise. Although keyboardist and benevolent dictator Joe Zawinul disclaims any specific outside influences, the band's music revels in intriguing allusions to ethnic sonorities and rhythms—and Weather Report has left its mark on far corners of the globe with 14 albums and numerous overseas tours in the past decade and a half.

Zawinul's Czech/Austrian heritage bears significantly on his unique musical panorama, as evidenced on *Dialects*, the long-awaited follow-up to *Zawinul*, his 1969 solo debut.

For all his globetrotting, Zawinul's roads appear to lead to a discreet hideaway in Pasadena, California, a stone's throw from the Rose Bowl. Whatever exotic and enigmatic reputation he has created over his years of jazz and synthesizer innovation, Zawinul is, at root, an artist who works best in the comfort of his own home.

Much of Weather Report's material has been realized in the Music Room, a large den at one end of the sprawling house. It is equipped with an ex-

tensive wraparound keyboard setup, a 24-track board and tape deck, and 2-track machine, a Yamaha grand piano, assorted ethnic instruments, shelves lined with work tapes, and an Apple IIe spitting out manuscript.

Weather Report fans have often noted the predominance of Zawinul's bold keyboards in the group setting, for better or for worse, suggesting that perhaps he was a solo artist in team colors. Leaving aside the question of whether or not he *prefers* solo work over the group, *Dialects* shows the potency of Zawinul's individual talent.

Recording in the DIY mode can often result in sterility due to an absence of objective distance, but *Dialects* works on a number of levels: as an example of music in the electronic idiom, utilizing the linking capability of MIDI technology; as an extension of the more impressionistic facet of Weather Report's sound; and as yet another entry in the register of music that defies categorization. While you feel the feverish jazz sonorities in "Zeebop" and the scent of Latin fire beneath "Carnavalito," neither piece falls conveniently into one niche—nor are they anything but predictable. Zawinul's synthesized landscapes, though, bristle with organic yet strange timbres, subtle poly-rhythmic cadences and lucid bits of melody, with a rugged power-drive underscoring the whole affair.

Zawinul would have it no other way. "It is jazz, but I think it's more wide open than just that classification. If anything, it's got some pop. In general, it's a world music concept." Like other paradoxical aspects of his persona, Zawinul is a homebody who can't get enough of the world outside.

Zawinul feels a new-found freedom in this self-generated mode—with only drum machines, sequencers and a handful of keys to share the stage. "I am a natural composer, man," he states plainly. "When I play a tune with Weather Report—when all are in a good mood and everyone is paying attention—that's when we can do things. But often, I want to play something and there is a big drum fill, because—maybe there was a pause, and just in the moment I want to play the first chord of an idea, someone cannot take that pause any longer."

One of the obvious differences between the solo record and the group sound is the shift of rhythmic sensibility. "I learned a lot on my last tour about programming with the accents on cymbals and things." Using a Linn-Drum and an Oberheim DMX with a Korg machine serving as master clock, Zawinul pieces together drum feels that completely avoid resemblances to the basic drum kit. On the hypnotic, arid "Walking on the Nile" and the oriental-sounding "The Great Empire," acoustic hand drums flesh out the synthetic pulse. Often, the rhythmic pulse is prodded along by sequencer phrases downplayed in the mix. "A lot of the rhythm is in the [tonal] instruments," he explains.

The decision to go solo came last year after the release of Weather Report's *Sportin' Life* album. Rather than exercising the customary treadmill of touring-writing-recording-touring, Zawinul and fellow Weather Report founder Wayne Shorter chose to explore their separate muses. Shorter's *Atlantis*, released last fall, surprised many listeners with its intricate compositions and paucity of sax solos. It seemed to be almost a chamber jazz project, with its emphasis on the written note. An extensive club tour brought the enigmatic legend into the limelight, though not all were thrilled with his new direction.

Meanwhile, Zawinul was holed up in the Music Room, adapting to musical autonomy. Zawinul's compositional method draws on improvising whole

pieces which are later transcribed and performed almost verbatim (He claims to have 2000 cassettes full of improvised/composed material lying around the house). Often, finding a striking synth texture will trigger his compositional faculty.

"To me, sound is everything. When I get a sound, I put that as the center of what I want to do. I had this thing called 'Africa' (which became "Walking on the Nile" on *Dialects*) that reminded me of North Africa in the way the melody runs," he smiles. "It seems like a camel groove—you know, sand. Hot."

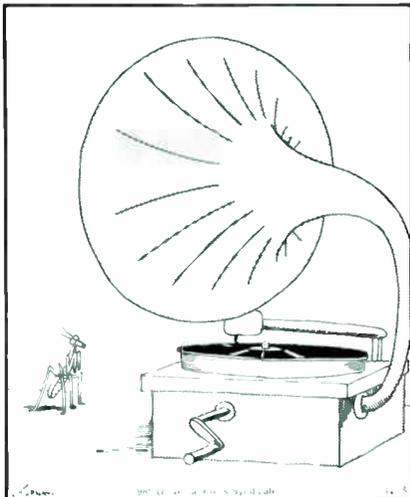
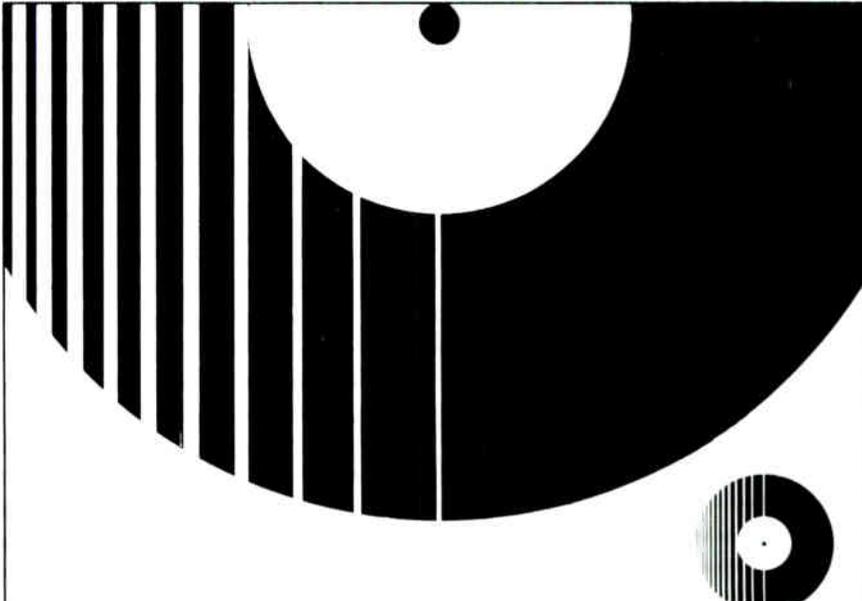
The melodic fabric of a tune may also dictate its length: for example, the furling, nearly eight-minute "Waiting for the Rain" is so long because "the melody never repeats itself. I wanted to edit the tune, but there was no way to do it because the melody goes in one line, one train of thought."

"Rain" also illustrates his unabashed fabrication of language. What vocalist Bobby McFerrin scats may sound like Swahili, but it's Zawinul's own gibberish—an extension of the global-unity theme Zawinul sees as the nucleus of *Dialects*. "From far away, all languages sound alike. So it's all made up; it's my dialect. What you hear are sounds I sang through a Vocoder. I wrote down the syllables I had improvised and showed them to the singers. It's an ego-trip thing, but the form is not to be sarcastic at all. I'm deeply respectful of other peoples."

The original plan called for the record to be finished in time for Zawinul's first solo tour of Europe last summer. Soon after Weather Report's *Sportin' Life* hit the bins last spring, he plunged into the Music Room to begin tracking. But rather than rush out a project that had been years in preparation, Zawinul put his solo concept to the test in the unforgiving arena of live

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By GARY LARSON

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playing. "When I came home from Europe I had a totally different concept, because my playing had very much improved. I've been a band-leader for years and I know what it takes to make a band sound good, including myself. But when you're doing everything yourself and want to keep it from sounding sterile, to put the enthusiasm in there"—he pauses—"not many people would be able to do that."

Zawinul is a fearless believer in intuition, both in his compositional tactics and his relationship with synthesizers. Part of this proclivity stems from a quest for new sounds and combinations. When he was growing up, Zawinul gained some proficiency on a bevy of instruments—violin, clarinet, bass trumpet, vibes, and drums. When he was young, he preferred the accordion (which he has called a precursor to the synth in terms of its tonal flexibility) to the piano, because "I get easily bored with a sound."

In this age of synth proliferation, it would seem difficult to come up with truly fresh timbres. But Zawinul avoids factory presets, choosing instead to fuse new technology with what might be termed "outmoded" gear (for instance, he makes extensive use of an old ARP analog sequencer, while most of these noble relics are collecting dust).

From such a solo endeavor, one might expect a high-tech, digital showcase—a MIDI sampler appealing to manufacturers and aspiring keyboard wizards alike. But in fact, Zawinul hasn't entirely bought into the MIDI revolution. His equipment inventory bespeaks a somewhat reluctant component of the leading edge: Korg DW 8000, Chroma Polaris, Prophet-T8, Prophet-5, Korg Vocoder, Oberheim and Rhodes expander modules, Linn, Korg and Oberheim DMX drum machines—and yes, we have no DX7.

"I never liked the digital sound as much as the analog sound," Zawinul confesses. "There is some digital filtering and control on the album, but the sounds are all analog. You remember the first Manfred Eicher ECM records? That was the same thing: to me, those records never sounded good. They were too clean and didn't have that musical quality. I don't mean music has to be dirty to cook—it *should* be clean in some ways. But, for instance, the flute tone on the ballad ["Peace," extracted from a flute concerto inspired by James Galway]—you couldn't get that with a digital instrument. I like the way the tone beats against itself."

By this time, Zawinul is fully reconciled to being seen as a synthesist as opposed to a keyboardist who happens to play synths. "They're just tools,

like these flutes," he says, gesturing toward a basket of sundry instruments. "You make them work for you, for what you need. They don't intimidate me. They never have. Most people play games with what synthesizers can do, but very few get natural beauty from them. Some people can get great sounds, but what they do with them..." As evidenced by the organic flow of interwoven timbres on *Dialects*, Zawinul's synths become fully matriculated instruments in their own right, not a means of emulation or other functional detours.

He is outspoken on the subject of the integrity of the synthesizer and its misuses in the field. "You cannot translate," he says. "You've got to make each its own tool. A hammer is a hammer and pliers are pliers. You can use the pliers to pound a nail if you've got *nothing* else. The piano lines I've heard Oscar Peterson use on the Synclavier—that's Herbie's [Hancock] fault. Herbie's highly intelligent and a very good musician, but synthesizer-wise, I think he's translating too much—playing those acoustic piano lines on synthesizer—and they do not work. The only similarity is that the keyboard is the same."

It's getting late in the Music Room, and Zawinul is taking the reporter on a walking tour of his ethnic instrument collection. He proudly takes out a Hungarian wooden soprano sax—the kind often used in Bartok's music. Zawinul has been taking lessons from soprano veteran Bennie Maupin. He pulls out a Peruvian flute and tosses off a few neo-pre-Colombian lines. "When we were kids in the forest, we'd make music out of leaves between the thumbs. In school, I had a band [he plays a lick]—we played with combs [another lick]. A quartet. We played in the Easter parade on the streets." [He hums a Slavic melody.] "Bass parts and everything—big combs and a smaller comb. I had a good-sized comb."

Combs have long since been replaced by more sophisticated instruments, but Josef Zawinul's raw urge to create a universal language remains a constant. ■

## Hey, Joe Lynn, Where You Goin' With that Hype On Your Head?

by Bill Milkowski

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## STUDIO DESIGNERS AND SUPPLIERS DIRECTORY

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**FINAL DEADLINE: MAY 15th**



Joe Lynn Turner

Your pleading puppy-dog eyes belie your 34 years. You are cute, yet macho, sort of a cross between Shaun Cassidy and Bruce Springsteen. Your gruff voice is tough and soulful, like Eddie Money, Bryan Adams and others of that ilk.

You are an emerging artist. Your hype says so. You've been emerging for the past 23 years, ever since you began playing rock and roll in your native New Jersey.

Along the way, you flirted with a career in teaching. English literature was your thing. Like compatriots Sting and Gene Simmons, you had a fling as a schoolteacher. It didn't work out. Rock and roll was in your blood. You said so on a recent MTV special called *Rock Influences/New Jersey*, in which you waxed philosophic about your chosen profession along with such other denizens of the Garden State as Jon Bon Jovi, Steven Van Zandt, Frankie Valli, Max Weinberg, and Southside Johnny.

"I like being a rock star," you say in one of the countless publicity sheets being churned out by your publicist in New York, alerting the press to your every move, your every thought. There's even a press release about your dreams.

You wrote the title cut from *Rescue You* in a dream, you recall in that press release: "I bolted out of bed, hummed the melody into a condenser mike, wrote the words down, and went back to sleep. The next morning, I woke up and it was still with me. Later that day, I just polished it up with the band." Which just goes to prove, dreams can come true. So says your hype.

There are other press releases about the time you split your very tight leather trousers on stage at the Capitol Center in Washington, D.C.; about your surprise cameo appearance on MTV, disguised as a delivery boy serving up a cup of coffee to Jack Blades of Night Ranger; about the time you met

fellow former Rainbow lead singer Ronnie James Dio backstage in Houston and struck up a mutual admiration society; about your songs from the solo album being so very different from the songs you performed with Rainbow ("I was more limited in the past. The songs I write now encompass all the colors of the rainbow. The lyrics are pretty autobiographical. I just narrate my life."); about your voice ("My singing is a gift. I don't take credit for that, but it does take hard work and discipline to keep it intact."); about your guest VJ segment on MTV's "Basement Tapes" program; about the unconventional matte method used on your video of "Endlessly," the first single from *Rescue You*; about the fact that you've toured around the world with Rainbow, become a superstar in Japan, yet returned to live in the town where you grew up; about your participation in an all-star jam with Kevin Cronin of REO Speedwagon and Tina Weymouth and Chris Frantz of Talking Heads on Richard Belzer's national cable-TV show.

There are all kinds of press releases detailing your activities. I wish I had never read them. Like most critics and music writers, I have a natural aversion to hype. Puts me on the defensive. Makes me think of you as a product, a new wind-up toy being merchandised by clever copywriters and concept men on the East Coast.

But you're not. I met you. I heard your album, and I caught your group at LaMour's, the premier heavy metal club in Brooklyn. But then, you're not really heavy metal, are you? Much closer to AOR, a la Foreigner, which only makes sense since your right hand man and keyboard wiz, Alan Greenwood, helped to patent the Foreigner sound before leaving that band around the time of *Foreigner 4*. Wise choice. Greenwood's a genius of sorts, when it comes to computers and MIDI and all things technological. He gives your band an orchestral swell, a sophisticated touch with his arrangements. Sounds good behind your husky belting.

As you put it so eloquently in one of those infernal hype sheets: "I don't want to be a heavy metal band. I'm trying to get away from that. I mean, I was born on pop radio, so melody is inherent in my soul. I mean, you can only go so far constantly banging your head. I do consider myself to be a good rock singer, but I'm a good ballad singer as well. I think you can witness that on my album. What I did on *Rescue You* is a bridge between rock, soul and dance. It encompasses all my influences, from Otis Redding to Sam Cooke to Frank Sinatra to Jimi Hendrix. It's all there."

One of your first bands was an R&B outfit called Fillet of Soul, with J.T. Bell of Kool & the Gang. "I lived around the corner from a gospel church, which is where we met," you recall. "The band was big time in this local area. We were big fish in a small pond and it was terrific. Then came Deep Purple with *Machine Head*. That's when I got into serious hard rock. I'd practice every guitar lick Ritchie Blackmore ever laid down."

Your rock band, Ezra, did Deep Purple covers, had a flashpot show . . . the whole bit. Later you hit it pretty good with Fandango, a five-piece rock band that released four albums on RCA. But the band fizzled out by the spring of 1981, a victim of economic hardship.

"We were successful in the sense that we were supporting ourselves, doing what we wanted to do and were happy doing it. We were working really hard, but then we got ripped off one night in Chicago. Eighty thousand dollars' worth of equipment . . . all custom equipment, custom racks, Marshall bottoms with wicker grille cloths. We even lost our clothes. They took everything. It was a ring of thieves working in Chicago. I was told that they took the stuff up to Canada and shipped a lot of it over to Japan. Billy Joel had some equipment ripped off by this ring. So did Styx and Lynyrd Skynyrd.

"But those bands recovered from their losses. We never did. The record company helped us out for a couple of months as far as giving us some dollars. And the insurance only covered half of it, so we took the other half up the kazoo. And this happened right in the middle of a tour. We were supposed to play with the Beach Boys at a stadium in Chicago. Big exposure. It was just when we were gonna get over the hump and start getting recognized. We were up and coming, or something like that. But we had to blow the gig off. Very depressing. This got us all down and I don't think we ever recovered, because a couple of months after that we just kind of looked around at each other and said, 'Let's break up.'

"We were a corporation. We filed Chapter XI. There wasn't anything else we could do. That ripoff took the wind out of our sails. It really hurt."

Fandango dissolved. You took the summer off for some soul searching. But Fandango's demise turned out to be a blessing in disguise. That fall you received a phone call from Deep Purple guitarist Ritchie Blackmore, who was in need of a vocalist to replace Graham Bonnet in his band Rainbow. You jumped at the opportunity, and soon found yourself in Sweden recording *Difficult to Cure*, the first of three Rainbow albums you

contributed to.

"Ritchie said he was looking for a singer like me for ten years. A Paul Rodgers-type singer. Ritchie is very blues-based and so am I. We wrote some hits together and we had some fun."

You collaborated with Blackmore on Rainbow's biggest hits, "Stone Cold" and "Street of Dreams," both decidedly lush by Blackmore standards. You helped Americanize the Rainbow sound, and in the process brought them a wider audience.

"I was writing and singing very melodic songs, and I know Ritchie enjoyed it at that point. I know he wanted the music Rainbow was doing to take a different step because he was getting really bored with what he was doing. And the songs like 'Street of Dreams' and 'Stone Cold' got us on the radio and on the map in the States. I mean, previous to that, Rainbow was practically an underground band in the States."

You got a lot of attention at home and abroad as Rainbow's frontman, following in the tradition of Ronnie James Dio and Graham Bonnet. Then the band broke up. Blackmore reformed Deep Purple, leaving the door wide open for your leap into a solo career.

"At first I had no interest in doing a solo album," you confide. "Then as time went on and I began to feel more confident, I realized I had a lot of material, good ideas, and a style that was not necessarily Rainbow's style. So Ritchie and I decided it would be a good idea for me to do a solo record while still a member of Rainbow."

Of course, it didn't really turn out as you had planned. Mr. Blackmore had other plans. "In a way, I feel almost responsible for having put Deep Purple back together, because it was my yearnings to do solo stuff that made Ritchie think really seriously about the Deep Purple thing."

You put together a demo with Bob Kulick of Meat Loaf's band, Chuck Burgi (who played with you in Rainbow), Steven Dees of Novo Combo and Alan Greenwood (ex-Foreigner, ex-Spys). Gelfen expressed some interest. Elektra finally bought it.

You recruited guitarist Bobby Mesano (ex-Steve Winwood band), bassist Barry Dunaway (ex-Pat Travers band) along with Greenwood and Burgi. Now you're off and running with your own band, touring on the strength of *Rescue You*, an album that aims for the AOR market in the same way as latter-day Rainbow did. But this time it's you. You're no foil to a guitar hero. You're the leader now. And by the looks of your performance at LaMour's in Brooklyn, you're pulling it off in fine

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style.

"I'm having fun now because I'm writing, singing, playing a little guitar, which I wasn't allowed to do in Rain-bow. It's nice."

It must seem like you've been waiting "Endlessly" for this day to come. You're back on the track, back in the spotlight. And this time, it's your show, Joe. ■

## Getting Personal with The Alarm

by Karen Schlosberg

A quintessential Alarm image: the instant during the video of "The Stand"

when all you see are boots tapping the floor urgently, as if life depended on keeping that pulse beat.

And in a sense, it does. That honest and true pulse is what makes understanding The Alarm so simple (as opposed to simplistic); this music is direct and without ulterior motives. Yet, at the same time, that very simplicity is what a lot of people—most of them music critics—cannot or maybe will not see.

Since the release of their eponymous 1983 self-titled EP and 1984's *Declaration* LP, the Welsh quartet has consistently been abused by critics. "All we are is a rock and roll band, on very simple terms," says singer/songwriter/guitarist Mike Peters, trying to explain and perhaps comprehend it

himself. "I've said it hundreds of times. It's not easy for us to be in a band. We really work hard at it, and we appreciate everything that goes on.

"Most bands I know have become cynical—I've seen it all, I hate doing interviews, I hate touring America—but I love it," Peters says, laughing, "because I know there are millions and millions of people who'd give anything to do what I do.

"I never want to become cynical about it and start thinking, 'Oh, it's another gig, another interview.' That's the day I pack it in."

It would have been easy for the four-some (Peters, guitarist/singer/songwriter Dave Sharp, bassist/songwriter/singer Eddie MacDonald and drummer Nigel Twist) to have become cynical by now, if only in self-defense. But instead of retreating into self-justifying bitterness, their second LP, *Strength*, is more personal and human—and therefore more vulnerable to attack—than its predecessors.

The gap between the LPs was fairly long for a young band—roughly 20 months. They released two singles in the U.K., "The Chant Has Just Begun" and "Absolute Reality" (a redone version of which appears on *Strength*), and toured Britain in support of each—in the case of "Reality," a major tour originally intended to support the second LP.

"That really was the turning point for the band," Peters says. "We just got very critical of [ourselves], and Eddie got critical of me because I was writing about big issues and big ideas. He said, '... Why don't you write about yourself and how those big ideas affect you emotionally, affect your friends and our community and how we've grown up?' I just needed to be pointed in the right direction..."

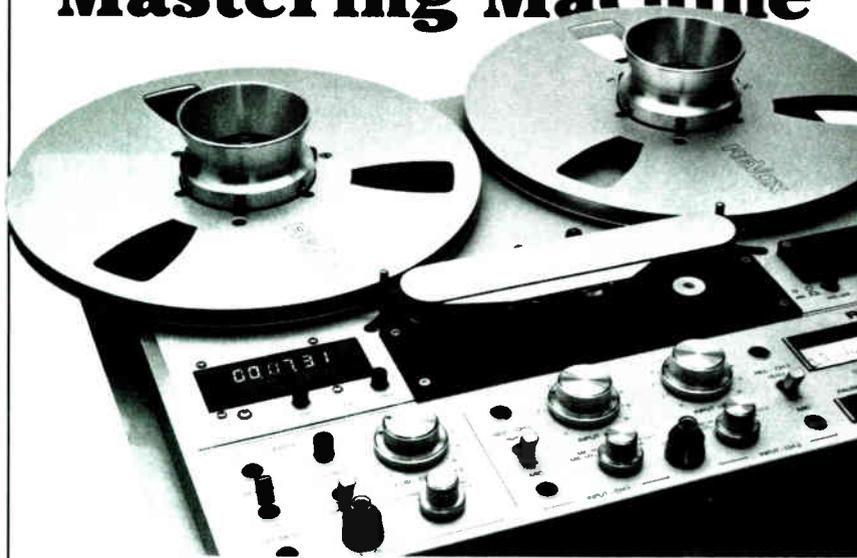
Peters tried to put "a human element, simple desire" into all the songs. "I thought some of the best music that's ever been made has been made from naked emotion, people saying, 'This is who I am—love me or leave me.' That's what I wanted to get into my lyrics.

"The best stories, the most powerful things you see, are about personal experiences and real-life events. I wanted to put that into The Alarm's music."

For *Strength*, the band and producer Mike Howlett (Joan Armatrading, A Flock of Seagulls) tried to capture a sound Peters characterizes as a "mid-way point between the *Alarm* EP and *Declaration*." Howlett's willingness to use the band's sound engineer, Nigel Luby, as the recording engineer, contributed to the success of the sound. On the EP and the LP, both produced by Alan Shacklock, Peters says they were too intent on "searching for the

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The Alarm (left to right): Eddie MacDonald, David Sharp, Mike Peters, Nigel Twist.

ultimate acoustic sound. Looking back now, it didn't quite work; it took the fire out of the sound a little bit.

"Mike Howlett felt that the rough edges had been smoothed out on *Declaration*. He just wanted to bring out what was there."

The new album manages to maintain a balance between the band's practiced, smoother musical skills and the rawer edge of the beliefs that drive the emotionally-charged songs, whose primary subjects are courage and hope in the face of despair. Is the band idealistic? "That's such a generalization," laughs Peters. "It can mean so many things. We're ambitious about the group—I think that's a better word. I want The Alarm to be able to play the biggest and the best venues; I want our songs to be heard all over the world. I want to improve our songwriting—I want our songs to become more personal, to mean something to people other than just wallpaper music. I want us to improve as musicians and retain our friendship as a band. I want The Alarm to be fun at all times and not a job; that's what I left computer operating for." ■

## Albert Lee: Stepping Out of the Shadows

by Robyn Flans

Guitarist Albert Lee has a solo spot in the middle of each Everly Brothers concert. "Country Boy," the country/bluegrass raver he wrote and which helped earn Ricky Skaggs a CMA Entertainer of the Year award, seems a far cry from "Wake Up Little

Susie" and "Cathy's Clown," but Lee kills the audience every time.

Watching Lee, who also sings and plays keyboards and mandolin, the question arises as to why this consummate sideman isn't running his own show. "It's a combination of shy and lazy," admits the soft-spoken Englishman. "It's always been so much easier for me to play with someone else. Someone calls up and says, 'I'm going on tour. Would you like to play?' Great, I'll do that. If I were on the road on my own, I think the pressures would be a lot different, so it's something I've always shied away from.

"I suppose it's something I've always wanted, though, and I'd love to be a solo artist out there doing gigs. The fact that I've done solo albums has taken it in that direction, but it's one thing doing an album and it's another to get on the road and slug around. I suppose my ideal scenario would be to be in a band where I'm an integral part of the band, as one of the front guys."

One reason Lee left the critically acclaimed Heads, Hands & Feet in 1972 was he got to sing two or three of the band's 15 songs and was uncomfortable with people thinking it was his band. Ironically, however, Lee chose to be a sideman for the likes of Emmylou Harris and Eric Clapton, while his two solo LPs (*Hiding* and *Albert Lee*), though enjoyable, barely exhibited his appreciable talents.

"I rarely think about vehicles for guitar playing," Lee says in defense of his albums. "Country Boy" was the exception, because it was perfect for guitar. I've always just looked for songs, so the guitar takes a back seat—which does perturb a few people."

*Speechless*, Lee's current release, is the first on which he really lets loose. Recorded for the New Master Series,

designed to be MCA's answer to Windham Hill or ECM, it is Lee's first entirely instrumental offering.

"We were having fun with titles during the recording of the album because we had it in mind that this record was supposed to be for the yuppie market. We were coming up with titles like 'BMW Breakdown' and 'Bullish Boogie'—referring to the stock market," he laughs.

But a very rock and roll "Bullish Boogie" and the album's seven other selections are far from the easy-listening category. "T-Bird to Vegas," a title inspired by one of Lee's guitar idols, James Burton, is a driving rag that typifies Lee's style. "I'm not playing it with a thumb pick, but I'm playing it banjo-style, with lots of open strings and rolling motions. It is what a banjo player would do, but I use a flat pick," says Lee. He says he was influenced by pianists Jimmy Webb ("vastly underrated") and Keith Jarrett—"my idol. I can't consider myself anywhere near what he does, but I like to think that I get close to the feel he has on his ballads.

"On guitar, I was influenced by the take-off style of Jimmy Bryant, which was really exciting and lifted a tune whenever that guitar came in. It was the same approach with James Burton—I'd just wait for that solo to come

in. Trying to copy those sounds and solos is really what got me playing guitar," says Lee, whose own clean, fluid style can now be copied by kids from an instructional tape available at music stores.

"The first real solos I learned to play were Buddy Holly's, because they were simple enough, effective, and had a great, bell-like Strat sound. Then I graduated to the solos on Gene Vincent records, which were played by Cliff Gallup. His style seemed to be based on scales and jazz, and I think his influences were Les Paul and Chet Atkins. Those solos were so much fun to play, and they got my left-hand technique working. Later on, when I was getting more into country, I listened to Chet Atkins and Jerry Reed and got into that flat-pick/finger-picking style. At the time, I didn't know anyone else who was doing that. I'd hear people like Scotty Moore playing that style with Elvis Presley, but I had the impression he was using a thumb pick at the time. Lots of people do it now."

With his instrumental technique, writing ability and vocal style, Lee could easily be an exciting recording and performing artist in his own right. The audience's reaction to his number in the Everlys' show should be intoxicating enough to motivate him. "When

I get home, for a few hours or a day or so I'm still on the high of it, thinking, 'Wow, I really went down well. The people really liked that.' After a day, I forget all about it. I guess I'm not able to maintain an ego. Otherwise, that would keep me going through that and I'd be able to sit here and think, 'What other songs could I really be good at?'

"I never dismiss the idea of doing my own thing...I always have it in my mind that something will happen."

## The Scouting Party Index of Independent Record Labels

"The desire to introduce mainstream America to independent record labels has lived with me for about seven years," writes Norman Schreiber in his introduction to *The Scouting Party Index of Independent Labels*. He doesn't say why, beyond a desire to "finagle my way into posterity."

Whatever his motivation, Schreiber spent nearly a year assembling this

—PAGE 209

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by Phil De Lancie

Editor's note: We're introducing the "Aftermix" column this month to provide a communications link with those who deal with the mastering and manufacturing aspects of record, CD and tape products. We'll be using this space to pass along information concerning storage media, techniques and new technologies relating to getting program material ready for mass distribution. We encourage you to write us with information relating to your activity in this area. Address your information or press releases to "Aftermix" c/o *Mix*, 2608 Ninth St., Berkeley, CA 94710.

• • •

With the emergence of the Compact Disc as a viable distribution format for music industry product, many prognosticators have eagerly predicted the extinction of the phonograph record by the end of the century. The real challenge for proponents of the CD, however, will likely have less to do with vanquishing the once supreme LP than with arresting the steamroller momentum of the marketplace's new leader: the audio cassette. The current decline in the dollar value of phonograph record sales began in 1979, four years before the U.S. availability of CDs. Cassette sales have more than tripled in the same period. While the advantages of the CD have been touted widely (though certainly not unanimously), it seems unlikely that consumers will casually abandon their newly chosen format champ. Thus, a major marketing battle between backers of cassettes and CDs for the hearts, minds and money of the world's music lovers will no doubt be waged for the foreseeable future.

A keen interest in the progress of this contest is probably shared by most companies in the audio electronics industry. But few would seem to have as high a stake in the outcome as Dolby Laboratories. Starting with the introduction of Dolby A-type Noise Reduction in the mid-1960s, Dolby's primary focus has been the development and distribution of technologies designed to overcome the shortcomings of analog magnetic recording. Further, the bulk of the systems for which Dolby is widely known, such as HX Pro and B- and C-type NR, are oriented toward the consumer audio

## Dolby and the CD

market. Clearly, a successful challenge to the analog audio cassette by a digitally based system like the CD would pose a serious threat to the continued demand for Dolby's present offerings.

With this in mind, I sought the comments of Ian Hardcastle, Dolby Laboratories Licensing Corporation vice president, regarding the present and anticipated impact of digital technology on the consumer audio market.

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A major marketing battle between backers of cassettes and CDs for the hearts, minds and money of the world's music lovers will no doubt be waged for the foreseeable future.

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"There is no doubt that digital technologies have had a significant impact," Hardcastle states. "In fact, they have been a benefit in several ways."

One of the most important effects at the retail level of digital audio has been a general increase in consumer expectations. "People are demanding more now in terms of quality," Hardcastle says. He believes that these higher quality standards on the part of the consumer translate into increased demand for Dolby systems in both the hardware and software areas of the audio cassette market.

In hardware, Hardcastle feels that cassette decks featuring Dolby HX Pro and C-type NR, with their ability to reduce tape noise and increase headroom, are equal to the audio fidelity challenge posed by the CD. In fact, he feels that sales of such high performance decks benefit from home CD player owners who wish to copy their CDs for use in audio cassette systems.

On the software side, higher consumer expectations have, as Hardcastle puts it, "forced the record companies to improve the quality of their pre-recorded product." He feels the impact has been a great improvement in both the attitude of those working in the field and the equipment that they have to work with. Enormous investments have been and continue to be made as "quality is taken more seriously" in the industry.

Professional digital audio gear is cited by Hardcastle as one valuable tool employed in the duplication industry's response to the CD. It has been customary throughout much of the record industry, he explains, to use as cassette masters tapes that are several generations removed from the original album master. And the task of making these copies has often been relegated to studios' least trained workers and most ancient machines. As record companies have tightened their standards, however, "the condition of the material that the tape dupe houses have to work with seems to be much better, and the chances of making a good sounding cassette are much improved."

The increased use of systems such as the Sony PCM-1610 and PCM-F1 has been one result of this trend away from generation degradation in cassette masters. Regarding the F1, Hardcastle notes that the 14-bit resolution mode seems to be preferable to the

16-bit due to its superior error correction capability. He is also enthused about the use of Dolby A-type encoding as a means of compressing the signal fed to the F1, thereby avoiding quantization noises and other problems associated with digitizing low level material. In such a system, the decoded output of the F1 has, he believes, effective resolution equivalent to that of 16-bit processing.

Another area in which digital technology is making a contribution to cassette production is in the bin loop mastering stage. "Ninety percent of the art of making good cassettes is in the making of the bin loop master," Hardcastle stresses. The master that translates best into the cassette medium is that which optimally balances the risk of tape noise against the risk of distortion. Since the level relationship between the bin loop master and the slaves must be fixed to ensure proper decoding of Dolby NR encoded cassettes, errors in master level cannot be compensated for by simply changing the output level of the master machine. The master itself must be prepared correctly, and that obviously requires an expenditure of time and effort. By recording a digital safety as the bin master is made, tape dupe houses can, without generation loss, avoid repeating this expenditure as masters wear out or break.

While noting that "digital techniques provide very useful tools for improving quality," Hardcastle seems cautious in his response to the prospect of further digitization of the duplication chain. Capitol Records announced early this year its commitment to a tapeless digital bin loop master system, which would be the first of its kind. Hardcastle believes that "anything which improves the quality of the bin loop master is a good thing, but we have to look at everything that comes along to see if it actually is an improvement." He sees two main advantages to a tapeless system. Firstly, deterioration of finished cassette quality over the course of a run due to bin loop master wear would be eliminated. In addition, the possibility would exist for increased productivity through use of parallel master memories to eliminate bin loop master change-over delays.

In spite of these appealing possibilities, Hardcastle harbors doubts about the real world benefits of moving to a digital system at this time. "For cassettes on average quality tape stock, current bin loop technology is not a limiting factor. With the higher quality tapes, bin loop shortcomings are more important, but there is a point of diminishing returns (for bin loop master improvements)." To demonstrate, Hard-

castle hypothesizes a situation in which master and slave tape stocks have the same bias noise level. The noise on the finished cassette would be 3 dB above the original noise level of the cassette tape stock. "Dropping the noise floor of the bin loop master by 10 dB would decrease the noise on the cassette by 2.5 dB. Dropping the master noise infinitely [assuming an ideal digital master] can only affect that remaining .5 dB of noise above the cassette's basic noise floor."

Another area of possible concern regarding the digital bin loop is the accuracy of digital-to-analog conversion at high duplication speeds. Hardcastle points out that "D/A conversion involves a trade off between accuracy

and conversion time." Stereo 16-bit digital audio in real time at a sampling rate of 48 kHz allows a processing time of 21 microseconds for each 16-bit word (assuming a separate D/A converter for each channel). With 64:1 duplication, data in the memory of the digital "bin loop" would have to be processed at 64 times normal speed. The resultant conversion time of approximately 325 nanoseconds may, Hardcastle fears, strain the ability of available technology to make conversion decisions. "With the accuracy implied by a 16-bit system, it will be interesting to see how much improvement the system is able to give, and how much difference it actually makes in

—PAGE 130

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by Elizabeth Rollins

*William Gladstone* of *MBS Productions* has graciously offered free space to the newly-formed *Los Angeles Women in Music* (this was the working name at press time). The organization welcomes both men and women to an open meeting Friday, May 2 at 7:15 p.m. at the hotel. It's free, and attendees need not be registered at the symposium to check out the agenda for this exciting service and education industry group. For more information about *Los Angeles Women in Music*, write: P.O. Box 18653 Ventura Blvd. #307, Tarzana, CA 91356.

## Cinedco's Ediflex System Bows at Pacific Video

Computer whiz *Adrian Ettlinger* joined forces with movie industry veteran *Milt Foreman* nearly five years ago to create an electronic editing system, "that would serve the talented editors in the easiest way—not to turn them into astronauts," says Foreman. "Editors are not computer scientists," he continues. "We have done a careful study of how the film industry works in reality every day—and this is what we came up with to help the editor."

The *Ediflex* electronic off-line system has been used so far to cut television series such as *Wally and the Beaver* and *Falcon Crest*, as well as the television movie, *The Gladiator*. The *Ediflex* uses eight VHS tape machines that store up to one hour of the same material on each one; this set-up can simulate random access retrieval so the editor can use a touchscreen to mark and view edits with amazing speed. If you're saying to yourself, "That reminds me of the Montage Picture Processor," the two systems do have a lot in common. The editor must never cut tape, but programs and views edits, which he can "print" to a ¾-inch machine when he's ready to run the final version. Like the Montage, four different "cuts" can be run out (which can save time, grief, and your job if the executive producer doesn't like one of your ideas.)

So what makes the *Ediflex* distinctly different from anything else on the market? "The secret of it is that we have a monitor which has a mimic display that is similar to the script that the editor is working from," explains Foreman, president of *Cinedco*, the

Burbank company that leases the *Ediflex*. "It's a system that is organized from the logic of a film editor—so it's easy for the people who are already experienced in the industry to use."

The assistant editor loads the program into the CPU, and ends up with a format on the touchscreen that is set up in the same way the script is formatted. There is also a "satellite station" available for an extra \$500 per week that allows this loading process to be performed without tying up the main system (which rents for \$2500 per week). Editors are currently being trained to use the *Ediflex* at Pacific Video in Hollywood, where the systems can also be leased by the week.

## CMX Shipping New Computer Aided Sound Sweetener—CASS-1

From the people who made their company name, *CMX*, almost synonymous with "on-line editing," comes a new audio-for-video editing system. The *CASS-1* combines computer-aided editing with audio console automation.

In the edit phase, time coded input from up to six source machines can be synchronized using the Adams-Smith 2600. An additional assortment of up to 14 non-time coded sources (i.e. CD, turntable, cart machine) can also be locked up using the built-in GPI (General Purpose Interface).

The edit phase offers user-programmable features such as automatic cycle and chase, and *CMX* Frame Bump, which allows the editor to move a tape in reference to another in increments as small as 1/100th of a frame.

While the operator is selecting material and laying it down on multi-track, all of the time coded in and out points are stored in random access memory, and can later be dumped to the system's 20 megabyte hard disk drive. The *EDL* is fully compatible with *CMX* video on-line systems, too.

The *CASS-1*'s automated mixing mode will probably have television editors jumping for joy after they get the chance to use it a few times. The system interfaces with most consoles with *VCA* fader controls (*Harrison*, *MCI*, *Sony*, *Sound Workshop*, *Helios*, for example). It can memorize motion of up to 16 faders, and play back with modification during replay. (Software will be released soon that will control up to 32 faders). Mixes can be stored

on disk with notes taken during the session i.e. track and reel numbers, plus other comments.)

*Bob Schotz* of *Editel Video*, New York, says he likes the mix storage capability because, "We found we were duplicating a lot of work when we'd have to go back and reformat a commercial." Now he can pull the disk that contains the exact mix, plus any comments he may have stored that may pertain to a re-mix. Schotz took an active role in debugging the system before it was released to several Beta site facilities last winter for practical input. At press time, *Studio Tempo* in Montreal had purchased the *CASS-1*, and the following facilities were acting as test sites: *Editel*, New York; *One Pass*, San Francisco; *Streeterville*, Chicago; *EFX*, Los Angeles; and *Century III*, Boston.

## Facility Upgrades

*Video Tape Associates Field Operations* (home base, Hollywood, Florida) has a new 48-foot remote truck roving the national live-TV beat. The *Enterprise* hit the road in mid-November '85.

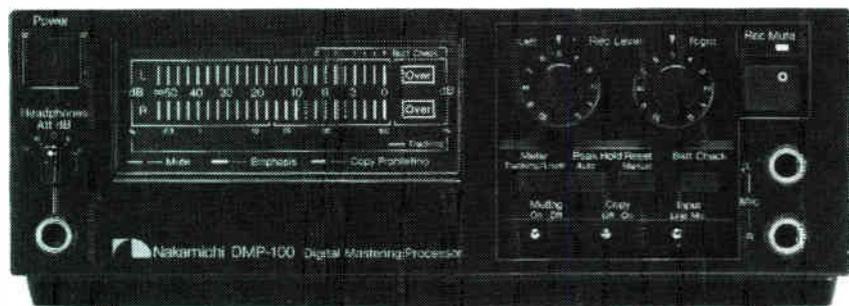
Meanwhile, *VTA-Atlanta* is still working hard to complete construction of their new facility. Look for a grand opening this summer.

*Greenlight Video Animation* in Toronto has been doing so well with computer graphics services that they have just bought two more *Bosch FGS-4000* animation systems. With three systems in-house, *Greenlight* will act as the Beta site for *FGS-4000* software development.

*McCune Audio/Visual* in San Francisco is beefing up their video production and editing capability with a new *Sony SEG-2000* switcher, a *FOR-A* time base corrector, a custom video production console and a tape duplication system. Plans also include acquisition of broadcast-quality cameras, video recorders, more *TBCs* and a character generator.

For all you producers who require *PAL* and *SECAM* transfers, *Vidicopy* of Sunnyvale, CA announces that they are eliminating any premium for conversion to any international standard.

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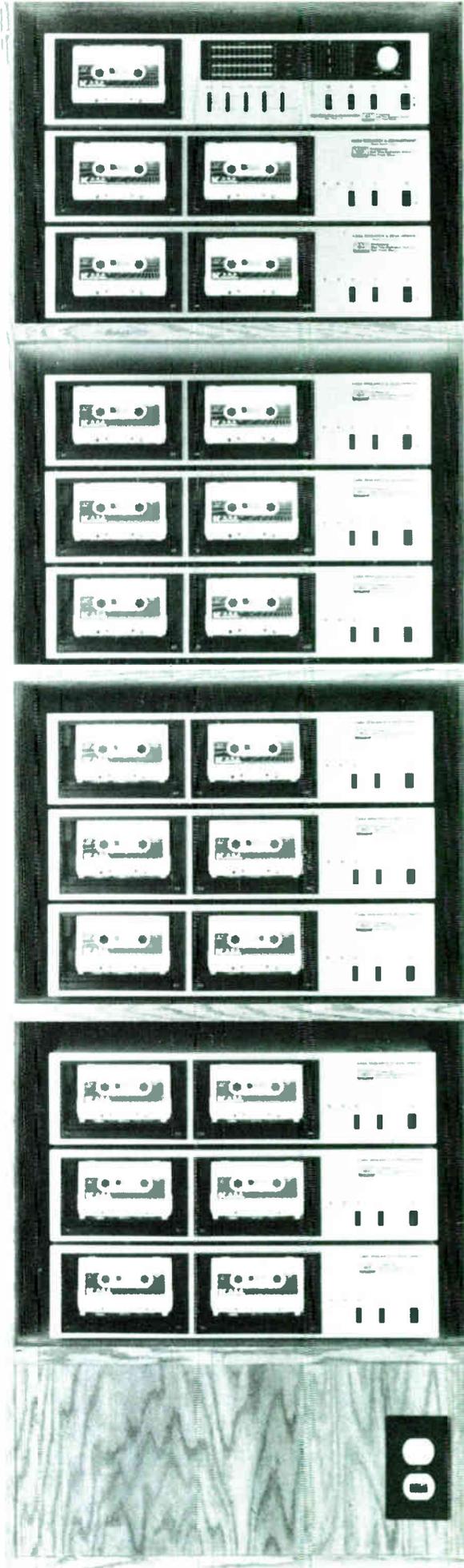
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World Radio History



by Lou CasaBianca

What if the Music Video business could be re-invented, and we could take everything that has been learned over the last ten years and re-apply it in the educated light of today's realities? The following is a brief outline of what a hypothetical agenda for re-invention might look like.

## The Business of Music Video

The business of being a music video producer is built around a winning relationship with a team of professionals—a group that develops a shared mind-set, evolving and maintaining a refined creative, logistical and emotional consciousness shared by intensive team effort. Film, video, music production are delicate and deliberate art forms utilizing the most sophisticated sciences and new technologies to document a performance, to create a fantasy or an illusion, or to communicate a message.

The core-team is composed of the producer, director, writer, and executive producer. Often one person may wear more than one hat. The offense: director of photography, the camera operators, the art director, the lighting crew, the production assistants, the make-up and wardrobe designers, the editors, the animators. The defense: marketing representation, the accountant, and the lawyers. Quality and pro-

## Re-thinking Music Video Production

ductivity are directly related to training and experience. Most often, the economic benefit of working with people "new" to the business can be justified as part of the process of building a team. However, in the long run, there is no question that experience is worth the price a professional commands.

### Contracts: Getting It In Writing

The development of a plan of action or the business plan is as important as the script or the budget. One of the most important lessons in business, particularly in media is "getting it in writing." The misunderstandings, or as they say in architecture, "the errors and omissions," that happen in the course of doing business can prove to be very costly. The experience gained from each project should be integrated into company contracts and agreements. The business organizational structure of a production company is reflected in its written contracts and its follow through on its verbal agreements.

The following is a list of the major agreements operative in "the business of Music Video."

- producer/record company production agreement
- producer/sales representative agreement
- producer/director agreement
- producer/writer agreement
- producer/director of photography agreement
- producer/associate producer agreement
- producer/visual artist agreement (custom graphics)
- producer/artist/music publisher production agreement
- producer/facilities agreement
- producer/executive producer/distribution contracts

Contracts for employment and all the accounting documentation and implications of dealing with the IRS are part of the more critical behind-the-scenes aspects of doing business. The preparation of these materials should be by experts. One of the most important aspects of managing any business is insuring that the financial details are handled properly.

Some of the more routine forms and agreements needed to round out the music video producer's administrative package are:

- basic agreement for script and storyboard
- invoice for concept treatment
- confirmation memo, additional billing, cancellation
- production cost summary
- producer/record company production agreement
- statement of account
- assignment confirmation forms for director, director of photography, lighting director, associate producer
- master invoice delivery form
- permission to reproduce a music video production
- binding arbitration clause

### The Music Video Producer and the Movies

Someday, in the not too distant future, the music video producer will be able to secure an equity share or royalty on their work. Since the videos have been considered commercials, the ability to share on revenues was negotiated out of the income formula by the record companies. For those

## United Kingdom Music Video Producers Join Forces

In a move that parallels the MVPA, British music video producers have formed a trade organization to represent their interests in negotiations with the British Phonographic Industry and other bodies. (The BPI is the British equivalent of the National Academy of Recording Arts and Sciences.) Chairman of the new Music Film & Video Producers' Association (MFVPA) is Jump Productions' Sidney Lanier, who heads a nine-person central committee that includes Scott Millaney of MGMM, Martin Wyn Griffiths of

AWGO and Medialab's John Graydon. Initial membership comprises more than 30 companies, and Lanier says he also hopes to see major video producers from continental Europe joining the group.

The aims of the MFVPA roughly follow the lines of those voiced by the MVPA. Lanier says that talks with technicians' union ACTT and with the BPI, aimed at securing standardized terms of trade, are already well advanced, and agreement could come some time this year. It may be two years before standardized contracts replace the half-dozen different budget forms currently in use. "Ignorance is one of our worst enemies," he continues, "The record industry generally has very little understanding of costs. We are trying to go slowly and be

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producers who are able to develop budgets independent of the record label, there is the ability to recover costs and generate profits through theatrical, cable and home video distribution deals. The following are some of the key agreements that apply in this context:

- theatrical exhibition agreement
- producer's reserve rights transfer and sale agreement
- notice to record company of resale royalties and rights

### The Agreements, Contracts and Legal Picture

If music video is treated strictly as commercial work for hire, then the marketplace will set its own standards. The top producers and directors will expect and accept only those projects with the top budgets—\$100,000 to \$150,000 and up. The executives at the major record labels will continue to bid each project by comparison shopping.

New recording artists will have to compete with higher and higher production values and production budgets. New and developing producers will have their work compared to projects budgeted at three or four times the rate new producers receive. One of the more appealing and potentially galvanizing options is the structuring of programming development packages which help the record company and the artists to recoup their costs, and generate profits, while providing a potential royalty income stream for the producers. If the emphasis is on the "music" in video music, then the artists/producer agreements with the record companies are viable criteria to pattern production development agreements. From the video music point-of-view, television syndication and film distribution agreements should serve as the rights negotiation standards.

### Copyright: The Producer's Prerogatives

Production copyrights and royalties will only become the producer's prerogative when the industry matures and standards similar to record and film royalty agreements are set by U.S., Canadian, U.K. and Australian participants. Creative legislation for the music video producer and the music video artists are essential if there is ever to be a self-funding music, film and video marketplace. There may very well be a trend toward recording artist and video music producer joint ventures. In this case, copyright would be held by the joint venture and licensed back to the record companies and other appropriate distribution outlets.

### Licensing, Merchandising and Publishing Video Music

Licensing, publishing and merchandising are the future for the video music producer. At this point, this area is controlled by the record labels and platinum level recording artists. Concerts, video clip compilations and original short and long form productions are all open for further domestic and international market development. New innovative approaches for generating financing and distribution must be established by producers if this business is going to stabilize with its own valid micro economy.

### MVPA—An Idea Whose Time Has Come

One of the most encouraging developments has been the formation of the Music Video Producer's Association (MVPA). If creativity, talent and skills are ever to be rewarded with equity-royalty participation, a unifying structure and industry standards must be established. In the process of "re-thinking" music video, probably one of the most strategic factors necessary to bring balance and efficacy to the big picture is an industry organization. Consensus and precedent are essential to the negotiation process that remains to be synthesized by the parties involved.

Music video production training and workshops must be made available for people who want to get into the business. In what has been called the Age of Information, the knowledge required by the producers and the cadre of crafts people and technicians that contribute to the production process, all represent skills that are or will be taught in trade school, high school, junior college and college level classes. Microelectronic miniaturization and consequent cost reduction in audio and video equipment and microcomputers now makes possible the acquisition of near state-of-the-art gear that at one time would have been economically out of reach for most schools.

### Grants and Industry Corporate Scholarships

One aspect of the training picture, in this hypothetical best of all possible worlds for video producers, would be the development and funding of grants and scholarships. Organizations like the MVPA and selected colleges and universities could administer funds provided by the record companies and equipment manufacturers. The recent acquisition of a paint box at UCLA has resulted in the creation of a whole new graphic look developed by students with this leading edge technology. There are obviously less expen-

sive, more basic tools available for student education. The look of future video music will come from this reservoir of untapped talent.

### Money and the Music Video Producer

Tax and business planning for music video producers should also come into play in the consolidation of a mature video infrastructure. The ability to generate loans and investment financing is keyed around a presentable business plan. Business valuations standards for music video production companies are essential. Issues in estate planning can only adequately be dealt with from a base of organized financial data. The implementation of retirement plans and tax protected money market programs is as much conditioned on the knowledge needed to use these economic devices, as it is on having the funds needed to get started.

Safeguards are needed for the producer as well as the production. Insurance for people and equipment is an essential part of the producers defense against personal and/or corporate liability and loss. The seemingly congenital last minute decision making process resident at most record companies, and in commercial production in general, contributes directly to hazardous working conditions for producers and crew. Late nights, around-the-clock schedules and intense pressure to "get it done" within the budget generates

as cooperative as possible, but we are no longer content to be seen as just a department of the pop business. We are an industry in our own right, and to legitimize that industry we have to work towards clear, honest and fair terms of trade."

U.K. music video production is a \$15 million a year business, representing one-third of all video production worldwide, according to the association. British directors have set the standard for quality and innovation. Techniques it has pioneered are increasingly used in the advertising industry and in television and movie production. But for many member companies, life is, in Mr. Lanier's words, an alternation of "feast and famine."

He says he would like to see the introduction of official music video awards, judged by the industry itself, as a sign of legitimacy. But for the long-term health of the business, he stresses, better exploitation of

nervous tension and frazzled tempers. Personal and group medical should be budgeted as a necessary cost of doing business.

### The Case for Smart Studios and Producer's Software

In recent columns, we have reviewed the computer software and hardware systems available for the music video producer. Next to strong personal working relationships and hardcore experience, the personal computer can be the most valuable asset in the music video producer's repertoire. For correspondence, budgeting, contracts, storyboards and project planning, the PC is a technological must in the producer's arsenal. The support provided by sketch editing, pre-production and post-production packages can add a new dimension to the creative and financial elements of a production. The ability to pre-visualize, test edit and re-edit can make the incremental difference between an OK edit and a great finished edit master.

### Production and Post-Production of Video Music

As new equipment and software packages expand the technical and creative options, the complexity of the audio/film/video production and post-production process has increased proportionately. Art through technology requires planning, strategy and logistics that can be staggering. The expectations created by the quality of —CONTINUED ON PAGE 209

music video product is essential. Record companies currently may see as little as \$1000 return on their investment during a video clip's six-week lifespan.

Mr. Lanier notes that few of the 6000 music videograms produced here are ever shown, and U.K. television lacks a music video showcase. "I don't see how the record industry can stop making videos," he says, "but they don't really do anything with them. Sure there are complications, but the companies have a hell of a time getting rid of them. Maybe they ship 5000, but only 20 percent are sold; the rest come back. "If you're a serious music fan, you don't want that tiny television speaker sound. Music video needs a different medium, 8mm video or some kind of CD/video combination, and it needs substantial price reductions too, if any real consumer market is to be developed."

—Lou CasaBianca

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—FROM PAGE 27, LILLYWHITE  
chial surround.” (Laughs) Years from now people will look back upon it as a landmark in sound, if we can ever figure out how to spell it.

**Mix:** Your experience has been mostly with new wave bands. Why do you think blues-rockers like the Stones chose you to produce *Dirty Work*?

**Lillywhite:** For the only reason a producer ever gets picked for a project—track record. If you’ve got the hits, you’ll get the work. It’s a catch-22 situation, and it’s really tough for kids who are trying to get a board today—much more so than when I started out. The Stones hadn’t used an outside producer since Jimmy Miller in 1973. It’s good to introduce an outside influence every now and then, keeps the sound fresh. I guess they just thought it was time.

**Mix:** How did you get started in the recording business?

**Lillywhite:** At the tender age of 17, I was lucky enough to get a job as an assistant engineer. They’re called “tape ops” in England. It was at a house studio for Phonogram. On weekends, it was empty and they’d let us go in and work on our own projects—practice your engineering or whatever. They were very kind about letting us bring our friends in and things like that. In fact, you don’t get that nowadays because the studios are all really budget conscious and “we must have it full at all times” sort of thing. But that studio was there more as a flagship for Phonogram than as a money-making concern as such.

**Mix:** And one of the “projects” you were working on was the group Ultravox?

**Lillywhite:** Yeah. We did some good demos that got them a deal with Island Records. Then the band wanted me to work on the album with them, and since I was only 18 at the time, Island said, “Sure, work with Steve, but we want someone with a bit of a track record in on this, too.” So Brian Eno was brought in, sort of as insurance, and the production credit was a three-way split between myself, the band and Eno. It was like sometimes Eno wouldn’t arrive, or was off doing other things, but I was always there. It was a great break.

**Mix:** It must have been interesting working with Eno on your first pro assignment.

**Lillywhite:** You learn from everyone you work with, obviously. At that time, I was still a staff engineer at Phonogram, moonlighting with Ultravox. But Island liked the record so much they offered me a job. Now the job I had—I

don’t think they’d ever sacked anyone. The chief engineer had been there for 20 years sort of thing. It was a safe job. But I took the position with Island even though they were very nebulous as to what the actual job description was. What was even worse than that, the only guy I really knew there, the one who employed me, left the company—unbeknownst to me—the Friday before the Monday that I started. So I left this really safe job to go and work for Island for less money, and there really wasn’t any job definition. The first day, I remember virtually crying, thinking ‘what have I done?’

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“Britain really does have a disproportionately large influence on contemporary music when you consider how small it is. I think part of the reason is the BBC—the programming makes them adventurous.”

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**Mix:** A daring maneuver. What made you do it?

**Lillywhite:** I’ve always operated on instinct. Instinctively I thought to myself, I must move on. Sometimes it’s best to go down and work your way back up again if the possibilities are greater, which I thought they were. So I worked there for a while, carrying on with Ultravox and producing Eddie and the Hot Rods and sort of little English groups, before finally getting a hit with Siouxsie and the Banshees. Shortly thereafter, I left Island and became independent, and that was another big step, because you don’t have that steady paycheck. You’ve really got to *make* your money. But things were going quite well. I was building a reputation, getting a bit of a name.

**Mix:** Your work with Peter Gabriel

earned you a reputation as a real innovator, a “fine art” producer. How did that union come about?

**Lillywhite:** One day I got a call from Peter’s manager. And I must admit, being a young punk rocker, I thought this was one of my mates phoning up as a joke. For me, early Genesis was sort of old hippie music. You know, when you’re a young punk rocker anything sucks that doesn’t have a lot of banging around in it—you sort of mellow out as you get older. But I met with Peter and he explained that he didn’t want it to be like a Genesis record—didn’t want it to be like any other record at all, in fact. It was *Peter Gabriel Three* and I suppose it was thought of as quite a milestone in sound—especially the drum sound we got.

**Mix:** Your drum sound—so influential in establishing U2 and Big Country—was widely imitated. One of your techniques for getting that booming quality was distant-miking the kit at your favorite studio, Townhouse, right?

**Lillywhite:** Yes. They have what is now quite famous—a big stone room which gives you a really live drum sound. Now everyone is using a big drum sound on their records. It’s not particularly original anymore, to have that sort of Phil Collins drum sound which started off over here.

**Mix:** To generalize a bit, do you think there are basic differences between British and American musicians?

**Lillywhite:** I’ve always found that American musicians can always actually *play* a lot better. There seems to be this American thing where people take pride in what they do. Kids get their records during their formative years, and they’ll put them on and they’ll *learn* that guitar solo note by note. It isn’t quite like that in England, especially not during the punk thing, which is when I started getting excited about the idea of making records. Back then, the major influences in England were groups like The Velvet Underground and Iggy Pop—people with no regard whatsoever for conventional musicianship.

**Mix:** Why do you think Britain is such a leader in the music industry?

**Lillywhite:** Britain really does have an enormous influence on contemporary music—a disproportionately large influence, when you consider how small the country is compared to the U.S. I think part of the reason is the BBC. Worldwide, it’s synonymous with class, culture and quality. Kids in England grow up on it, and I think the programming is such that it makes them a bit more adventurous. There’s more of an emphasis on the arts, less

escapist entertainment. The only thing in the U.S. that compares is public broadcasting. All those little shows about plants and insects—those are the ones that are really interesting.

**Mix:** Do you listen to records you produced when you're at home with your family and friends?

**Lillywhite:** I might listen a bit when they're first out, but generally speaking, no. It's a bit self congratulatory, isn't it? Hey, let's sit down and listen to me! I do listen to records, though. The Smiths are my favorite at the moment.

**Mix:** Do you find popular music trends much different in The States than in Britain?

**Lillywhite:** In general, I'd say the music coming out of England is more moody. That's only natural, really. When you're sitting in your flat on a rainy afternoon, Simple Minds make a lot more sense than The Eagles singing about pool parties and Hotel California. I'm sure for people in California it's great, but that sort of thing does not tend to go over well in England.

**Mix:** What do you concentrate on during pre-production?

**Lillywhite:** I make sure the structure of a song is correct. Sometimes people write a song and it has a great bit

in it, but it only comes along once. I try and bring things like that out. Not that you take the same bit and ram it home so it becomes completely commercial. As much pre-production as you do, it all sort of goes out the window when you get into the studio.

**Mix:** What about during the mixing?

**Lillywhite:** You want to make sure people can hear the song. Nowadays, there's a tendency to cover up the vocals with too much sound. It's the vocals that sell a record. I guess they count for about 80 percent of a song's appeal—for me anyway. I like to hear the singer.

**Mix:** What about at the mastering stage? By then I guess most of your work is done.

**Lillywhite:** The best way is to leave it to the mastering engineer, because he has a fresh pair of ears, and he knows his room. I'll take home a cut of what he's done, listen to it and go back with my suggestions. But I always like to give them a shot at it on their own, rather than saying "do this, do that," because you never know what people can come up with on their own.

**Mix:** Which contemporary producers do you particularly admire?

**Lillywhite:** Laurie Latham, who does

Paul Young's albums, and Trevor Horn. He's a real producer's producer.

**Mix:** Because all his records sound like Trevor Horn?

**Lillywhite:** No, if that were true, I wouldn't think him any good at all. And if you'd heard any of his solo recordings, you wouldn't say that! (Laughs) Remember that song "Video Killed the Radio Star"? That was his, and it doesn't sound a bit like the ABC or Frankie Goes to Hollywood albums he did.

**Mix:** Your records are more spare—a lean framework built up in the mid-range, and a lot of little noises filling out the high and low ends. There's a lot going on. It's especially effective on the U2 albums.

**Lillywhite:** Well, yeah. Phil Spector was an influence, I suppose, so I guess more Spector sound comes out than I'd think about. You go through phases, really. Some days you like eating lots of chocolate and other days you don't. It's like when you said "what special tricks did you use on *Dirty Work*?" Well, I didn't think that record needed it. Once you start working in formulas, you ruin spontaneity because you tend to keep doing the same things all the time. I'd like to try and keep a little bit of mystery. ■

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World Radio History

# NORTHEAST STUDIOS

## Making Music for Eyes & Ears

by Linda Johnson

Yeah, yeah, yeah. Everyone reading this mag knows that the East Coast is one of the hottest music recording scenes in the U.S., if not the world. So, in choosing a focus for this month's Studio Roundup, we thought it might be interesting to find out what's been going on besides record work this past year. Turns out there's been an ever-increasing demand for record-quality audio for the visual media, and with this growing interest in "picture perfect" sound, several Northeast facilities are investing in synchronizers, video recorders and monitors, as well as expanding their studios, adding video editing suites, post-production rooms, and whatever else they see fit to keep up with this explosive new trend catering to both ears *and* eyes.

Having completed the mixdown for the Sun City album, Shake Down Sound in New York is a good example of a studio well-known for its record work that is now gearing up for audio-for-video as well. "I strongly envision music-to-video being a part of our biz," says studio manager Jeff Chitorous. "Video is becoming a multi-media event out there in public land, and the audio is just as important as the video." In March, Shake Down's mixing room was rebuilt into a 48-track, 56 input SSL-equipped room with lock up to Sony 3/4-inch video, (2) 24-track Otari MTR-90s linked by Lynx synchronizing, a Sony BVU800 3/4-inch video machine, and ATR100 1/2-inch mastering. A brand new 24-track room was added as well, mainly for overdubbing,

equipped with a Trident Series 80B 32 input board with MCI 24-track, Yamaha 816 and DX7 keyboard setup.

"Business is booming!" says Diane Ehrlichman of ServiSound in NYC. Since receiving installation of a Studer A80 one-inch layback machine, ServiSound has had an influx of audio-for-video post-production projects. Some recent activity at the studio included an interactive video project for the AT&T permanent exhibit (in NYC) called "Info Quest," scoring music for a cable/film documentary about Marilyn Monroe, and various industrial and non-theatrical events. "We've made a commitment to video, and it's paying off," says Ehrlichman. "There's lot of opportunity here."

Last year, owner Richie Vetter of Blank Tapes (NYC) decided to commit his studio to whatever the "next big thing" was, and since completely rebuilding studio A, Vetter reports that he's maintaining a healthy balance between record projects and A/V work. The new room is equipped with Adams-Smith synchronization, dual Sony PCM-3324 digital 24-track machines with an MCI 52 input console. "Audio for film and video pays twice the rate of record projects," says Vetter. "Plus, it's exciting work!" As advertising work comes in, Vetter says that his record business is benefitting as well because a lot of record producers are now also doing commercial productions. "They want album-quality sound," he says, "and we offer the ability to do both commercials *and* albums at top quality." Some recent projects include audio work for Schlitz, Budweiser, and a Robin Williams PBS movie, *Seize the Day*, as well as post-production on a Hall & Oates concert, and album projects for Vanity, The Thompson Twins, Nightshift, and Jackie King.

Just as several New York audio facilities are gearing up for video work, N.E.P.—a video edit house—is equipping itself for higher quality audio. "People are *hearing* television now," says engineer Barbara Flyntz. "They're much more aware of audio." N.E.P. opened a new studio B last September, furnished with a Sound Workshop Series 40 completely automated console, an Otari 24-track, 40-inch video monitors, four-machine lock-up capability, and by this month, a new mag film recorder will be installed. Recent projects at N.E.P. included narrations for the television series *Nature* (mixed in stereo), and a National Geographic special, "Explorer," as well as mixing, editing and sequencing commercials for MTV and for a special ad series entitled "Intimacies."

Unique Recording (NYC) has been busy with an impressive amount of record projects for such artists as B.A.D.,



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Debbie Harry, General Public, Steve Winwood & James Ingram, and the soundtrack for *Equalizer*, a film scored by Stewart Copeland, was recently completed as well. Two rooms were renovated last September, stocked with new gear including two Sony PCM-3324 digital 24-track recorders, a Neve 8068 console, a Kurzweil 250, and software (Performer and Total Music) for their Macintosh computer. "People are really into electronic music now," says studio manager Mary Culum. "They're using lots of synths and electronic drums for speed and cost-effectiveness." Culum adds that with the rapidly growing world of technol-

ogy (Madonna), Mars Williams (Psychelic Furs), Seiko, and at press time, studio B was being used to do the original soundtrack for the April NAB tradeshow.

As of April, Little Big Horn Studios, an 8-track facility in NY, became history, and was replaced by Platinum Island Recording Studios, Inc. With a new location and a new partnership, the facility consists of two studios: Platinum East and Platinum West. "East" offers 16-, 24- and 48-track recording and mixdown, and is equipped with a Solid State Logic 4000E console, Studer recorders, signal processing by AMS, Lexicon, Neve and Eventide,

and films left Ken Hahn of Sync Sound with a lot to smile about this year. Hahn credits much of this influx of business to the new release formats of VHS/Beta HiFi. "It used to be that only some people could get stereo television through pay TV, but now high quality audio is available to everyone... even my dad has a VCR!" Thus, the demand from manufacturers for high quality audio brought several projects to Sync Sound, including video concert specials for Huey Lewis and Elvis Costello, a PBS special on Spencer Tracy, and all of the pre- and post-production for Laurie Anderson's new film, which was a completely digital project.

Master Sound Astoria (featured on the cover of *Mix* this month) has seen a "drastic change in clientele," since their move last October to the Kaufman Astoria Studios entertainment complex in Astoria, NY. "We're meeting lots of film people because we're in this great, busy building," says co-owner Maxine Chrein. "And we are the exclusive audio business here." The new 60 x 40 studio is capable of both 48-track analog and 48-track digital recording, equipped with two Sony 3324s with tie line access to the rest of the complex. "You've heard of multi-media?" asks Chrein. "Well, this is it."

"Business has been so good that we're taking advantage of it and expanding our facility," reports studio manager Laurel Gonzalez of Quadrasonic Sound in NYC. The sixth floor studio was remodeled, enlarging the control room to accommodate two SSL 4000Es with Total Recall, and a new Studer 24-track machine, giving them 48-track capability. There are plans to expand the recording room as well, to add needed space for clients. "Artists are now willing to pay for high quality and comfort," says Gonzalez. Dealing primarily with album projects, Quadrasonic has had several groups in including Cameo, Bootsie Collins, The Fat Boys and Stephan Gallis.

Power Play in Long Island had such an influx of album projects this past year that studio manager Gary Salzman says they'll be expanding the facility's capabilities, and are planning to buy a new building and annexing sometime this year. Recent upgrades include a Trident board, Emulator II, Publison Infernal machine, Lexicon 224XL, a Studer 24-track, and by June, an SLL board will be installed in a new, 48-track capable room. Artists in using the studio include Nile Rodgers, Reggie Griffin (Chaka Khan), Skip Worth & Turner, and some of Prince's older songs were mixed for an album entitled *94 East Genius*.

Brian Setzer's latest LP, *The Knife*



*Sound Ideas*

ogy, Unique plans to keep the price down on their digital equipment "so people can try out digital without going broke."

Ranch Recording is yet another NY studio with a bellyfull of album projects. "We get a lot of European acts in here," says studio manager Cathy Parks. Annie Lenox (Eurythmics) was one such overseas visitor, and Dr. John was in recently with Danny Dryer and Elliot Randall. Other projects at Ranch included mixing the soundtrack album of *The Stripper*, and audio sweetening for a TV special entitled *Spearfield's Daughter*. Upgrades include an Otari MTR-90 24-track, Yamaha REV7, and Lexicon PCM70, and Parks adds that there are plans to open a new room later this year.

After being on-line for two and a half years, Intergalactic Music in NYC has added a new studio B, equipped with a Soundcraft Series 760 Mark 3 24-track totally transformerless recorder, Otari half-inch mixdown, and two Lexicon 224X with LARCS. Intergalactic caters to both music and commercial clients; some in the studio recently included The Ramones, Bobby Brown (New Edition), Paul Pes-

control room monitoring by UREI, Yamaha and Auratone, and various synths and drum machines. Platinum West, on the other hand, "is our answer to those who require the highest quality for a smaller budget," says owner Richie Kessler. It houses an API custom console (the same one that tracked Bruce Springsteen's last LP), Studer recorders, and offers 8-, 16-, and 24-track recording and mixdown.

Having survived 17 years in this unpredictable biz, Media Sound in Manhattan is still going strong, as is represented by the long list of recent clients that production manager Lindy Shaver recites: David Bowie, Mick Jagger, Madonna, The Spinners, Coke, Avon and Dupont. Media Sound is busy with soundtracks for TV shows as well, including Sesame Street's TV Workshop, and a David Letterman/Paul Schaffer "Dress Cool" special segment. New equipment at the studio consists of a Harrison Raven console and an Adams-Smith lock-up system. "Biz is holding its own," Shaver states simply, "but there's always room for improvement."

A barrage of audio post-production work for music videos, television spe-

*Feels Like Justice*, is only one of the many album projects handled at Tiki Recording Studios in the past few months, where owner Fred Guarino reports they've upgraded their entire monitoring system. The monitors were moved together, and the entire front section of the control room was reconstructed, retuned, and equalized. Some new gear was added as well, including a REV7, Korg Sampler, and a Linn-Drum. Though Guarino expects to see more record work coming in, he says he's also getting pushed into video and plans to invest in a 3/4-inch Sony recorder and synchronizing gear this year. "It's a lot of fun to watch pictures when you're making music," he says. (Tiki is featured on this month's listings cover, page 141).

Edwin Ayala of Sound Ideas in NYC has also felt the pressure to get into video, and so invested in an Adams-Smith synchronizer and renovated studio B, now outfitted with an SSL 56 input mainframe. "We also have plans to expand our control room and add more equipment by this summer," says Ayala. Several recording artists have been in the studio recently, including Wrestler, Evelyn King, Chico Freeman, as well as some commercial work for Coke, Calvin Klein and Budweiser.

Working exclusively on album projects, the Platinum Factory in Brooklyn,

NY has been recording a variety of music, from West Indian and reggae to rap and jazz. Chief engineer Jon Evans says that the local music scene is healthy and getting better, noting that an increasing number of musicians are becoming very synthesizer-oriented, and the studio's drum machines are continually in high demand. Evans adds that there are plans to open a small pre-production room with a keyboard system sometime this year. Recent upgrades at the studio include a new MCI 636 automated console, a Mirage Sampler, Lexicon 224XL, and a Macintosh computer was installed for both the office and the studio.

Owner Rawlston Charles of Rawlston Recording in Brooklyn reports that record work has been abundant, including such artists as Kurtis Blow, The Fat Boys, Pieces of a Dream and Lou Cortne. In response to his clients' demands, Charles recently invested in an Emulator II and a Yamaha TX816. "We're concentrating on record work," he says. "Records come before video... You have to have a good record to allow you to make a successful video."

John Lennon's music video, "Live in NYC," was Editel's first digital project since purchasing a Sony 3324 24-track console last December. PR

representative Howard Sherman says that the NYC post-production facility has been busy with several commercials and television shows, as well as lots of music videos for such artists as 'til tuesday, Cheap Trick, Herb Alpert and Patti LaBelle. In addition to the 3324, Editel invested in an Abekas digital video recorder, a da Vinci color correction system and a Quantel Harry. "They're continually upgrading and expanding their facility," says Sherman. "This year they plan to put a million dollars toward hardware and new editing and post-production suites."

Steven Remote of Aura Sonic in Flushing, NY says that business is on an upswing since he got his new mobile truck together last year, with additions including an Otari MTR-10 2-track, Nakamichi DMP-1000 digital processor, and Yamaha REV7. "And," adds Remote, "I'm hoping this year will be even more intense than '85 because we're putting in a Harrison console." Remote says he's seen a trend in musicians buying MIDI equipment for home studios and then calling in a remote truck to do the recording. One such situation had Aura Sonic drive to a synthesist's house to pre-produce for a Boy George LP project. Some recent live recordings included The Blasters, Randy Brecker, and Bad Brains.

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*Manny's Music, NYC*

At Manny's Music in NYC, manager Doug Cooke reports that they've also seen a growing trend towards the MIDI studio. "People are buying more sequencers and going for a minimal

amount of multi-tracking," says Cooke. "With rents so high in New York, people want to stay as miniaturized as possible, and with sequencers, they realize they don't have to go 24-track."

## GREENE STREET RECORDING

Walking the  
Line in SoHo

by Dan Daley

These days, there are probably more Volvos in the SoHo (South of Houston Street) region of lower Manhattan than there are in Stockholm. The neighborhood has become the latest boomtown for New York's affluent trendies, replete with fern-laden watering holes and spacious art galleries selling what in Sierra Leone would be considered an eyesore at prices that rival that nation's GNP. In short, it's a hot location.

However, much of what made the area a mecca for artists in the first place still survives—small establishments that try to walk the ever-thinning line between accommodating the encroaching future and remaining faithful to the individual bohemian spirit that ignited them. One of these places is the Prince Street Bar, a regular little joint (and narrative red herring) that was the setting for the sale of another line-walker (and our subject), Greene Street Recording in 1978. In fact, the bar even provided the stationery—a paper napkin upon which the bill of sale was scrawled in ballpoint ink.

Greene Street owner Steve Loeb prefers to operate on a person-to-

person level, whether in the realm of finance or music. Casually ensconced in his cavernous office-cum-storage and repair room, he recalled the history of SoHo's premiere recording facility. "In 1976, my former partner and I were looking for a studio to finish up the album of our (management) client, Frank Morgan, who was signed to RCA. At the time, this place [then known as Big Apple Recording] was a 16-track studio serving the SoHo musical community—Philip Glass, Don Cherry, Ornette Coleman, people like that. The studio was owned by Glass' musical director, Michael Reisman and a sculptor, Jeffrey Lew. We came in on the condition that if we didn't like it, we weren't paying. We never left."

Loeb and company took over management of the studio in 1976, bringing a sorely needed business expertise to the enterprise, and began to bring in outside (read: paying) clients. They bought the studio in 1978. (Loeb eventually became the sole owner in 1982.) "We had the first Neve console in New York," he recalled. "In those days, people would call and ask which console we had, and if you didn't say MCI they would say, 'What's a Neve?' It also became obvious to us that a lot of work was moving into the control room with more direct recording, and we wanted to allow for that."

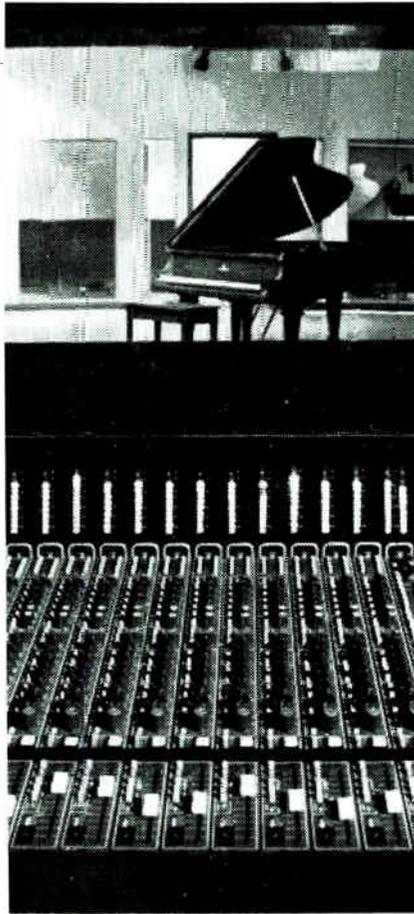
—PAGE 122

## Newbury Sound

Cooke also reports that instead of analog mixdown machines, clients are using more PCM converters (such as the Sony PCM-F1 and PCM-701), mixing down to digital and then bouncing back up to other tracks. Some hot sellers at Manny's include PCM70s, REV7s, and Allen & Heath CMC consoles "because people are gearing toward the MIDI studio, and the CMC interfaces nicely with that."

Moving south to Boston, Gene Amoroso of Syncro Sound reports that "the local music scene is thriving. It's hot." As a result, demo and LP projects are keeping the facility busy, working with local artists such as Last Stand, Three Speed, and Lizzy Borden & The Axes. Commercial work is also one of the studio's mainstays, and Amoroso says he hopes to get into more creative commercial work: "We're thinking of upgrading so that we will be able to create jingles from the ground up."

Since moving last September to a larger facility in Boston and adding an arsenal of new gear to his studio (including a Harrison MR4 24-track automated console, Studer A820 half-inch mastering deck, and an Otari MTR-90), owner Ken Kanavos of Newbury Sound reports that he is "actively



pursuing the jingle market this year. Even though the music scene here is strong," he adds, "there's just not much label interest." So, in addition to LP and demo projects, Kanavos is looking to hop on the audio-for-video trend, and plans to buy a lock-up system by this summer. "We're also in the process of making some acoustical changes in our control room, with Al Fierstein (Acoustilog) consulting, to create a more accurate room."

Mission Control relocated to the heart of Boston last November, and now houses \$700,000 in new gear including an SSL console, an Adams-Smith system for 48-track lock-up, and a computerized keyboard system. Studio manager Bill Sebastian reports that the facility will now do more "out-of-house" record productions in addition to its in-house projects with producer Michael Jonzun. Some current clients include Clarence Clemens, The Spinners, The Stylistics, and Con-FunkShun.

Century III in Boston had a busy year, so busy in fact that they've recently been able to invest in a new audio production suite, a sound effects library, and at press time were working on a third room for mix to picture and audio production. The new room is equipped with a Sony/MCI 636 mixing console, an Otari MTR-90/II 2-

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# MASTER SOUND ASTORIA recording studios

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—FROM PAGE 120, GREENE STREET

The studio embarked on a slow but steady upgrading course, adding a 24-track MCI deck and a Trident TSM console. But during the change, he made a point of keeping the Neve's compressors, a

move that underscores his desire to make the studio reflect his personal sonic values. This approach of bucking state-of-the-art for art's sake leaves him in a sometimes difficult position when it comes to new technology like digital record-

ing: "A sound has to paint a picture in your mind. You have to be able to see it, and with digital I have a problem seeing it. I really do." While he won't go so far as to rule out digital for the future (he's waiting for the technology to mature), he



Neil Dorfsman working with A&M recording artist Bricklin at Kajem Recording's SSL 48-track room in Gladwyne, PA.

## Philadelphia Recording Studio: Brotherly Love?

One doesn't normally think of the recording business as a cooperative profession. Yes, there are groups that promote communication between studios, such as SPARS and NARAS, but more often than not studios are trying to out-equip and out-service each other in hopes of attracting clients, and the competition between studios in some areas borders on the cut-throat. So what's all this black-slapping (not stabbing) going on among 24-track studios in Philadelphia? Is it possible that it really is the "City of Brotherly Love"? Surely there's an economic angle here.

Well, of course the infamous "bottom line" was well in sight when ten of that city's top studios formed the non-profit Recording Association of Philadelphia a few months ago. The organization is essentially a trade association designed to promote Philadelphia as a world-class recording center, but damn if the Association hasn't also resulted in a genuine outpouring of good feelings between studios and brought much-needed unity to a once highly fragmented recording scene.

"The environment in Philadelphia was such that there were a lot of studio wars going on and nobody really knew the faces behind the wars," comments Kurt Shore, co-owner of Kajem Studios, and also the Association's publicist. "It was very counter-productive, and I think people recognized that. They also realized that we all live with a common problem: as studio owners and operators, we all function in the shadow of New York. There's no reason for that to be the case, because there's so much going on here from a talent point of view and technologically. We know that if we work together, Philadelphia will rightly be recognized as a top international recording city."



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acknowledged out the dichotomous situation such a course puts him in. "On one hand, there are the things that I personally like. On the other hand, there are people out there who need certain types of equipment, people in advertising, etcetera. As a result, they make demands on studios and studios have to respond. We have to stay competitive."

Loeb gave several examples of the problems he runs into when what his ears tell him runs contrary to the current popular wisdom. In 1982, after enlarging the control room and adding other features, he installed John Meyer 833 monitors. "That was one area where we refused to go along with the crowd," he said. "Everybody goes with the [UREI] 813's and I never liked them. I love the Meyers. I was saying just the other day to Dave Andrews, a Meyers dealer, 'Sell more of them so people will know what they are!' Virtually everyone who hears them in here loves them."

"Another time, when we were looking to buy our first professional digital signal processors, we looked at the AMS RMX16 and 1580S prototypes. I loved them and ordered them. Then I found people asking me if I had a [Lexicon] 224. I said no, but I did have an AMS and people would then say, 'What's that?' I wound up cancelling the order and purchasing a 224X. Only later when I saw the AMS line get more attention and success did I say to myself that I should have gone with my own instincts in the first place. What happened was, I saw that no one knew the line and I was very afraid that I was about to spend 16 to 17 thousand dollars on a purchase only to find everyone asking me to rent the Lexicon. I wanted to go with my instincts, but I would have had to endure six months to a year of people becoming familiar with a new product."

The studio continues to acquire outboard gear, keeping the room technologically *au courant*, but Loeb makes a point of saying that he will never keep rates artificially low to attract business only to sock clients with added charges for outboard rentals. "How can you put an engineer in a position to turn around and ask a client, 'Gee, we should use this or that gadget here but it'll cost you extra'? It interferes with the creative process. To me, a studio is more than just hardware... there has to be a creative environment."

Rather than reciting an equipment list, Loeb prefers to define

Greene Street Recording by its eclectic and esoteric assortment of clients, particularly what he refers to as a core group of artists who share his own artistic and acoustic sensibilities. "Like John Robie, who came down two years ago to produce Jenny Burton and never left. It's like these people become part of the studio," he said. Then there are rappers Russell Simmons and Larry Smith of Run-DMC who, even though they and the studio are in the midst of a legal imbroglio, still maintain an ongoing relationship with the studio, according to Loeb. "As crazy as it sounds," he laughed, "we're suing each other but we still work together."

Greene Street Recording's future includes more renovations; part of the large space adjacent to the recording room now occupied by the office, repair and storage facilities will be converted into an additional control room whose main purpose will be direct-recording work, but which will also be connected by tie lines and a window to the recording room. The new room was designed by Greg Shriver, who designed the original control room at Big Apple. Implementation, according to Loeb, is imminent.

Greene Street Recording is located at 112 Greene Street in New York City. The number is (212) 226-4278. ■

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Century III Audio, Boston. Audio production suite voice-over recording with sound engineer, Don Goonan (left).

## New York's Martin Audio Unveils New MIDI Showroom

Martin Audio Video Corp., for the last 20 years a major supplier of recording equipment to New York studios, has recently added a new operating division: Martin Music Technologies. The heart of the new expansion is a sales area with a demonstration room in which new MIDI technology is available to clients in a hands-on, low-pressure environment.

According to Courtney Spencer, Martin's vice president and general manager, "We felt that a lot of the new products being sold by the

—PAGE 125

—FROM PAGE 121, *N.E. STUDIOS*  
inch 24-track, Studer 810 Master recorder, a complete BTX synchronization system, Kurzweil 250 and other synths, and a Kloss video beam projection system. In addition to projects for Trak Skiis, Prime Computer, and last year's World's Fair in Japan, Century III also recently completed mixing the soundtrack for a short film entitled *Beset*, scored by Ric Ocasek and Greg

—PAGE 125

**unique** (*yu-nek'*) *adj.* 1. being the only one. 2. **a:** being without a like or equal. **b:** distinctively characteristic. 3. unusual. **usage example:** a 48-track recording and mixing facility having two 48-channel Solid State Logic consoles with Total Recall™, a 32-channel Neve 8068 MKII console and the world's largest midi synthesizer, sequencer, drum machine and out-board gear collection.

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—FROM PAGE 124, N.Y.'s MARTIN

traditional music retailers were moving into a level of complexity where our experience and our approach—a willingness to spend time with a customer, to service products and do so quickly—was necessary."

Martin Audio's approach could also be accurately described as comprehensive. Sprawled over two floors in a West 55th Street building in Manhattan, the 44,000-square-foot facility contains everything from head cleaner to consoles, along with a sizeable and knowledgeable staff. In Spencer's view, the addition of the Music Technologies division will keep Martin, which not only sells and services but also handles rentals, maintenance and audio consultations, at the leading edge of a rapidly changing field. "The key part of our market has always been music recording," he says, "and MIDI is simply a new way of recording music."

Since much of MIDI technology is accessed by keyboards, Martin has now added some select instruments to its sales line, including the Kurzweil MIDI Board, which serves as the tech room's master keyboard, and sales have jumped accordingly. The MIDI room at Music Technologies is loaded with racks of high-end analog and digital synthesizing equipment, sampling systems and drum machines by manufacturers including Yamaha, E-mu Systems, Roland and Ultimate Support Systems. All are run through two patch bays, an audio one for non-MIDI items and a J.L. Cooper MSB 16/20 MIDI patcher. Beyond the tech room is a display area and a computer software counter.

The atmosphere at Martin is at once efficient and cozy; it exudes the same sort of atmosphere you'd expect to find in a Saville Row tailor's shop—if the tailor also used Macintosh computers along with needle and thread. "We've been regarded by some people as a sort of elite and maybe even sometimes inaccessible company," Spencer acknowledged. "People sometimes think that we sell only to large studios. But that has never been true, and we see Music Technologies as another way to help make that point very clear. We've always been interested in the needs of the musician and the smaller studios. Anyone who makes music."

—Dan Daley

Hawkes of The Cars.

In Washington, DC, John Ramo of Sonic Images says, "We're doing exactly the same work we were doing before, except now we get to watch pictures, too!" After five years in the music production business, Sonic Images recently expanded into the world of audio sweetening and post-production by relocating and upgrading the facility. The LEDE-designed studio is equipped with a NEOTEK console, MCI 24-track recorder, Otari MTR-12 2-track with time code, Kurzweil with Macintosh interface, an 8-track Otari setup, and a Q.Lock Eclipse system with 32 transport capability. "We saw the demand for high-quality sound for video and film, so that's exactly the

market we're going after," says Ramo.

In Dover, Delaware, Bob Skye of Skyelabs Remote Recording says that he's also seen an upsurge in audio-for-video and film projects. His truck (Rover) recently went on location to the Kennedy Center to do a multi-track recording for film of a live, anti-Apartheid concert featuring Peter, Paul & Mary, Judy Collins, John Denver and others. Skye also just completed the audio for a video project featuring Princess Palemoon in concert promoting American Indians. As far as upgrades on the truck, Skye says, "There's always room for more." Already fully-equipped with production gear and interfacing, Rover also recently received installation of two Otari MTR-

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—FROM PAGE 122, PHILADELPHIA

"We're trying to create the atmosphere of a professional guild," agrees Wally Hayman of Modern Audio, another Association member. (The other eight members are Sigma, Alpha International, Warehouse Recording, Studio 4, Morning Star, Virtue, Queen Village and Spectra. All are equal members with equal input into the Association's activities.) "We're trying to build camaraderie and open the lines of communication so we can talk as a unified community. By pooling our resources to a degree, we make all of us stronger. So instead of a lot of hostility, the atmosphere is much more positive."

Admittedly, it took a little while for the idea to catch on. At one of the

early meetings, for example, the owner of the studio hosting the conclave announced that he thought the whole idea was, to use his word, "bullshit." But he and other skeptics have mellowed, and now the Association is running quite smoothly.

That's some feat considering the diversity of the studios involved. Each has carved out its own niche in the community. Shore's Kajem Studios, for example, has specialized in doing rock and soul album work, and since becoming the first studio in the city to have an SSL board, it has attracted even more signed acts. And Neil Dorfman, who recently won an engineering Grammy for his work with Dire Straits, recently proclaimed Kajem one of his favorite studios in the

world. On the other side of the fence is a facility like Hayman's Modern Audio. Just a year old, the facility was built to join forces with a successful video company, Modern Video, offering 24-track recording and full sweetening capabilities. Naturally, much of that studio's work comes from the commercial world, though Hayman expects to also draw album and singles work to Modern's beautiful studios, perched on the thirty-third floor of a modern high-rise. Both Hayman and Shore agree that there's definitely enough business to go around to keep *all* the studios in town busy.

As part of the new cooperation between studios, facilities rent each other equipment and even refer clients to other member studios should one be unable to provide a requested service for any reason. All these sorts of things should help keep local artists from going to New York, just a couple of hours away. "We're trying to make our own backyard the focal point," Hayman says. "Everything a band needs is right here."

Philadelphia has long been considered a major breeding ground for music. Though much maligned, the "American Bandstand sound" that catapulted Frankie Avalon, Bobby Rydell and others to stardom in the late '50s and early '60s did help put Philly on the map. Cameo/Parkway Records, with Chubby Checker at the forefront, kept the city buzzing up until the arrival of The Beatles. The city has had high-points and a few slumps since. Perhaps the most notable peak of the past decade was the popularity of Philadelphia soul singers and bands in the mid- and late '70s.

At the mid-point in the '80s, the city is poised for another major musical renaissance. The popularity of modern rockers like The Hooters led to a virtual invasion of Philadelphia by record company A&R types, and several other groups were signed in the excitement. The urban music scene, too, is coming back strong. New clubs are still springing up around town and the "Philadelphia pride" that the Association has tried to promote seems to be for real, not just hype. The staging of Live Aid in Philadelphia was a tremendous boon to the local music community, as well.

"There's a nice energy here these days," Shore comments. "And it's not just in the recording business. On every front, the city is doing better, and I've got to think it's because we all *want* to make it better."

Blair Jackson

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—FROM PAGE 125, N.E. STUDIOS

90 24-tracks and a variety of additional outboard gear.

Over in Philadelphia, Forge Recording just upgraded from eight tracks to 24-track digital. "We were losing 60 percent of inquiring calls because we weren't 24-track," says president Warren Wilson, "and we decided to go all the way with digital." A Sony PCM-3324 24-track (the first in the area) and a NEOTEK Elite with Mastermix automation will be installed this month, and Wilson says they hope to attract a lot of people from New York by offering lower rates. Forge will continue doing commercial work—its bread and butter in the past—and Wilson expects to see an influx of demo and LP work as well.

In January, Sammy Fields (Demarest, NJ) added an arsenal of equipment to his studio (PMR), some of which includes: Trident 80B console (54 x 24 x 2), 12 channels of reverb, UREI 813Bs, and a huge keyboard section consisting of an Emulator II, Memorymoog, DX7, Yamaha TX816 system, Yamaha KS88 weighted keyboard MIDI controller, and a Linn-Drum with digital sampling. The studio used to only be available for in-house projects, but is now open to the public, with clients including Exxplorer, Cuba Godwin, Gary Burr, and David Eyes.



Sammy Fields Recording studio

A producer/arranger/composer himself, Fields says that composing music for radio and television is his specialty, having scored spots for Buick, Mars Candy, General Foods, and for the TV

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JVC 2-track systems. Studio manager Lila Wasserman reports that they've been renting a lot of 3Ms out to such artists as Sting, Arcadia, and Alabama. Recording in-house recently were Lilo Thomas, Freddie Jackson, Melissa Morgan, and Restless Heart, and a remote gig just completed was the JVC Jazz festival in Newport. Wasserman adds that they plan to focus heavily on audio-for-video this year.

Azimuth Recording Studio, a 24-track facility in Malaga, NJ that opened in early '85, has seen a tremendous surge in business. Along with this, they have just added about \$60,000 in keyboards, drum machines and outboard gear. Some additions include: Kurzweil 260 digital sampling keyboard, Emulator II, LinnDrum w/alternate sound chips, and a Macintosh digital editing/MIDI system. Owner Jim Langley states: "There just seems to be no end to this! I just can't believe how much business has come through these doors lately."

If Walls Could Talk Studios in Passaic, New Jersey is starting to shift its emphasis more toward jingles, soundtracks and industrial work, according to owner Glenn Taylor, but they are not abandoning artist work. The studio is currently under construction, and the new room will feature a "MIDI City" section with 20 MIDI keyboards and a fully synchronized (via a Lynx

system) 3/4-inch video JVC recorder for scoring film and commercial work. A new 32 x 24 Harrison Raven console will be at the heart of the facility, with 2- to 24-track available in any format.

According to Bob Alleca of Reel Platinum Studios in Lodi, NJ, their Trident Series 80 has been churning out masters for such companies as Elektra, Emergency, Streetwave, Spring CBS Filmworks, and Starlite Records. Many of the studio's clients are using the Roland SBX-80 which allows SMPTE to MIDI synchronization to their MIDI house. The last two years of all the recordings mastered there have been done digitally on the Sony PCM-F1.

"We're big enough to do it all," says owner Bob Yesbek of Omega Recording Studios in Kensington, MD. Their facility count is now up to three, having opened Studio C last October to satisfy the needs of audio-for-video clients. "A lot of people are locking to video these days," says Yesbek. "Also, it's amazing how many people are mixing commercials down to stereo." Omega was responsible for all the music (pre-recording and underscoring) for the Martin Luther King television tribute featuring Stevie Wonder. Yesbek adds that he's seen an increase in album and jingle work as well. Some recent upgrades included a Studer A80IV 24-track, an Emulator/Macintosh system, EMT 250 digital reverb, REV7,

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## ENGINEER RODDY HUI

### Walking Another Kind of Line

Rod Hui (pronounced "way") has found a home at Greene Street Recording, starting there as an assistant in 1977 and becoming an engineer in 1980. The Hong Kong native first became enthralled by music watching his brother sing with Scarlett (Rolling Thunder Revue) Rivera and her band. His first visit to a recording studio clinched it for him. But aside from being one of the few Asians working in pop music on either side of the board, Hui also sports an additional twist by working as engineer and co-producer to many of rap's premiere artists, including Kurtis Blow, Run-DMC and Shannon.

"There's a black and a white in America," he said. "You can't deny that. But I fall somewhere in between; I'm not black and I'm not white. People like Run-DMC didn't have a problem bringing their

friends down to sessions because there are no white guys—no honkies," he laughed—"in the room."

If there is such a thing as Chinese soul, Hui has yet to find it applied to Occidental music. "If you listen to Chinese music, you see they really know how to screw up a Western song," he remarked with a grin. But growing up in Corona, Queens, gave Hui exposure to a variety of influences from rock to soul. His experience recording proto-head-bangers Riot (another Loeb-managed act) and pop acts like Bonnie Tyler (Hui was the engineer on "Total Eclipse Of The Heart") led him to add crunchy guitars to Run-DMC's *Rock Box* 12-incher, which he co-produced. He saw that as making the music more accessible to a wider audience. "You listen to rock beats and you see they're the same as on rap records."

Hui functions well in both worlds, white and black, he says, and that being Asian "works very much in my favor, since I'm easily accepted by both."  
—DD



*Azimuth Recording Studio; (L to R) Ed King, (Lynyrd Skynyrd); Jim Langley, owner; Dave MacIntosh; Mark Schultz*

PCM70, and a new sound effects library on CD. "We're looking to buy a Sony PCM-1610 or a new dbx digital processor this year," says Yesbek. "We want to stick with digital so we can make our own masters, but we have to be careful because not many people can pay the price."

Over in Baltimore, MD, Richard Van Horn of Sheffield Audio Video Productions says that "business is excellent and about to get even better." And judging from the recent purchase of an SSL board, a Sony 3324 digital recorder, and a 34-foot audio remote truck with a Trident console, Van Horn isn't exaggerating. Recent projects at Sheffield included album work for Nils Lofgren, Clarence Clemens and Barry Manilow, various remote recordings including one for Mr. Mister live at the Ritz, and an abundance of commercials and jingles. Van Horn says that Omega is gearing up to make a serious commitment to video. "That's why we got the SSL and the 3324," he says. "Right now, we have five one-inch video machines, our video post-production editing is up to 16-tracks, and we're about to spend a whole lot more money on video equipment. We've been trying to get big name artists in here for years, and now we're finally doing it. It's all just starting to happen..." ■

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—FROM PAGE 107, *AFTERMIX*

the final product... A good 480 ips analog loop bin is still a reliable, quality choice."

Naturally, any discussion of the long term outlook for various bin loop systems presupposes continued demand for the audio cassette. Hardcastle's confidence on that issue is based largely on the promise of an important development in the prerecorded cassette market: the introduction of Dolby C-type encoding for mass distribution. Dolby is "working actively at the moment," Hardcastle says, on realizing this goal.

Hardcastle believes that the C-type encoded cassette makes more sense than the CD as a general consumption format for several reasons. Firstly, he estimates that Dolby C equipped cassette systems enjoy a ten to one lead over CD players in both the total numbers sold to date and the current rates of manufacture. Secondly, CDs are still produced for the most part abroad, leaving them vulnerable to serious production delays, not to mention pricing instability due to currency fluctuations. Pre-recorded cassettes, on the other hand, are domestically produced, largely from U.S. made materials. The combination of Dolby C and HX Pro will, in Hardcastle's view, allow U.S. manufacturers to service the increasingly large market for high fidelity pre-recorded music. With their sizable recent investments in plant, the duplicators now have added means and incentive to compete fiercely against erosion of their market position by the CD.

The role that Dolby proposes for C-type NR in the pre-recorded marketplace is not to supplement but rather to replace Dolby B. As Hardcastle puts it: "In the U.S., at least, dual inventory is a no-no." Of course, for the millions who own cassette systems without Dolby C, compatibility will be of major concern. Dolby, however, is proceeding on the assumption that compatibility is much less of a problem than it might seem. As Ray Dolby noted in presenting C-type NR to the AES in 1981, "a certain compatibility happens to be a useful by-product of the design philosophy used in producing these systems, namely, that the best treatment of the signal is the least treatment. If the action of the system is constrained to the bare minimum... the bulk of the encoded signal is simply the original input signal." Hardcastle echoes this view, pointing out that the combination of "spectral skewing" and an antisaturation network in Dolby C allows a higher level to be sent to tape, thereby reducing the percentage of time during which the noise reduction circuitry need be acting on the signal.

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Another reason for Hardcastle's seemingly relaxed outlook on the compatibility question is the nature of the differences noticeable between a decoded and an undecoded C-type cassette. While an undecoded B-type signal may sound overly bright, Hardcastle describes the perceived effect of undecoded C-type more in terms of dynamics than frequency. He feels that those consumers interested in high quality playback, to whom dynamic compression might be objectionable, are likely to already own Dolby C equipped cassette systems. As for the less discriminating part of the market, he doubts that they would notice any irregularity without direct A/B comparison. In fact, he suggests that playing a C-type tape through B rather than C type decoding on an auto stereo might be an excellent means of keeping low level program audible over automobile interior noise.

Perhaps the greatest threat to compatibility seen by Hardcastle is the use of noisy tapes as masters. Noise present in the source material will be raised by the compressing action of C-type encoding. Without proper decode expansion, this noise will remain at objectionable levels. "It all gets back to how careful people are," Hardcastle says. "These days there is no excuse for a noisy master tape." Care must be taken as well so that the current race for extra hot levels on mass produced product does not result in saturated tape. By introducing non-linear response, saturation undermines the critical assumption of tape chain accuracy upon which all complementary noise reduction systems are based.

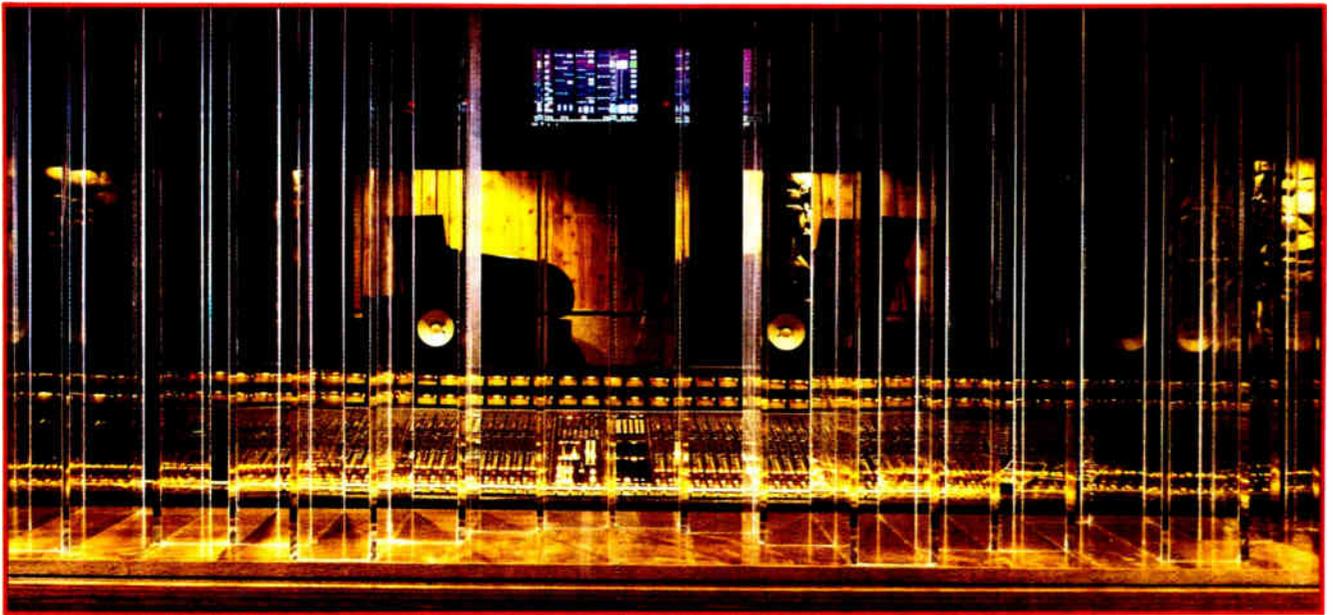
Potential problem areas aside, Hardcastle is optimistic about the future of the HX Pro/C-type pre-recorded cassette, with its 10 dB edge in dynamic range over B-type product. Thus, while digital technology will no doubt have an increasing part to play in the world of audio, the outlook for analog from Dolby's point of view is far from funereal. "People are looking very hard at analog right now . . . They may be overlooking faults of digital," says Hardcastle. "We've been using analog for a long time so we are very familiar with its problems. Digital seems to be an answer to those problems, but when you get more familiar with it, there may be other problems that were not recognized at first." If Hardcastle proves right, music consumers might continue to gorge on cassettes rather than make the CD switch, and proponents of analog distribution may yet find occasion to paraphrase an old line by Mark Twain: "Reports of our death have been greatly exaggerated." ■



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# BLUE JAY RECORDING

## HIGH TECH UNDERGROUND

by Tom Carr

Count on Yankee ingenuity to combine advanced ergonomic and acoustical design with a relaxed rural atmosphere. Thirty minutes northwest of Boston, just outside of Concord, is

Carlisle, Massachusetts, home of Blue Jay Recording Studio. Driving into the parking lot, one sees only a large grassy knoll with a brick chimney protruding at the far end. That knoll is actually the roof of this unique, earth-sheltered structure, New England's

first 48-track, SSL-equipped recording and mixing facility.

Why is some of the world's most advanced recording technology buried underground? Back in 1977, owners, Bob and Janet Lawson, began planning their studio. Bob Lawson recalls, "We never seriously considered adapting an existing structure into a studio because that approach inevitably involves a whole series of compromises. We wanted to build an excellent acoustical space that would have a noise floor compatible with the digital technologies looming on the horizon. We also decided to locate the studio in the peaceful town of Carlisle, but that meant that the surrounding environs had to be protected from blasting rock and roll day and night." Both objectives could be met by one solution: exceptional acoustical isolation between the studio and the outside world.

They brought on Steve Langstaff of Boston's Communications Research Group as their studio consultant, and began an intensive year of research and planning. Bob and Janet had read some books on earth-sheltered homes and it dawned on them that such a design would be incredibly well-suited to their needs. The enormous mass of earth surrounding the walls and roof would provide a degree of acoustical isolation that would be exorbitantly expensive to attain by conventional techniques. The town would not be disturbed and Blue Jay would be a recording facility capable of handling an extremely wide dynamic range, whose integrity would hold up through generations of technological change.

Structural engineer Val Prest was brought on to handle the technicalities of underground construction, differentiated from conventional above-grade methods mainly by the enor-





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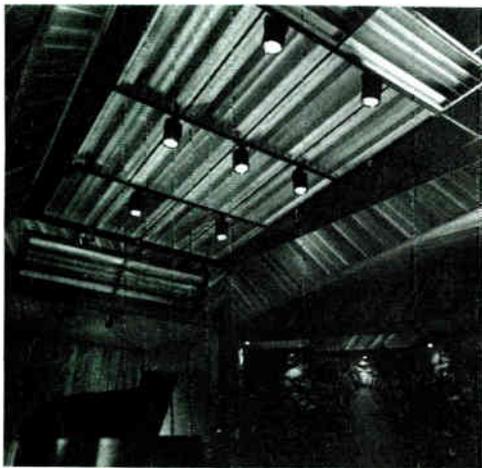
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*Blue Jay Recording Studio*

mous load-bearing capacity of the walls and roof deck. In brief, a 60-foot long hole was excavated into the gentle slope of the land, and a rectangular concrete shell constructed within it. The concrete walls were poured 12-inches thick with steel reinforcing bars running vertically and horizontally every 18-inches. Once two 40-foot steel I-beams were in place, it was time to build the multi-layered roof—a roof that would ultimately weigh some 350 tons! First, 10-inch thick pre-stressed

concrete planks were laid in place with a crane. Next came 6-inch tapered foamglass insulation board, covered by a waterproof rubber blanket, 1/4-inch thick. To protect this membrane, and to add a further measure of heat insulation, a layer of rigid styrofoam was then laid down. Final burial was accomplished by dumping 14 truck loads of soil over the shell, topped with Kentucky Bluegrass sod, creating the present knoll. The entire roof and most of the walls were buried. Tiered railroad ties were used to retain some of the earth, allowing the stuccoed lounge end of the facility to have a fully exposed view of the sloping countryside.

Shortly after Blue Jay opened its doors for business in early 1980, the effectiveness of the underground design was put to the test: Aerosmith came in to cut basic tracks. Bob Lawson relates, "The band was intent on playing at near coliseum levels with stacks of amplifiers and cabinets eight feet high. When they finally got cranked up around 5 a.m. I decided to step outside to check out any possible disturbance. On top of the knoll, directly above Tom Hamilton's bass cabinets, all I could hear was the sound of early morning birds arriving at our feeders."

The other goal—creating an excep-

tionally quiet recording environment—was also realized. Unwanted interference of any kind, from subsonics to RF, is unknown at Blue Jay. In fact, Bob can recall only one instance when an outside noise source was heard in the studio, and that was when an oak tree fell down on the roof! It sounded like a gentle thud.

It is interesting to note that the earth-sheltered design isolates the building electromagnetically as effectively as it does acoustically. The concrete shell consists of conductive salts, water and steel rods, and, being embedded in the moist earth, provides a low impedance path for RF interference—in effect, a "Faraday shield." Blue Jay is protected from abnormalities in the power grid with several power conditioners—peak absorbers, a sola, and an uninterruptable power supply. The latter will carry the SSL computer for several minutes to prevent data loss in case of sudden power failure. Says Michael Blackmer, Blue Jay's long-time electronic designer and tech, "I like to think of this building as a large band reject filter which isolates us from all bands except the very high spectrum, up in light. Natural light can enter the control room and even the studio—in case people working on a long session happen to care whether it's day or night!"

**NO MORE GUESS-WORK.**

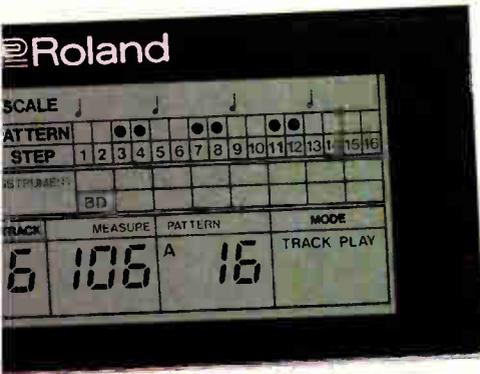
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TR-505

# RHYTHM COMPOSER TR-505



**PATTERN**  
 CLEAR SCALE LAST STEP INST./METRO  
 CLEAR BACK FWD LAST MEAS

**MODE**  
 PLAY

**TEMPO** MEAS

**PATTERN GROUP**  
 A B C  
 1 2 3  
 TRACK NUMBER

**LEVEL**  
 DOWN UP

**TEMPO** **VOLUME**

**START/STOP**

**1** LOW CONGA **2** HI CONGA **3** TIMBALE **4** LOW COWBELL **5** HI COWBELL **6** HAND CLAP **7** CRASH CYMBAL **8** RIDE CYMBAL

**9** BASS DRUM **10** SNARE DRUM **11** LOW TOM **12** MID TOM **13** HI TOM **14** RIM SHOT **15** CLOSED HI-HAT **16** OPEN HI-HAT

**LEVEL**  
 ACCENT  
 ENTER

## LIGHT HEAVYWEIGHT

Weighing in at only 950 grams (that's 2 lbs. 2 oz. to us), Roland's spunky new TR-505 Rhythm Composer sports a winning combination of traditional drum-kit and Latin Percussion instruments. But don't let its small size and modest price fool you—the TR-505 boasts heavy-weight digital PCM samples of kick, snare, toms, handclaps, high hats, cymbals, timbales, congas and cowbells—16 voices in all to give your rhythm tracks, rehearsals or live performances a punchy professional drum sound and feel. Behind all this brawn is a sophisticated computer brain with more than enough smarts and memory to make this drum machine your ally in the fight against boring drum programming. Program 48 of your own drum patterns (in real-time or step-time) or take advantage of 48 useful preprogrammed patterns—either way you're off and drumming right away. The large LCD display helps you keep track of every beat and performance parameter. But that's not all, our new champ still has a few moves you haven't seen. The TR-505 is a thoroughly modern MIDI instrument loaded with MIDI features and controls including an ability to respond to dynamic drum parts. Battery or AC powered, the versatile TR-505 scores an easy Technical Knock-Out over the competition. But don't say we didn't warn you—this little powerhouse will knock your socks off!

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*Blue Jay Recording Studio; Carlisle, Massachusetts*

Outside noise sources are only part of the equation, however. Equally important is elimination of noise originating within the building—noise related to either the HVAC systems or to the wall structure separating studio and control room. Massive double walls (up to 3-feet thick) were constructed between the earth damped floor slab and the earth damped concrete ceiling was employed. Audio lines between the two rooms were run via PVC conduit buried within the slab to avoid piercing the control room wall. The HVAC system was carefully engineered to promote continuous low velocity air flow with diffusers and ducts sized and routed to provide an NC rating of 15 or less. Says Lawson, "When we record something like a classical gig live to digital, we can really appreciate the silence of the room, especially in the quiet spaces where you can hear the players breathing, or the dampers lifting off the piano strings. We invariably use 'quiet' mics, like the Bruel & Kjaer 4006s, and the results are impressive."

While the overall facility design was meticulously planned out in advance of breaking ground, the acoustical design of the studio and control room evolved over time. Experience kept teaching Blue Jay engineers more about their rooms, and periodically business operations closed down for alterations and improvements. However, it wasn't until the major upgrade in the fall of 1985 that the staff felt the potential of the rooms was finally realized. Russell Berger, principal in charge of studio and broadcast facility design with the Joiner-Rose Group, Inc. in Dallas, was brought in to design

the new alterations.

First, he examined both the studio and control room for construction technique, ambient noise, and acoustical signature. "The Blue Jay staff were quite vocal about what they wanted to hear out of their rooms," Berger says. "I translated their musical and emotional responses into acoustical terms, attributed these to physical properties and devised tests to verify and quantify these properties." The following solutions were proposed and executed:

### **Control Room**

Since the original control room design was based around solid acoustical principles, major structural changes were unnecessary. The areas that could be improved were center imaging, an increase in the size of the "sweet" spot (so as to encompass an area the width of the SSL back approximately 8-feet to the client area), and to even out the low frequency amplitude response.

Smoothing out the low end was the highest priority. Previous attempts to deal with this problem had resulted in the installation of a diaphragmatic absorber in the front ceiling. Berger deemed this a partial cure (which had the unfortunate side effect of causing early reflections at the mix position). A better solution was to decouple the monitors from the control room structure, and alter their placement between the ceiling and floor boundaries. Free-standing 6-foot monitor pedestals were constructed of grout-filled concrete block coupled only to the earth-damped floor slab. The monitors were then point-loaded on top of these pedestals, acoustically grounded di-

rectly to the slab. The speakers themselves underwent structural modifications and acoustical improvements. The individual drivers were shock-mounted, the cabinet bracing was increased, and limp mass dampening was added to the exterior.

In the rear of the room, diffusing elements were specified to increase the return of diffuse energy back into the listening areas. The 7-foot picture window located directly behind the mix position was replaced with a custom designed, optically-pure plexiglas quadratic residue diffuser by RPG Diffusers, Inc. This element allows natural ambient light to filter into the control room, affords a view of the beautiful countryside, and provides the diffuse sound need at the listening areas. Additional diffusing elements were added to the left and right rear wings of the control room to further widen the area of accurate listening.

### **Studio**

Berger found the acoustics in the studio to be a bit on the dry side, lacking a diffuse ambient decay. While this was in keeping with the vogue of studio design in the late '70s, the staff was clearly opting for a much brighter sound. The center ceiling area was raised up to the concrete planks and the space filled with 16 quadratic residue diffusers. Their sound distribution patterns were arranged to maximize the diffuse energy in the wood floor areas. An alcove that was originally absorptive was reconstructed out of stone for visual impact and to further add to the diffuse nature of the space. The ceiling above the stone is also covered with quadratic residue diffusers. Since the entire studio is constructed out of concrete with tons of earth compressing the walls and roof deck, resonating panels were not a problem.

Blue Jay's chief engineer, Gragg Lunsford, responds to the remodel, "Mixing in the new room is great. There's no need to second guess anything or make compensations. The low end is tight, and the imaging in the room is crystal clear." About the alterations in the studio room, Lunsford said, "You know, people usually associate 'quiet' with 'dead,' but not here. There was no problem of exacerbating any existing ambient noise by livening the space. Russ really made the room sparkle."

Says Bob Lawson, "People are often puzzled or amused by this odd-looking place. My banker calls it a 'single purpose building' (which means, who else would buy it?), my neighbors consider it their bomb shelter, my clients are amused when we mow the roof, but, all in all, it makes for one hell of a studio." ■



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# NORTHEAST STUDIOS

## LISTINGS



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

The recently remodeled control room at Tiki Recording Studios in Glen Cove, New York, features a Trident TSM 40x32 console, UREI 813A monitors, and a Studer A80 MkIII 24-track.

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

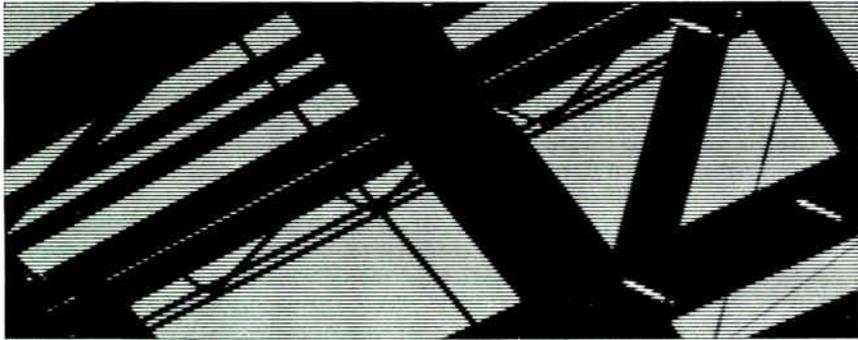
Upcoming Directory Deadlines:  
Studio Designers and Suppliers: **May 1, 1986**  
Southern California Studios: **June 3, 1986**  
North Central and Canadian Studios: **July 2, 1986**  
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# NORTHEAST STUDIOS



# 4/8 TRACK

• **A LITTLE ROOM**  
3116 Elba Dr., Baltimore, MD 21207  
(301) 944-6517  
Owner: GT Little, Jr.  
Studio Manager: GT Little, Jr.

• **ABUSE STUDIOS**  
Rt. 165, Voluntown, CT 06384  
(203) 376-0433  
Owner: Michael Panasuk  
Studio Manager: Mark Crum

• **ACE RECORDINGS**  
414 Vanderbilt Ave., Brooklyn, NY 11238  
(718) 622-7524  
Owner: John Pergamo  
Studio Manager: Tony D'Ambra

• **ADMASTER INC.**  
*also REMOTE RECORDING*  
95 Madison Ave., New York, NY 10016  
(212) 679-1134  
Owner: Charles Corn  
Studio Manager: Doug Landberg

• **ALPERTRACK**  
77 Warren St., New York, NY 10007  
(212) 349-8095  
Owner: Greg Alper

• **ALPHA RECORDING**  
1197 Teaneck Rd., Teaneck, NJ 07666  
(201) 837-0363  
Owner: Gregg Hatten, Russ Moore  
Studio Manager: Russ Moore, Gregg Hatten

• **AMERICAN ARTIST STUDIO**  
Box 131, Erie, PA 16512  
(814) 455-4796  
Owner: Carl A. Niebauer  
Studio Manager: Sam Hyman, Jr.

• **AN AMERICAN STUDIO**  
251 W. 30th St., New York, NY 10001  
(212) 947-7771  
Owner: Gary Silver  
Studio Manager: Bob Demetrician

• **ANGEL SOUND INC.**  
1576 Broadway, New York, NY 10036  
(212) 765-7460  
Owner: Angel Sandoval  
Studio Manager: Angel Sandoval

• **ANGELSEA**  
55 Russ St., Hartford, CT 06106  
(203) 241-8111  
Owner: Angelsea Productions, Inc.  
Studio Manager: Douglas Munford

• **ARABELLUM STUDIOS**  
654 Sand Creek Rd., Albany, NY 12205  
(518) 869-5935  
Owner: The Scarybellum Group  
Studio Manager: Yvonne Bautochka  
Dimensions of Studios: 18 x 24  
Dimensions of Control Rooms: 12 D x 20 W  
Tape Recorders: Otari MX5050 Mk. III 8 track, Otari MX-5050 2-track, Sony TC-854 4-track, Sony TC-K75 cassette, Sony TC-158 cassette  
Mixing Consoles: Soundcraft 3B, 24 x 16 (32 x 32 frame).  
Monitor Amplifiers: Dynaco QSA-300M, Crown D-75.  
Monitor Speakers: Advent, Auratone, Genesis and Dynaco.  
Echo, Reverb & Delay Systems: Lexicon 224 digital reverb, Lexicon Model 93 "Prime Time" digital delay, Korg SDD 2000 sampling digital delay, Ibanez HD 1000 harmonizer, Echoplex tape echo (vintage), custom plate.  
Other Outboard Equipment: dbx noise reduction, UREI 1176LN limiters, Symetrix CL-100 limiters and SG-200 signal gates, dbx 161 limiters, various modular FX devices.  
Computer systems: IBM PC/XT computer with 640K and color graphics, IBM Proprinter and Sony KV-1311 CR color monitor.  
Microphones: AKG, Beyer, Sennheiser and Shure.  
Instruments Available: Yamaha CP70 electric grand piano, Korg Poly-800 synthesizer, Rockman, EML synthesizers and sequencers. Many others available at very reasonable rates.

• **ARINC RESEARCH TELEVISION CENTER**  
*also REMOTE RECORDING*  
2551 Riva Rd., Annapolis, MD 21401  
(301) 266-4686  
Owner: The Arinc Companies  
Studio Manager: Tim Eisenhut

• **ARLO STUDIOS**  
7635 Telephone Rd., Leroy, NY 14482  
(716) 584-3709  
Owner: Kenneth Bearce, James Bearce  
Studio Manager: Kenneth Bearce

• **ASBURY PRODUCTIONS**  
104 Asbury St., South Hamilton, MA 01982  
(617) 468-2713  
Owner: David G. Neill

• **ASTRADYNE SOUND RESEARCH DUNGEON**  
*also REMOTE RECORDING*  
16 Julie Dr., Hopewell Junction, NY 12533  
(914) 221-2576  
Owner: Scott Lurowist  
Studio Manager: Scott Lurowist

• **ATONAL PRODUCTIONS**  
*only REMOTE RECORDING*  
River Ave., Providence, RI 02908  
(401) 831-0631  
Owner: Anthony P.M. Ricci  
Studio Manager: Anthony P.M. Ricci

• **AUDIBLE IMAGES**  
22 Cambria Point, Pittsburgh, PA 15209  
(412) 821-2648  
Owner: Jay Dudt  
Studio Manager: Jay Dudt

• **AUDIO ARTS RECORDING STUDIO**  
*also REMOTE RECORDING*  
425 Church St., Endicott, NY 13760  
(607) 748-8223  
Owner: Michael Putrino, Greg McQuade  
Studio Manager: Michael Putrino, Greg McQuade

• **AUDIO RECORDING TECHNOLOGY INSTITUTE**  
113-25 Queens Blvd., Forest Hills, NY 11375  
(718) 261-8999  
Owner: James J. Bernard  
Studio Manager: Tony Iannucci

• **AUDIOTRAX**  
*also REMOTE RECORDING*  
7 Dana St., Revere, MA 02151  
(617) 289-8044  
Owner: Robert Kellaway  
Studio Manager: Bob Kellaway

• **AVID RECORDING**  
P.O. Box 120, Waban, MA 02168  
(617) 437-6288  
Owner: Steve Albrecht, Kevin Smith  
Studio Manager: Spud McDozer, Wes Weisenfeld

• **BACKSTAGE SOUND STUDIO**  
212-91 26th Ave., Bayside, NY 11360  
(718) 224-5022  
Owner: Michael Fine  
Studio Manager: Michael Fine

• **BACKTRACKS/COMMUNITY MEDIA**  
*also REMOTE RECORDING*  
3½ Kent St., Montpelier, VT 05602  
(802) 223-2551  
Owner: Mike Billingsley  
Studio Manager: Geol Brumbaugh  
Extras: Two tracks direct to digital, 4 tracks direct to digital plus Hi-fi (with remix to digital 2-track master); digital 2-track butt editing; location recording (video sync soundtracks, special effects, live performances) to 2-track digital or 4-track digital plus Hi-fi; remote recording to 2-track digital.  
Direction: Concentration on ambient enriched music and location recording, including Ambient Sampling (to digital) with our patent-pending Simulated Binaural Recording System (SBRS)™. Experimental, classical, ethnic and folk music plus commissioned ambient sound effects. Community Media is non-profit promotion and demo production space, including public service radio, up to 4-tracks (analog).

• **BACKTRAX RECORDING STUDIOS**  
*also REMOTE RECORDING*  
106 Roosevelt Blvd., Oakland, NJ 07436  
(201) 337-5203  
Owner: Vincent Miraglia, Gregg Miraglia  
Studio Manager: Gregg Miraglia

• **BAGEL RECORDS**  
8 Settlers Way, Setauket, NY 11733  
(516) 751-5673  
Owner: S.R. Obrien, A. Schiff, W. Littlefield  
Studio Manager: W. Littlefield

• **BAKER SOUND**  
*also REMOTE RECORDING*  
1821 Ranstead St., Philadelphia, PA 19103  
(215) 567-0400  
Owner: Gary Moskowitz

• **PARKER BANDY'S SOUND ADVICE**  
*also REMOTE RECORDING*  
181 S. Central Ave., Chambersburg, PA 17201  
(717) 263-8289  
Owner: Parker B. Bandy III  
Studio Manager: Parker B. Bandy III

• **BARCLAY PRODUCTIONS**  
430 W. 14th St., New York, NY 10014  
(212) 242-1275  
Owner: Bruce Coughlin  
Studio Manager: Richard Regner  
Engineers: Richard Regner, Bruce Coughlin.  
Dimensions of Studios: 120 sq. ft.  
Dimensions of Control Rooms: 190 sq. ft.  
Tape Recorders: Otari MX5050 MK-III 8-track; TEAC 3440 4-track; Otari MX5050 B 2-track; Nakamichi MR-1 cassette.  
Mixing Consoles: Ramsa WR-8816 16 x 4 x 2.  
Monitor Amplifiers: Yamaha P2100, SAE 310.  
Monitor Speakers: Electro-Voice Sentry 100A, Auratone cubes  
Echo, Reverb & Delay Systems: ART01 A digital reverb, Orban 111B stereo spring reverb, Lexicon PCM41 digital delay, DeltaLab ADM 1024.  
Other Outboard Equipment: dbx 150 (8) type 1; Roland Vocoder, dbx 166 stereo comp/limiter; Yamaha 1/2 octave stereo EQ 3224 (house EQ); Garfield digital click; Furman stereo parametric EQ.  
Microphones: Neumann U87s, EV-1776, Shure SM58, AKG 1000E  
Instruments Available: Yamaha DX7, TX-216; Roland Jupiter 6; Moog Source; SCl Prophet-5; Ensoniq Mirage with Sound Lab; Roland MSQ 700 sequencer; Mac-512 with Total Music Software, LinnDrum; Roland TR 808, TR-727, Ensoniq Symphony Percussion.  
Video Equipment & Services: JVC 5550 3/4-inch video playback with remote Sony PVM 1910 color monitor

• **BARKING CAT PRODUCTIONS**  
*also REMOTE RECORDING*  
83 St. Mark's Pl. #4F, New York, NY 10003  
(212) 505-1595  
Studio Manager: Rich Williams

• **BARRINGTON RD STUDIOS**  
523 Laurel St., Longmeadow, MA 01106  
(413) 567-9631  
Owner: Mark Gasque  
Studio Manager: Mark Gasque

• **BEARSWAMP STUDIOS**  
1611 Cherry Ln., Macungie, PA 18062  
(215) 398-1492  
Owner: Clark A. Ferguson  
Studio Manager: Peter D. Smoyer

• **BEE VEE SOUND STUDIOS**  
*also REMOTE RECORDING*  
211 E. 43rd St., New York, NY 10017  
(212) 949-9170  
Owner: Bruno Vineis  
Studio Manager: Sean Benson

• **BELEE SOUNDS**  
*also REMOTE RECORDING*  
177 Casterline Rd., Denville, NJ 07834  
(201) 366-6629  
Owner: Alan Belcher  
Studio Manager: Alan Belcher

• **BIG CHEESE PRODUCTIONS**  
*also REMOTE RECORDING*  
429 Cabot St., Beverly, MA 01915  
(617) 927-6847  
Owner: John Carden  
Studio Manager: Tracy Devine  
Engineers: John Carden  
Dimensions of Studios: 20 x 15.  
Tape Recorders: TEAC/Tascam 38, 8 track; TEAC/Tascam 32, 2 track; Nakamichi BX-1 cassette  
Mixing Consoles: Allen & Heath Brenell CMC-24, 24 x 16 (computer aided mixing)  
Monitor Amplifiers: Yamaha  
Monitor Speakers: Yamaha NS-10M, Minimus 7.  
Echo, Reverb & Delay Systems: Alesis XT digital reverb, Korg SSD 2000 digital delay/sampler, DeltaLab Effectron Jr  
Other Outboard Equipment: Furman noise gates, Rocktron Hush II noise reduction, DOD stereo graphic EQ, (2) dbx 160X compressors, EXR Exciter.  
Microphones: Sennheiser MD431, Shure SM58, (2) Shure SM57s.  
Instruments Available: Oberheim DX drum computer, Juno-106 synth, Hamer electric guitar, Takamine acoustic/electric, Ibanez bass.  
Rates: \$15/hr

• **BLAKE HILL RECORDING**  
Hartland Hill Rd., Woodstock, VT 05091  
(802) 457-3818  
Owner: Michael Kinnicut  
Studio Manager: Michael Kinnicut

• **SAMUEL R. BLATE ASSOCIATES**  
*also REMOTE RECORDING*  
10331 Watkins Mill Dr., Gaithersburg, MD 20879  
(301) 840-2248  
Owner: Samuel R. Blate  
Studio Manager: Len Jaffe

• **BLUE CHIP**  
P.O. Box 123, Orefield, PA 18069  
(215) 398-2900

• **BLUE LACE**  
583 W. 215th St., New York, NY 10034  
(212) 942-0365  
Owner: Bill Lacey  
Studio Manager: Bill Lacey

• **BOO PRODUCTIONS**  
251 W. 30th St. 3rd loft, New York, NY 10001  
(212) 239-7054  
Owner: Adolfo Gallela  
Studio Manager: Adolfo Gallela

• **BROOKLYN'S BEST REMOTE RECORDING**  
*also REMOTE RECORDING*  
2439 85th St., Brooklyn, NY 11214  
(718) 372-2094  
Owner: Anthony Giacchi  
Studio Manager: William Blayd

• **MARV BROOKS PRODUCTIONS, INC.**  
1813 Greenwich Woods Dr. #24  
Silver Springs, MD 20903  
(301) 439-0101  
Owner: Marv Brooks  
Studio Manager: Lynn K. David

• **CABSCOTT BROADCAST PRODUCTIONS, INC.**  
*also REMOTE RECORDING*  
517 7th Ave., Lindenwold, NJ 08021  
(609) 346-3400  
Owner: Larry Scott  
Studio Manager: Anne Foster

• **CAPTAIN FIDDLE RECORDING**  
*also REMOTE RECORDING*  
4 Elm Ct., Newmarket, NH 03857  
(603) 659-2658  
Owner: Ryan J. Thomson  
Studio Manager: Ryan J. Thomson

• **CATHEDRAL SOUND PRODUCTIONS**  
*also REMOTE RECORDING*  
Box 2715, Columbia, MD 21045  
(301) 953-0198  
Owner: Nolan C. Church Jr.  
Studio Manager: Nolan C. Church Jr.

• **CAT'S VOICE RECORDINGS**  
*also REMOTE RECORDING*  
Box 104, Seabrook, NH 03874  
(603) 474-5875  
Owner: Tom Reeves  
Studio Manager: Tom Reeves, Alexandria DeVoe

• **CBP FILM TO TAPE, INC.**  
*also REMOTE RECORDING*  
517 7th Ave., Lindenwold, NJ 08021  
(609) 346-3400  
Owner: Larry Scott  
Studio Manager: Elaine Goldstein

• **CEDARBROOK RECORDING**  
21 Central Ave., Sicklerville, NJ 08081  
(609) 728-3843  
Owner: Brian McMahon  
Studio Manager: Patricia McMahon

• **CELERON PRODUCTIONS**  
*also REMOTE RECORDING*  
550 Celeron St., Pittsburgh, PA 15221  
(412) 242-5258  
Owner: Steven Scull  
Studio Manager: Karen Fullerton

• **THE CHARM CITY WORKSHOP INC.**  
*also REMOTE RECORDING*  
3710 Garrison Ave., Baltimore, MD 21215  
(301) 664-9160  
Owner: Rayner Chance, Keith James, Lawrence James  
Studio Manager: Lawrence James

• **CHERRY SOUND STUDIO, INC.**  
*also REMOTE RECORDING*  
132 N. 3rd St., Philadelphia, PA 19106  
(215) 922-3975  
Owner: Bob Cohen  
Studio Manager: Bob Cohen

• **CINEMA SOUND, LTD.**  
*also REMOTE RECORDING*  
311 W. 75th St., New York, NY 10023  
(212) 799-4800  
Owner: Joan S. Franklin  
Studio Manager: David S. Weinstein

• **CINESOUND**  
*also REMOTE RECORDING*  
P.O. Box 94, Webster, NY 14580  
(716) 872-1639  
Owner: Gregory M. Baum  
Studio Manager: Gregory M. Baum

• **CITIZEN'S RECORDING**  
150 W. 26th St. #502, New York, NY 10001  
(212) 989-2565  
Owner: Joel Martin Kohn

• **CHARLES CLARK/AUDIO SERVICES**  
*also REMOTE RECORDING*  
20 Ritchie Dr., Bear, DE 19701  
(302) 322-0767  
Owner: Charles W. Clark, Jr.  
Studio Manager: Charles W. Clark, Jr.

• **CHRIS CLAUSEN PRODUCTIONS**  
23 Phillips Rd., Nahant, MA 01908  
(617) 593-2437  
Owner: Chris Clausen  
Studio Manager: Chris Clausen

• **CLICKPOINT RECORDING**  
937 Gordon St., Allentown, PA 18102  
(215) 433-8178  
Owner: E. Maurides  
Studio Manager: Donna O'Sullivan

• **COLLEGIUM SOUND, INC.**  
*also REMOTE RECORDING*  
35-41 72nd St., Jackson Hts., NY 11372  
(718) 426-8555  
Owner: Don Wade, Jerry Epstein  
Studio Manager: Don Wade

• **COTTON HILL RECORDING**  
*also REMOTE RECORDING*  
RD #1 Cotton Hill Rd., W. Berne, NY 12023  
(518) 872-2505  
Owner: Ray Rettig  
Studio Manager: Ray Rettig

• **COYOTE STUDIOS**  
584 8th Ave. 1, New York, NY 10018  
(212) 505-5275  
Owner: Al and Michael Caiati  
Studio Manager: Michael Caiati

• **CRAIG RECORDING STUDIOS**  
*also REMOTE RECORDING*  
Suite 101 Benjamin Fox Pavilion  
Jenkintown, PA 19046  
(215) 885-8600  
Owner: James (Stu) Craig  
Studio Manager: Michael Gallagher

• **CREATIVE CHAOS INC.**  
1013 Garden St. (upstairs), Hoboken, NJ 07030  
(201) 798-7861  
Owner: Creative Financing  
Studio Manager: Timothy Trespas

•• **CREATIVE SOUND STUDIOS**  
 601 N. 6th St., Allentown, PA 18102  
 (215) 439-8004  
 Owner: Hal Schwoyer  
 Studio Manager: Carole Silvo  
 Engineers: Hal Schwoyer, Neil Hever.  
 Dimensions of Studios: (A) 11.5 x 17, (B) 3 x 7 (announcement booth).  
 Dimensions of Control Rooms: (A) 10 x 12, (B) 8 x 14.  
 Tape Recorders: Otari MX 5050III-B, 8-track; Otari MX 5050III-4, 4-track; Otari MX 5050III-2, 2-track; Otari MX 5050II-2, 2-track; Pioneer RTU 11, 4-track; JVC KD 1636 Mark II cassette.  
 Mixing Consoles: Tascam 5B, 8 x 4.  
 Monitor Amplifiers: Crown DC-300A Series II, Crown D-75.  
 Monitor Speakers: JBL 4411s, Auratone 5Cs.  
 Echo, Reverb & Delay Systems: Lexicon PCM 42 digital delay, Master-Room XL-210 stereo reverb.  
 Other Outboard Equipment: Orban 424A gated compressor/limiter, Symetrix CL-100 compressor/limiter, Klark-Teknik DN-360 1/3 graphic equalizer, NEI 2709 B 1/3 octave real time analyzer, Symetrix TI 101 telephone interface.  
 Microphones: Sennheiser MD 421s, AKG 451, CK22, CK3; Shure SM58s; Beyer M101.  
 Instruments Available: Casio CZ-101 keyboard.  
 Video Equipment & Services: Mitsubishi 1/2-inch VHS recorder, Panasonic 13-inch color monitor.  
 Rates: Rate card and demo are available upon request.

•• **CREATRAK**  
 also **REMOTE RECORDING**  
 4119 Atlantic Ave., Atlantic City, NJ 08401  
 (609) 347-1503  
 Owner: Mike Kehr  
 Studio Manager: Mike Kehr  
 Engineers: Mike Kehr, Jeff Turner.  
 Dimensions of Studios: 25 x 22 x 10 ceiling.  
 Dimensions of Control Rooms: 15 x 10 x 8 ceiling.  
 Tape Recorders: Otari w/Autolocator MKIII-8, 8-track; Otari w/remote control 5050B, 2-track; Sony Beta Hi-fi SL-2700, 2-track; TEAC-C-3, 3 head cassette; Sony TCD5M, portable cassette.  
 Mixing Consoles: Amek/TAC Scorpion 24 x 16 x 2.  
 Monitor Amplifiers: Crown PSA-2, BGW-750B, AB Systems 1210, BGW 100.  
 Monitor Speakers: JBL 4411s, JBL 4311s, Auratone 5Cs.  
 Echo, Reverb & Delay Systems: Lexicon 200, Lexicon PCM60, Master-Room XL-305, Lexicon Prime Time II, Lexicon PCM42, Lexicon PCM41.  
 Other Outboard Equipment: (2) dbx 160, (2) dbx 160X, Valley People rack system w/gates, (4) Symetrix noise gates, Orban 622b parametric EQ, UREI 539 room equalizers, UREI 535 dual octave equalizer, custom designed patch bay (TT-type) w/over 400 patchable points.  
 Microphones: (2) AKG P48 414, (2) AKG 460b, (5) Sennheiser 421, (4) Shure SM57, Electro-Voice RE20, (2) Sennheiser 441, (5) Sennheiser 431, Countryman direct boxes.  
 Instruments Available: Baby grand piano, Boogie guitar amp, Rhodes Chroma, Yamaha DX7, Minimoog, Yamaha RX11, Apple IIe w/MIDI Interface, Tama "Superstar" Super maple 6-pc. drum kit, complete bass guitar systems, complete hi-tech cue system w/(8) AKG 240M and (3) Koss 4AA headphones.  
 Video Equipment & Services: Video services available upon request.  
 Rates: \$25/hr., discount rates available.

•• **CROWN PRINCE PRODUCTIONS**  
 1654 Stanley St., New Britain, CT 06053  
 (203) 225-1797  
 Owner: Dave Hames  
 Studio Manager: Jarvis Lekatt

•• **CRUSADERS FOR CHRIST RECORDING STUDIOS**  
 1201 S. 47th St., Philadelphia, PA 19143  
 (215) 387-3014  
 Owner: L. Kurt Keene  
 Studio Manager: L. Kurt Keene

•• **CRYSTALLINE ACOUSTICS**  
 128 E. State St., Media, PA 19063  
 (215) 566-8532  
 Owner: Glenn Short  
 Studio Manager: Glenn Short

•• **CUE RECORDINGS INC.**  
 also **REMOTE RECORDING**  
 1156 Ave. of the Americas, New York, NY 10036  
 (212) 921-9221

Owner: Mel Kaiser  
 Studio Manager: Bruce Kaiser  
 Extras: Reel-to-reel and cassette duplication. Mini and micro cassette duplication. Continuous loop cassette duplication. Audio and A/V cartridge duplication. Video track

## NORTHEAST STUDIOS



## 4/8 TRACK

sweetening from 1-inch (type C) or 3/4-inch formats. High quality telephone-tie matrix, for remote directing of recording sessions. A/V to 3/4-inch video conversions.

•• **THE CUTTING CORPORATION**  
 4200 Wisconsin Ave., N.W. Ste. 215  
 Washington, DC 20016  
 (202) 363-3566  
 Owner: James H.B. Cutting  
 Studio Manager: Evan Pollack

•• **THE CUTTING EDGE**  
 also **REMOTE RECORDING**  
 Old Rt. 17, Box 217, Ferndale, NY 12734  
 (914) 292-5965  
 Owner: Paul Gerry  
 Studio Manager: Patricia Gerry

•• **CYRUS SOUND**  
 also **REMOTE RECORDING**  
 3545 S. Park Rd., Bethel Park, PA 15102  
 (412) 854-2076  
 Owner: Cyrus V. Anderson, Jr.  
 Studio Manager: Cy Anderson

•• **JACK DANIELS PRODUCTIONS**  
 8056 Tuckerman Ln., Potomac, MD 20854  
 (301) 983-9595  
 Owner: Jack Daniels  
 Studio Manager: Jack Daniels

•• **D&G MASTERING**  
 P.O. Box 370, Englishtown, NJ 07726  
 (201) 446-2411  
 Owner: Don Van Gorden

•• **DARK STAR**  
 also **REMOTE RECORDING**  
 P.O. Box 430, New Boston, NH 03070  
 (603) 673-0976  
 Owner: Jaime R. Saunders  
 Studio Manager: Jaime R. Saunders

•• **DASEIN STUDIOS**  
 169 Ave. A #13, New York, NY  
 (212) 254-3594  
 Owner: Linda and Edward Bair  
 Studio Manager: Linda and Edward Bair

•• **DEASONIC RECORDING**  
 714 Almond St., Vineland, NJ 08360  
 (609) 794-2377  
 Owner: Peter Deasio III  
 Studio Manager: Peter Deasio III

•• **DEEP SPACE**  
 400 Mill Rd., Hewlett Woods, NY 11557  
 (516) 791-4878  
 Owner: Kenn Fink  
 Studio Manager: Kenn Fink

•• **DEMOCRATIC MEDIA CENTER**  
 also **REMOTE RECORDING**  
 430 S. Capitol St. SE, Washington, DC 20003  
 (202) 485-3400  
 Owner: Democratic Congressional Campaign Committee  
 Studio Manager: Jim Eury

•• **DEMO-VOX® SOUND STUDIO, INC.**  
 also **REMOTE RECORDING**  
 1038 Bay Ridge Ave., Brooklyn, NY 11219

(718) 680-7234  
 Owner: Demo-Vox Sound Studio, Inc.  
 Studio Manager: Frank and Laura Grassi

•• **DEMO WORKSHOP**  
 2 Sherbrooke Dr., Smithtown, NY 11787  
 (516) 265-9697  
 Owner: Richard G. L'Hommedieu  
 Studio Manager: Gilda L'Hommedieu

•• **DIDIK TV PRODUCTIONS, INC.**  
 also **REMOTE RECORDING**  
 Box 133, Rego Park, NY 11374  
 (718) 843-6839  
 Studio Manager: Frank Didik

•• **DIMENSION III RECORDING CO**  
 P.O. Box 326, New Milford, NJ 07646  
 (201) 265-5200  
 Owner: D. Zernutta  
 Studio Manager: D. Zernutta

•• **BOB DOELKS ELEMENT**  
 Calhoun Hill Farm, Andes, NY 13731  
 (914) 676-4617  
 Owner: Bob Doelks Element  
 Studio Manager: Bob Doelks Element

•• **DU-ART FILM LABORATORIES, INC. / SOUND STUDIOS**  
 245 W. 55th St., New York, NY 10019  
 (212) 757-4580  
 Owner: Irwin Young  
 Studio Manager: Dominick R. Tavella

•• **THE DUG-OUT**  
 233 E. 32nd St., New York, NY 10016  
 (212) 213-5082  
 Owner: Doug Price  
 Studio Manager: Arnold Rodrigues  
 Direction: The Dug-Out is an 8-track/MIDI facility geared toward demo and jingle production. We are constantly upgrading and expanding to include the latest MIDI and sampling developments. We also specialize in dance remixing and editing.

•• **DVA STUDIOS**  
 4274 Trailing Dr., Williamsville, NY 14221  
 (716) 632-8340  
 Owner: Don Andrews  
 Studio Manager: Don Andrews

•• **DYNAMIC ARTS RECORDING**  
 248 Main St., Warren, RI 02885  
 (401) 245-1726  
 Owner: Rick DeAngelis  
 Studio Manager: Rick DeAngelis

•• **DYNASPEC RECORDING STUDIO**  
 58 Claypoole Ave., Moorestown, NJ 08057  
 (609) 234-4065  
 Owner: Vincent A. Perla  
 Studio Manager: Vincent A. Perla

•• **EAR-RELEVANT STUDIOS**  
 One Nutting Ln., Westford, MA 01886  
 (617) 692-1810  
 Owner: Bob Wey  
 Studio Manager: Bob Wey

•• **E.J. PRODUCTIONS**  
 also **REMOTE RECORDING**  
 P.O. Box 507, Industrial Rd., Brownstown, PA 17508  
 (717) 627-4633, 859-2091  
 Owner: Eric W. Johnson  
 Studio Manager: Eric W. Johnson  
 Engineers: Eric W. Johnson, John Uhl, others.  
 Dimensions of Studios: Studio A: 37 x 36 w/14-16 foot ceilings; isolation room: 10 x 12 w/8-10 foot ceilings.  
 Dimensions of Control Rooms: 18 x 20 w/8-11 foot ceilings.

Tape Recorders: Otari MX-5050 MKIII/8, 8-track; Otari MX-5050 BII, 2-track; TEAC 3340-S, 4-track; Tascam 35-2, 2-track; Nakamichi BX-300 cassette.  
 Mixing Consoles: Amek/TAC Scorpion, 24 x 16; Tascam Model 3, 8 x 4.  
 Monitor Amplifiers: BGW, Hitachi, E-V Tapco.  
 Monitor Speakers: JBL, E-V, Tannoy.  
 Echo, Reverb & Delay Systems: Lexicon, Roland, ART/MXR, Intersound, etc.  
 Other Outboard Equipment: dbx, ART/MXR, U.S. Audio, Orban, etc.

Microphones: AKG, Beyer, Sennheiser, Shure, E-V, etc.  
**Instruments Available:** MIDI keyboard system w/anything available by special arrangement, Rhodes piano, Hammond organ, complete Gretsch drum kit w/North hardware and Zildjian cymbals, Steinway or Yamaha grand piano (at additional charge, by prior arrangement). We can rent virtually any instrument or rack gear at your request.  
**Video Equipment & Services:** Complete video production company co-located on the premises for ¾-inch or 1-inch or film.  
**Rates:** We are a growing studio. Please call or write for current rates and equipment!

•• **EPSILON PRODUCTIONS**  
*also REMOTE RECORDING*  
 354 E. 91st St., New York, NY 10128  
 (212) 876-2757  
 Owner: George A. Sempepos

•• **ESOTERICA RECORDINGS**  
*only REMOTE RECORDING*  
 229 White St., Belmont, MA 02178  
 (617) 484-1446  
 Owner: John L. Harper  
 Studio Manager: John L. Harper

•• **FALLEN ANGEL RECORDING**  
 56 Salem Rd., Hicksville, NY 11801  
 (516) 938-6180  
 Owner: Karen and Dennis Genovere  
 Studio Manager: Karen Genovere

•• **FANTASY FACTORY**  
 Box 31 Kings Hwy., Sugar Loaf, NY 10981  
 (914) 469-9272  
 Owner: Bob Fugett  
**Tape Recorders:** Tascam 80/8, Otari S050 HB Series II, Tascam 122 and Aiwa 3600 cassettes.  
**Mixing Consoles:** Modified Studio Master 16 x 8 x 2, Studio Master 8 x 4.  
**Monitor Amplifiers:** Crown DC-300.  
**Monitor Speakers:** Voiced Altec 604Es with Mastering Lab crossovers, Auratone 5Cs.  
**Echo, Reverb & Delay Systems:** Master-Room XL-305 Reverb, Lexicon PCM 41, Roland RE-301 tape delay.  
**Other Outboard Equipment:** Zenith Z-151 640K computer with hard disk and MIDI (Octave Plateau Sequencer+ REV 2.0, Jim Miller's Personal Composer, Voyetra Voice Editor) dbx noise reduction, Valley People Gain Brains, Aphex Aural Exciter Type B, Valley People Dyna-Mite limiter, ADC Patch Bays, AKG 141 and 241 headphones, Edcor headphone amp, Countryman DI, MXR 1/3 octave graphic equalizers, Biamp stereo 10 band EQ and more.  
**Microphones:** Neumann U87, AKG-452, Crown PZM 31s, Beyer M500 and M400s, Shure SM57s, SM58s, PE50SP, and 545SD.  
**Instruments Available:** Yamaha U3 Piano, Oberheim DMX drum computer, Voyetra 8 synth, Mesa Boogie Mark II amp, Paul Reed Smith guitar, Alembic bass, Ovation Adamas guitar, Roland TR-808 drum synth, Korg DW6000 synth, Gibson ES-347, J-50 guitars and more.

•• **FANTASY PRODUCTIONS**  
*also REMOTE RECORDING*  
 141-16 25 Rd., Flushing, NY 11354  
 (718) 463-1127  
 Owner: Sammy Caine  
 Studio Manager: Sammy Caine

•• **FC SOUND**  
*only REMOTE RECORDING*  
 1 LaCroix Ct., Apt. B, Rochester, NY 14609  
 (716) 467-6238, 266-6671  
 Owner: Frank A. Cataldo  
 Studio Manager: Frank A. Cataldo

•• **THE FEED SACK**  
 937 W. Southern Ave., South Williamsport, PA 17701  
 (717) 326-2299  
 Owner: Rick Nordstrom  
 Studio Manager: Rick Nordstrom

•• **FILIPPONE SOUND & VIDEO**  
*also REMOTE RECORDING*  
 176 Garner Ave., Buffalo, NY 14213  
 (716) 881-4483  
 Owner: Randy Filippone  
 Studio Manager: Karen Dalessandro

•• **FLASHTRAKS**  
*also REMOTE RECORDING*  
 98 Fresh Ponds Rd., E. Brunswick, NJ 08816  
 (201) 821-0594  
 Owner: Tony Zimmermann  
 Studio Manager: Chris Strandberg

•• **FORGE RECORDING STUDIOS**  
*also REMOTE RECORDING*  
 P.O. Box 861, Valley Forge, PA 19481  
 (215) 935-1422, 644-3266  
 Owner: Forge Recording Studios, Inc  
 Studio Manager: Warren R. Wilson

•• **4 BITS RECORDING**  
*also REMOTE RECORDING*  
 512 Main St. Rm. 9, E. Orange, NJ 07018  
 (201) 672-7109  
 Owner: Meekaaeel Muhammad  
 Studio Manager: Kevin Hedge

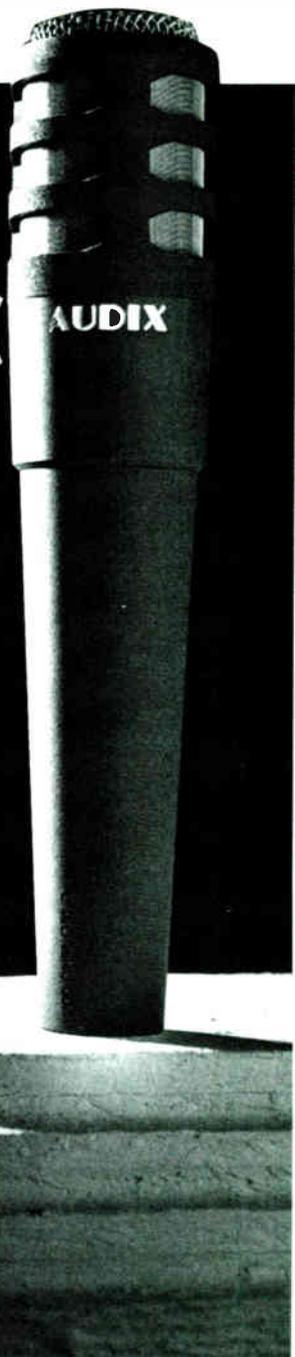
•• **GABRIEL FARM STUDIO**  
 82 Mountainview Rd., Belle Mead, NJ 08502  
 (201) 359-5267  
 Owner: Gregory Frey, Andy Gomory  
 Studio Manager: Gregory Frey, Andy Gomory

•• **GARAGELAND**  
 322 4th St. #3, Jersey City, NJ 07302  
 (201) 795-1509  
 Owner: Michael Van Duser  
 Studio Manager: Julie Schmittinger

•• **GARDEN PRODUCTIONS**  
*also REMOTE RECORDING*  
 New York, NY 10025  
 (212) 222-5417  
 Owner: James H. Madison  
 Studio Manager: Bradley Haiwei

•• **GARRETT FILMS INTERNATIONAL**  
*also REMOTE RECORDING*  
 Box 253 Rt. 3, Bernville, PA 19506  
 (215) 488-7552  
 Owner: R.E. Garrett

•• **GOLDEN ANGEL MUSIC**  
 P.O. Box 234, Rural Ridge, PA 15075  
 (412) 265-4116  
 Owner: Angel Tucciarone Pontier  
 Studio Manager: Angel Tucciarone Pontier



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•• **GOODTIME SOUND RECORDING**  
*also REMOTE RECORDING*  
 101 Westchester Ave., Port Chester, NY 10573  
 (914) 939-1066  
 Owner: The A/V Connection Inc  
 Studio Manager: Judy Novy

•• **G.P. RECORDING**  
 83-75 116th St., Richmond Hill, NY 11418  
 (718) 441-6747  
 Owner: Gene Polito  
 Studio Manager: Gene Polito

•• **BILL GRACE PRODUCTIONS**  
 1724 Bridge St., New Cumberland, PA 17070  
 (717) 774-1862  
 Owner: Bill Grace  
 Studio Manager: Mi Midi Mind

•• **GROUP TWO, INC.**  
*also REMOTE RECORDING*  
 428 E. 25th St., Baltimore, MD 21218  
 (301) 467-9000  
 Owner: Dan O'Toole  
 Studio Manager: Robert Bragg

•• **G.R.M. STUDIOS**  
 24 Buxton Rd., Bedford Hills, NY 10507  
 (914) 241-0844  
 Owner: Gene R. Minasi  
 Studio Manager: Gene R. Minasi

•• **HARBINGER STUDIOS**  
 P.O. Box 208, Bellingham, MA 02019  
 (617) 966-1963  
 Owner: Duff D. Kirklewski  
 Studio Manager: Duff D. Kirklewski

•• **HARDMAN EASTMAN STUDIOS, INC.**  
*also REMOTE RECORDING*  
 1400 E. Carson St., Pittsburgh, PA 15203  
 (412) 481-4450  
 Owner: Marilyn Eastman, Karl Hardman  
 Studio Manager: Barbara D. Jost

•• **HARRISON AUDIO SERVICES**  
*only REMOTE RECORDING*  
 9 Birch Hill Rd., So. Hadley, MA 01075  
 (413) 536-3830  
 Owner: Jeff Harrison  
 Studio Manager: Jeff Harrison

•• **THE HART UNIT**  
 979 Dalton Ave., Hermitage, PA 16148  
 (412) 346-4479  
 Owner: Thomas S. Hartsyk  
 Studio Manager: Thomas S. Hartsyk

•• **THE HATCH RECORDING STUDIO**  
*also REMOTE RECORDING*  
 6920 W. Lake Rd., Fairview, PA 16415  
 (814) 474-1032  
 Owner: Joe Kotlyuk  
 Studio Manager: Joe Kotlyuk

•• **H.B.F.C. MUSIC COMPANY**  
 P.O. Box 11323, Hauppauge, NY 11788  
 (516) 361-8890  
 Owner: Douglas Russell, Claire Russell  
 Studio Manager: Douglas Russell

•• **HELIOTROPE STUDIOS LTD.**  
*also REMOTE RECORDING*  
 21 Erie St., Cambridge, MA 02139  
 (617) 868-0171  
 Owner: Boyd Estus, James Gniebsch  
 Studio Manager: Boyd Estus

•• **HOLD THIS**  
*also REMOTE RECORDING*  
 12 Moulton Dr., Montvale, NJ 07645  
 (201) 930-0919  
 Owner: Tim Dailey  
 Studio Manager: Tim Dailey

## NORTHEAST STUDIOS



## 4/8 TRACK

•• **IN FOCUS VIDEO/LOCATION RECORDING**  
*only REMOTE RECORDING*  
 P.O. BOX 232, W. Newton, MA 02165  
 (617) 244-0894  
 Owner: Art Freedman  
 Studio Manager: Art Freedman

•• **INCHES PER SECOND**  
 463 West St. #A-409, New York, NY 10014  
 (212) 243-8903  
 Owner: WC Conway  
 Studio Manager: WC Conway

•• **INSATIABLE RECORDING**  
 62 O'Neil St., Kingston, NY 12471  
 (914) 338-1524  
 Owner: Albin Zak  
 Studio Manager: Zoe Zak

•• **THE INSYNC ASYLUM**  
 P.O. Box 62, Burtonsville, MD 20866  
 (301) 384-8480  
 Owner: Paul Kitchen  
 Studio Manager: Paul Kitchen  
 Engineers: Paul Kitchen.  
 Dimensions of Studios: 17 x 14.  
 Dimensions of Control Rooms: 8 x 14  
 Tape Recorders: Tascam Model 38 w/dbx, 8 track, TEAC  
 A 3300 SX w/dbx, 2 track; JVC DD 7 cassette; Sony  
 WMD6 cassette  
 Mixing Consoles: Ramsa WR-8118, 18 x 4 x 2; Tascam  
 Model One.  
 Monitor Amplifiers: (2) Onkyo A-7, Edcor headphone  
 amp  
 Monitor Speakers: JBL 4301B, Auratone 5C  
 Echo, Reverb & Delay Systems: Yamaha REV7 digital  
 reverberator, DeltaLab 2048 Super Time Line DDL, Yama-  
 ha E1010 ADL.  
 Other Outboard Equipment: dbx 164 compressor/limit-  
 er, dbx 150 NR, Valley People Kepex II, Tascam EQ.  
 Microphones: 421, AKG 451EB, (3) D310, Sony, Shure  
 Instruments Available: Yamaha DX7, Prophet 600, Fen-  
 der Twin Reverb, Gibson Melody Maker, Rockman X100,  
 Boss SD 1, PH-1r, TW 1, OC 2, CE-3, DF 2, Oberheim DX  
 drum computer.  
 Rates: \$25/hr (+ tax)

•• **ILJ STUDIOS**  
 2903 S. Deerfield Ave., Yorktown Hts., NY 10598  
 (914) 245-7753  
 Owner: ILJ Productions  
 Studio Manager: Jim Roberts

•• **J.M. STUDIO**  
 149 Grand St., Newburgh, NY 12550  
 (914) 562-8084  
 Owner: John Mulligan  
 Studio Manager: Debra E.

•• **JOE'S STUDIO**  
 150 Warren Ave., Boston, MA 02116  
 (617) 262-7263  
 Owner: Joe Pedi  
 Studio Manager: Joe Pedi

•• **JS SINC**  
 23 Orchard Ave., Holmdel, NJ 07733  
 (201) 264-0536  
 Owner: Jeff Schwartz  
 Studio Manager: Alex Goetchius

•• **JUNKER ASSOCIATES**  
 55 Purdue Dr., Millford, MA 01757  
 (617) 473-9101  
 Owner: Jeffrey Stephen Junker  
 Studio Manager: Edward Noonan

•• **K&S STUDIOS**  
 52 McKinley St., Maynard, MA 01754  
 (617) 897-3485, 897-2939  
 Owner: Jon French, John Cunningham  
 Studio Manager: Jon French

•• **KAISER PRODUCTIONS**  
 46 Fenway #6, Boston, MA 02115  
 (607) 266-6517  
 Owner: William Kaiser  
 Studio Manager: William Kaiser

•• **KANBAN INTERNATIONAL**  
 6 West Ave. #3K, Larchmont, NY 10538  
 (914) 833-0482  
 Owner: Al Craven  
 Studio Manager: John Leitch

•• **KEMO SABE AUDIO RESEARCH**  
 36 Hampton St., Metuchen, NJ 08840  
 (201) 549-0063  
 Owner: Mark J. Laura  
 Studio Manager: Mark J. Laura

•• **KEWALL RECORDING/TAPE DUPLICATION**  
 77 Bayshore Rd., Bayshore, NY 11706  
 (516) 586-2486  
 Owner: Keith Gutschwager  
 Studio Manager: Dorothy E. Gutschwager

•• **KING "B" RECORDING**  
 224 Avenue B #9, New York, NY 10009  
 (212) 228-5956  
 Owner: Greg Shirley  
 Studio Manager: Greg Shirley

•• **KING HENRY PRODUCTIONS**  
*also REMOTE RECORDING*  
 1855 Fairview Ave., Easton, PA 18042  
 (215) 258-4461  
 Owner: Henry Casella  
 Studio Manager: Henry Casella

•• **KINGSBOROUGH AUDIO PRODUCTIONS**  
*also REMOTE RECORDING*  
 2001 Oriental Blvd., Brooklyn, NY 11235  
 (718) 332-8953  
 Owner: Kingsborough Community College  
 Studio Manager: Cliff Hesse

•• **KOLLAR SOUND & RECORDING**  
*also REMOTE RECORDING*  
 116 Chestnut Ln., North Wales, PA 19454  
 (215) 643-6427  
 Owner: Greg Kollar

•• **KRELL FILM & SOUND WORKS**  
*also REMOTE RECORDING*  
 P.O. Box 71, Bayport, NY 11705  
 (516) 472-2275, 472-3855  
 Owner: RJ Thurber  
 Studio Manager: B. O'Doherty  
 Engineers: Roger J. Thurber, Bernie O'Doherty  
 Dimensions of Studios: 20 x 30 x 11 h.  
 Dimensions of Control Rooms: 10 x 20.  
 Tape Recorders: Tascam 38, 8 track; 34, 4 track; 32, 2-  
 track; Nagra IVS, stereo and SMPTE; assorted cassette  
 decks  
 Mixing Consoles: Tascam M16, 24 x 8  
 Monitor Amplifiers: Phase Linear, Dynaco, Aiwa  
 Monitor Speakers: JBL 4312, Big Reds  
 Echo, Reverb & Delay Systems: MXR digital, Master  
 Room spring.  
 Other Outboard Equipment: Full complement of out-  
 board gear including limiters, noise gates, etc.  
 Microphones: AKG, Sennheiser, Electro-Voice, Shure  
 Instruments Available: Steinway grand, Fender guitars  
 and keyboards, Martin acoustics, miscellaneous wood-  
 winds, etc.  
 Video Equipment & Services: 16mm and 35mm Arriflex  
 and Eclair film cameras, ¼ and ½ inch Sony and Pana-  
 sonic video decks and editors, Arr Image Stabilizer, dual  
 system projection. Support for all phases of film/video  
 productions  
 Rates: Call for rates

•• **LAB-8 AUDIO INC.**  
 111 8th Ave. Mezz. 2, New York, NY 10011  
 (212) 645-1930  
 Owner: Peter Other, Ken Florendo  
 Studio Manager: Ken Florendo

• ED LACINSKI PRODUCTIONS  
*only REMOTE RECORDING*  
 Country Club Dr., Coram, NY 11721  
 (516) 732-5954  
 Owner: Ed Lacinski  
 Studio Manager: J. Lacinski

• LAKE RECORDING STUDIO  
*also REMOTE RECORDING*  
 RFD 2 Putnam Hill Rd., Sutton, MA 01527  
 (617) 476-3366  
 Owner: Phil Berube  
 Studio Manager: Phil Berube

• L'AMOUR-SIQUE SOUND STUDIOS  
 1084 Carroll St., Brooklyn, NY 11225  
 (718) 735-4553  
 Owner: Robert Hunter, Elliott Lamour  
 Studio Manager: Elliott Lamour

• LAUGHING DOG PRODUCTIONS  
 21 Brewster St., Staten Island, NY 10304  
 (718) 448-1026  
 Owner: Bill Donnelly, Pat Penington  
 Studio Manager: Bill Donnelly

• LEDGEVU  
 P.O. Box 34, Marlborough, CT 06447  
 (203) 295-9718  
 Owner: Mark Zampino  
 Studio Manager: Donna Lee Zampino



Audio/Video/Corporate Communications



LEGEND RECORDING STUDIOS  
 Belleville, NJ

• LEGEND RECORDING STUDIOS  
*also REMOTE RECORDING*  
 42 Belmont Ave., Belleville, NJ 07109  
 (201) 751-9528  
 Owner: Anthony Pomponio  
 Engineers: Tony Pomponio  
 Dimensions of Studios: 17 x 12.5, 8 x 7, and drum booth 9 x 7.  
 Dimensions of Control Rooms: 10 x 16.  
 Tape Recorders: Otari Mark III, 8-track; Otari 5050 BII, 2-track; Tascam Series 32, 2-track; Tascam A-3300 SX 1/4-track; Akai GX F71, cassette  
 Mixing Consoles: Hill B Series 3, 16 x 8 x 2, (2) Shure SE-30 remote mixer, 3 x 2.  
 Monitor Amplifiers: Crown, Symetrix, and Marantz  
 Monitor Speakers: Altec Lansing and Auratone.  
 Echo, Reverb & Delay Systems: Ecoplate reverb 3 x 6 plate, Lexicon PCM42 w/4.8 second option.  
 Other Outboard Equipment: dbx Type I noise reduction systems, (2) dbx 160X compressors, (2) Rane GE 27 1/2 octave EQ, Tapco C 201 graphic EQ, Tapco 2200 graphic EQ, UREI 546 dual parametric EQ, Drawmer DS 201 dual noise gate, Sansui SR 929 turntable.  
 Microphones: AKG 414s, Sennheiser 421s, Electro Voice RE20, 635A, Shure SM58s, SM57s, and Sony  
 Instruments Available: LinnDrum, Yamaha DX7 key-boards, Yamaha 6 string acoustic, Epiphone 12 string acoustic, Peavey amps.  
 Video Equipment & Services: Involved in all aspects of music production for corporate and commercial video.  
 Rates: \$30/hr. Block rates available.

• MAX LENT PRODUCTIONS  
*only REMOTE RECORDING*  
 24 Wellington Ave., Rochester, NY 14611  
 (716) 328-5126  
 Owner: Max Lent  
 Studio Manager: Max Lent

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• **LIFE OF RILEY**  
33 Edgewood Pl., Locust Valley, NY 11560  
(516) 671-4612  
Owner: Peter Engisch, Perry Gartner  
Studio Manager: Peter Engisch

•• **THE LITTLE STUDIO**  
P.O. Box 416, Rockland, ME 04841  
(207) 594-2497  
Owner: Helmut Vles  
Studio Manager: Helmut Vles

•• **LITTLE WORLD STUDIO**  
214 Houston Rd., Pittsburgh, PA 15237  
(412) 364-4314  
Owner: Brian S. Kirsch  
Studio Manager: Brian S. Kirsch

• **LIVE TRACKS MOBILE RECORDING**  
also **REMOTE RECORDING**  
6201 Crittenden St., Philadelphia, PA 19138  
(215) 276-8734

Owner: Charles H. Griffin  
Studio Manager: Charles H. Griffin  
Engineers: Hamp Colize, Charles Griffin  
Dimensions of Studios: Mobile Van Units  
Dimensions of Control Rooms: 20 x 16  
Tape Recorders: Tascam M-44 4 track, Tascam M-32 2 track, Technics M-222 2 track, Sanyo 7200 Beta Hi fi VCR  
Mixing Consoles: Tascam M-3, Tascam M-216, 8 x 4 x 2.  
Monitor Amplifiers: Peavey CS 400.  
Monitor Speakers: JBLs in custom cabinets  
Echo, Reverb & Delay Systems: DeltaLab 256 ADM digital delay, Accessit spring reverb, dbx 163 compressor  
Other Outboard Equipment: dbx 150 and DX4 Type I noise reduction.  
Microphones: Shure SM57, Audio Technica 450DS, ATM 63, AKG D321  
Instruments Available: Korg mono/poly, P body bass, Korg Poly 800 synthesizer.  
Rates: \$30/hr plus special production package. Rates upon request



**LIVEWIRE RECORDING**  
Long Branch, NJ

•• **LIVEWIRE RECORDING**  
Long Branch, NJ 07712  
(201) 229-2309  
Owner: Greg Laugelli, Mick Seeley  
Studio Manager: Mick Seeley  
Engineers: Mick Seeley, James Amadruto  
Dimensions of Studios: 20 x 16 x 10.5 vocal booth 5 x 3 x 7.  
Dimensions of Control Rooms: 13 x 11 x 10.5  
Tape Recorders: Fostex A8, 8 track, Otari 5050B-HD, 2 track, TEAC 2300S 2 track JVC KDV6 cassette, Sanyo high speed dubber  
Mixing Consoles: Allen and Heath Brenell CMC 24, 24 x 16 out, with (6) effect sends.  
Monitor Amplifiers: BGW, Peavey  
Monitor Speakers: JBL 4311, Realistic Minimus 8  
Echo, Reverb & Delay Systems: Ursa Major Star Gate 626 digital reverb, Yamaha REV7, Ibanez digital delays, Yamaha and dbx compressors, dbx noise reduction, Korg synchronizer and more.  
Other Outboard Equipment: Coffee latest digital model from Mr. Coffee  
Microphones: Neumann U87, AKG 414EB, Electro Voice PL20, Sennheiser 421, Shure SM57 and SM58, and more.  
Instruments Available: Keyboards Yamaha DX7, TX7, Roland Jupiter 6 Casio CZ 101, Korg EX 8000, Minimoog, ARP string ensemble (modified) We will have sampling by publication date. Guitars: Strat, Telecaster, Gibson Les

## NORTHEAST STUDIOS



## 4/8 TRACK

Paul, Rickenbacker and Gibson EBO basses, steel guitars and Guild acoustic Amplifiers: Marshall, Peavey, Acoustic Percussion: Rogers drum kit, MXR drum computer, various toys. MIDI sequencers: (2) Commodore 64, Apple IIe, Atari ST with complete software including patch library for each synth. We are MIDI-wired!  
Rates: \$20/hr.

• **LOCATION RECORDING, INC**  
also **REMOTE RECORDING**  
122 E. Rocks Rd., Norwalk, CT 06851  
(203) 371-4757  
Owner: Anthony M. Scalisi  
Studio Manager: Anthony M. Scalisi

•• **LOCATION SOUND RECORDING**  
also **REMOTE RECORDING**  
32 Beverly Dr., Depew, NY 14043  
(716) 684-6307  
Owner: Paul Kriedeman  
Studio Manager: Paul Kriedeman

•• **LOFT STUDIO**  
405 Taft Ave., Endicott, NY 13760  
(607) 748-1752  
Owner: Michael S. Tomik  
Studio Manager: Michael S. Tomik

•• **L.U.V. SOUND STUDIO**  
also **REMOTE RECORDING**  
102 Cornwall St., Hartford, CT 06112  
(203) 522-2371  
Owner: Timothy Williams, Silver Sargent Sargent, Harold Sargent  
Studio Manager: Timothy Williams, Silver Sargent Sargent, Harold Sargent

•• **M-CUT STUDIOS**  
328 Shore Dr., New Windsor, NY 12550  
(914) 496-4429  
Owner: John Colacurcio  
Studio Manager: John Cal, Barbara Lewis

•• **MAINSTREAM PRODUCTIONS**  
also **REMOTE RECORDING**  
4562 W. Streetsboro, Richfield, OH 44286  
(216) 659-3812  
Owner: Jeffrey M. Oxlford  
Studio Manager: Jeffrey M. Oxlford

•• **MAKIN TRACKS**  
75 Summer St., Chelmsford, MA 01824  
(617) 256-4051  
Owner: Henry Rowl  
Studio Manager: Henry Rowl

• **MALLOY PRODUCTIONS**  
also **REMOTE RECORDING**  
1544 E. Passyunk Ave., Philadelphia, PA 17147  
(215) 467-5486  
Owner: Paul T. Calvi  
Studio Manager: Paul T. Calvi

• **MAN FROM MARS PRODUCTIONS**  
also **REMOTE RECORDING**  
159 Orange St., Manchester, NH 03104  
(603) 668-0652  
Owner: Ed Brouder

• **MANHATTAN CENTER STUDIOS INC**  
311 W. 34th St., New York, NY 10001  
(212) 279-7740  
Owner: Atlantic Video Inc.  
Studio Manager: Steve Honey  
Engineers: Roy Clark, Tom Miho, Tom Burkholder  
Dimensions of Studios: Studio 7: 94 x 98 x 40 ceiling w/stage 54 x 95 x 30; Studio 8: 23 x 28 x 16  
Dimensions of Control Rooms: 7: 16 x 18, 8: 12 x 13.  
Tape Recorders: TEAC 2300, 4-track, Otari MTR 10, 2-track; Otari 5050, 2 track, (2) Revox A-77, Nakamichi, Sony, JVC cassette decks  
Mixing Consoles: Helios (serial No. 2) modified, 28 x 8 x 24; Soundcraft 1S, 20 x 2.  
Monitor Amplifiers: Phase Linear 400s, SAE, Crown  
Monitor Speakers: JBL 4350, 4311, Auratones  
Echo, Reverb & Delay Systems: EMT 140 stereo, EMT 140 mono (tube), Lexicon PCM41, Roland Space Echo RE-201.  
Other Outboard Equipment: Valley People Gan Brans, Kepex IIs, dbx 160s, Valley People Dyna-Mite, UREI LA-2As, Eventide Harmonizer 910, SAE 1/2 octave graphic EQs, SAE Parametric EQ, UREI 1/2 octave EQ.  
Microphones: AKG C 24 stereo tube, 452s, 1000s, Neumann: KM56s (tubes), U87s, U47s, Sony ECM 50s, C55s, Sennheisers 441s, 421 E, V RE16s, RE11s, RE10s, Audio Technica ATM-41s, ATM 21s, Shures, PZMs.  
Instruments Available: Steinway L5 1/2 foot, (4) tympani, bass drum, Hammond Porta-B, xylophone, 80 music stands  
Video Equipment & Services: On request



**MANHATTAN RECORDING COMPANY**  
New York, NY

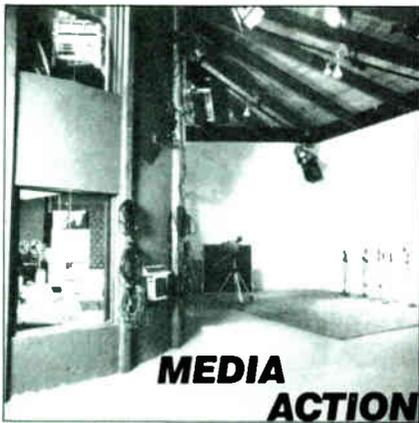
•• **MANHATTAN RECORDING COMPANY**  
135 W. 14th St., New York, NY 10011  
(212) 929-5960  
Owner: Manhattan Recording Company Inc  
Studio Manager: Nick Gutfreund

• **MARTIN RECORDING STUDIOS**  
also **REMOTE RECORDING**  
8710 Patton Rd., Wyndmoor, PA 19118  
(215) 233-1606  
Owner: Niles Martin  
Studio Manager: Niles Martin

• **MASTERS BY JOHNSON**  
832 Montgomery Ave., Narberth, PA 19072  
(215) 664-1188  
Owner: Stephen Johnson  
Studio Manager: Stephen Johnson

• **MATCHBOX SOUND**  
also **REMOTE RECORDING**  
126 Montgomery St., Highland Park, NJ 08904  
(201) 545-5177  
Owner: Kevin McCabe  
Studio Manager: Ken Brown

•• **MEDIA ACTION**  
175 Elm St., Somerville, MA 02144  
(617) 625-7882  
Owner: Media Action, Inc  
Studio Manager: Mark Lord



**MEDIA ACTION**  
Somerville, MA

•• MELANGE MUSIC  
80-06 47th Ave., Elmhurst, NY 11373  
(718) 429-1201  
Owner: Jeff Ganz  
Studio Manager: Jeff Ganz

•• MELODY STUDIO  
2005 Benson Ave., Brooklyn, NY 11223  
(718) 372-9546  
Owner: Joseph Cardinale  
Studio Manager: Frank Cardinale

•• MHS RECORDING STUDIO  
also REMOTE RECORDING  
Broad St., Manasquan, NJ 08736  
(201) 528-8825  
Owner: Manasquan Board of Education  
Studio Manager: Lee N. Weisert

•• MILBRODT COMMUNICATIONS, INC  
dba MUSIC & SOUND DESIGN STUDIO  
1425 Frontier Rd., Bridgewater, NJ 08807  
(201) 560-8444  
Owner: Bill Milbrodt  
Studio Manager: Bill Milbrodt

•• JON MILLER PRODUCTION STUDIOS  
also REMOTE RECORDING  
7249 Airport Rd., Bath, PA 18014  
(215) 837-7550  
Owner: Jon K. Miller  
Studio Manager: Jon K. Miller

•• MLR STUDIOS  
only REMOTE RECORDING  
33 Hobart St. #5, S. Portland, ME 04106  
(207) 774-2938  
Owner: Marc L. Rubinsten  
Studio Manager: Marc L. Rubinsten

•• MOUNTAIN SOUND STUDIOS  
235 N. Robbins Ln., Syosset, NY 11791  
(516) 931-4329  
Owner: Bob Kaplan  
Studio Manager: Gerry Janicek

•• MUSIC & SOUND DESIGN STUDIO  
1425 Frontier Rd., Bridgewater, NJ 08807  
(201) 560-8444  
Owner: Bill Milbrodt  
Studio Manager: Bill Milbrodt

• THE MUSIC MONGER  
203 Loudon Rd., Concord, NH 03301  
(603) 225-0673  
Owner: Eric Curtis  
Studio Manager: Joanna Fish

•• MUSICO-PRODUCTIONS-DIGITAL SOUND  
DESIGN—COMP STUDIO  
also REMOTE RECORDING  
c/o 7294 Michael Rd., Orchard Park, NY 14127  
(716) 884-0974  
Owner: David Musial  
Studio Manager: David Musial

• MUSKRAT PRODUCTIONS INC.  
also REMOTE RECORDING  
44 N. Central Ave., Elmsford, NY 10523  
(212) 409-1902, (914) 592-3144  
Owner: The Smith Street Society Jazz Band  
Studio Manager: Bruce McNichols

•• NAZZLAND  
412 E. 11th St., Wilmington, DE 19801  
(302) 656-7804  
Owner: Keith L. Smith  
Studio Manager: Keith L. Smith

•• NERAN STUDIO  
also REMOTE RECORDING  
55 Old Field Rd., Huntington, NY 11743  
(516) 673-7297  
Owner: Neran Productions  
Studio Manager: Layne Negran



**NEW CLEAR PRODUCTIONS**  
Endicott, NY

•• NEW CLEAR PRODUCTIONS  
129 W. Wendell St., Endicott, NY 13760  
(607) 754-8517, 785-2850  
Owner: Jeff Stahara  
Studio Manager: Gerry Sherwood  
Engineers: Jeff Stahara  
Dimensions of Studios: 10 x 12  
Dimensions of Control Rooms: 8 x 20  
Tape Recorders: Fostex 80 w/remote, 8-track, Fostex A-2 w/remote, 2-track; Sony TCFX 1010 cassette, Sony TCFX 310 cassette  
Mixing Consoles: Ramsa T820 w/meter bridge 20 x 8 x 2, Yamaha RM804, 8 x 4 x 2; Fostex 2050, 8 x 2.  
Monitor Amplifiers: Dynaco 120, Randall 2 200  
Monitor Speakers: E V Sentry 500, Fostex 6301  
Echo, Reverb & Delay Systems: Yamaha REV7, Alesis XT c. 6 foot custom plate, Lexicon PCM41, DeltaLab CompuEffectron, DeltaLab 512 programmable.  
Other Outboard Equipment: (2) Ibanez 31 band graphic EQs, (2) Soundcraftsman 21 band graphic EQs, (2) Sunn 10 band graphic EQs, Furman PQ3 preamp parametric EQ, (2) Fostex 3070 gated comp./limiters, (2) Yamaha gated comp./limiters, (2) MXR limiters, 4 channels Aphex Aural Exciters Type B, MXR Pitch Transposer package, Orban 245F stereo synthesizer, Scholz Ultralight Rockman, Garfield Electronics MIDI adaptor  
Microphones: (3) AKG D12E, (2) Crown PZM; (2) E V PL 77B, PL 5, PL 20, Sennheiser 441, (3) Shure SM57; misc. others Also (2) DOD direct boxes, (2) Countryman direct boxes  
Instruments Available: Alvarez acoustic guitar, Korq Poly 800, Kramer bass w/EMG P-J pickups, LinnDrum LM 2, Ludwig antique 8 inch wood shell snare drum, (3) Remo Rto toms, Slingerland 6-piece drum kit (double bass), Simmons SDS8, Simmons Claptrap, Zildjian and Paiste cymbals, Fender bassman, Fender twin, Marshall 4210 JCM 800, Commodore 64 w/Syntech interface, Yamaha D5100 others on request  
Video Equipment & Services: In conjunction with music workshop, complete Panasonic 1/2-inch editing system, full line of cameras, recorders (VHS Beta), lighting  
Rates: \$20/hr. Audio, video rates on request (per project basis)

•• THE NEW FRONTIER SYNTHESIZER STUDIO  
RD 1, Box 406A, Stockton, NJ 08559  
(609) 397-2716  
Owner: Robert Sands  
Studio Manager: Robert Sands

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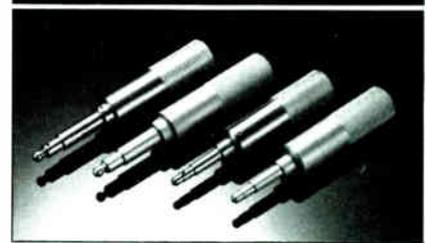


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West Palm Beach, FL 33401

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• **NEW SCHOOL FOR SOCIAL RESEARCH**  
2 West 13th, New York, NY 10011  
(212) 741-8903  
Owner: New School for Social Research  
Studio Manager: Michael Curran

• **NEW YORK DIGITAL RECORDING, INC**  
*also REMOTE RECORDING*  
150 West End Ave #1D, New York, NY 10023  
(212) 874-4660  
Owner: Michael Moore  
Studio Manager: Michael Moore

• **NEWORLD MEDIA**  
*also REMOTE RECORDING*  
Rt. 175, S. Blue Hill, ME 04615  
(207) 374-5539  
Owner: Neil Stockley  
Studio Manager: Stu Davis

• **NEXT STATION STUDIOS**  
*also REMOTE RECORDING*  
154 New Norwalk Rd., New Canaan, CT 06840  
(203) 966-7124  
Owner: Michael Sullivan/Paul Tocco  
Studio Manager: Perry Cantor

• **NINE PINES RECORDING STUDIO**  
1121 Clean Rd., South Wales, NY 14139  
(716) 652-3750  
Owner: Paul J. May Richusa, Bill Bakker  
Studio Manager: Paul J. May Richusa

• **NITE DEPOT RECORDING**  
880 5th St., Beaver, PA 15009  
(412) 774-8444  
Owner: Joe Spagnola  
Studio Manager: Joe Spagnola  
Engineers: Joe Spagnola  
Dimensions of Studios: Main studio 20 x 14, vocal booth 6 x 8, drum room 8 x 8  
Dimensions of Control Rooms: 12 x 14  
Tape Recorders: Tascam 80 8, 8 track, Pioneer RT 1050 2 track  
Mixing Consoles: Tascam M 5000, 12 x 8  
Monitor Amplifiers: Crown, SAE, Rane  
Monitor Speakers: JBL 4311, Auratones, JBL Signature  
Echo, Reverb & Delay Systems: Lexicon Prime Time  
Digital Effectron Yamaha BF7 Orban 111 B  
Other Outboard Equipment: 4: Symetrix 522 PE 40  
Asst. SC 50 12 Symetrix 501 Rane HC 6 Roland 880 12  
Tascam M 40 11  
Microphones: Sennheiser AKG, Electro Voice, Sma58  
Sony  
Instruments Available: Most any instrument upon request  
Video Equipment & Services: Sony SL HF 900 Hi fi Beta  
VCR  
Rates: Call for rates.

• **NONCHALANT**  
*also REMOTE RECORDING*  
P.O. Box 64, Ardmore, PA 19003  
(215) 649-0365  
Owner: Bill Minnert Frank Kurtz

• **NORTH COUNTRY SOUNDS**  
*also REMOTE RECORDING*  
175 Bunker Hill Rd., Auburn, NH 03032  
(603) 483-2662  
Owner: Tom Bartlett  
Studio Manager: Tom Bartlett

• **NORTH STAR RECORDING STUDIO**  
54 Lake St., Belleville, NJ 07109  
(201) 751-9636  
Owner: Gerald W. Robinson Jim Robinson  
Studio Manager: Gerald W. Robinson

• **NORTHEAST SOUND STUDIO**  
P.O. Box 208, West Newton, MA 02165  
(617) 894-2973  
Owner: Gary M. Smith  
Studio Manager: Gary M. Smith

• **NORTHERN LITES AND SOUND STUDIOS**  
*also REMOTE RECORDING*  
36 Cedarwood Terr., Georgia, VT 05468  
(802) 893-1220  
Owner: Tracy L. Lord PR Applegate  
Studio Manager: Tracy L. Lord PR Applegate

# NORTHEAST STUDIOS



## 4/8 TRACK

• **NOVA SOUNDS & SIGHTS**  
*only REMOTE RECORDING*  
878 Broadway, Somerville, MA 02144  
(617) 646-1899  
Owner: Dee Dorian  
Studio Manager: Deane Stone

• **NU-TRAX RECORDING STUDIO**  
141 W Ruscomb St., Philadelphia, PA 19120  
(215) 456-9141  
Owner: Paul M. Hellrich  
Studio Manager: Paul M. Hellrich

• **NYETIMBER STUDIO**  
P.O. Box 818, Severn, MD 21144  
(301) 551-4655  
Owner: Paul Weaver  
Studio Manager: Paul Weaver

• **OAK GROVE RECORDING STUDIO**  
*also REMOTE RECORDING*  
65 Clinton St., Malden, MA 02148  
(617) 321-1017  
Owner: Emenee Productions  
Studio Manager: Timur Galevi

• **OFF-TRACKS/GRASHMO PRODUCTIONS**  
5 Packard Ave., Warwick, RI 02886  
(401) 732-2788  
Owner: Lawrence A. Grasso  
Studio Manager: Lawrence A. Grasso

• **O.K. STUDIOS**  
59-65 60th Ln., Maspeth, NY 11378  
(718) 326-1572  
Owner: Pat O'Brien  
Studio Manager: Liz Kruber

• **OKTOBER STUDIOS**  
P.O. Box 460, New York, NY 10012  
Owner: FS Hedl  
Studio Manager: FS Hedl

• **ONE SHOT PRODUCTIONS**  
*also REMOTE RECORDING*  
1863 Delabole Rd., Pen Argyl, PA 18072  
(215) 863-7706  
Owner: Dusty McCollum  
Studio Manager: Dusty McCollum

• **OWL'S HEAD PRODUCTIONS**  
*only REMOTE RECORDING*  
915 Neill Ave., Bronx, NY 10462  
(212) 904-1542  
Owner: Gary A. Lester

• **PA DA RECORDING**  
*also REMOTE RECORDING*  
27 Washington Sq. N. Rm. 4D, New York, NY 10011  
(212) 228-1808  
Owner: R.A. Miller  
Studio Manager: Eddy R. Davis

• **PERSIA SOUND**  
*also REMOTE RECORDING*  
11 Argonne St., Staten Island, NY 10305  
(718) 816-6384  
Owner: Chris Voller  
Studio Manager: Chris Voller

• **MIKE PETERS MUSIC LTD.**  
*also REMOTE RECORDING*  
10 W. Jackson Ave., Middletown, NY 10940  
(914) 342-1696  
Owner: Mike Peters  
Studio Manager: Eric Bogart

• **PG AUDIO RECORDING**  
1377 Provident Rd., Southampton, PA 18966  
(215) 322-9647  
Owner: George A. Hajoannou  
Studio Manager: Harry J. Miller

• **PHILADELPHIA MUSIC WORKS**  
P.O. Box 947, Bryn Mawr, PA 19010  
(215) 825-5656  
Owner: Andy Mark  
Studio Manager: Andy Mark

• **PLAYTIME MUSIC**  
*also REMOTE RECORDING*  
20 Westland Ave. Ste 46, Boston, MA 02115  
(617) 267-6366  
Owner: Playtime Conglomerate, Inc.  
Studio Manager: Tom Dube  
Engineers: Hans Offedebord, Tom Dube, Geoff Harper  
Dimensions of Studios: 12 x 14  
Dimensions of Control Rooms: 14 x 18  
Tape Recorders: Tascam 38, 8-track; 32, 2-track; 234,  
4 track, TEAC V380C cassette.  
Mixing Consoles: Soundcraft 200B, 24 x 4; Tascam M  
30, 8 x 4  
Monitor Amplifiers: QSC 1400, Nikko Alpha 3, Yamaha  
CA 800  
Monitor Speakers: Boston Acoustics A 400, ADS 500.  
Echo, Reverb & Delay Systems: Lexicon PCM70, Ya-  
amaha D 1500, tape echo, live chambers  
Other Outboard Equipment: Yamaha Q 1031, GC 2020,  
Loft 400 gates, dbx 160X  
Microphones: AKG 414, 451 (2), 310, Shure, E V, Audio  
Technica  
Instruments Available: Mirage, Roland MSQ 100 and  
JX 3P, Kubicki and Fender Teles, Hamer Special, Alembic,  
fretless, Rockman, Roland JC 77, Sequential Drumtraks,  
Farlight, Emulator, Kurzweil, Linn 9000 on request.  
Rates: \$20/hr., blocks available.

• **PLUM ISLAND SOUND LTD.**  
M Street Plum Island, Newburyport, MA 01950  
(617) 462-6640  
Owner: John Aloia  
Studio Manager: John Aloia

• **THE POLYGON**  
6305 Walton Ave., Pennsauken, NJ 08109  
(609) 662-7619  
Owner: Robert Fedencic, Michael Fortuna  
Studio Manager: Robert Fedencic, Michael Fortuna

• **POSTHORN RECORDINGS**  
*only REMOTE RECORDING*  
142 W. 26th St., New York, NY 10001  
(212) 242-3737  
Owner: Jerry Bruck  
Studio Manager: Michael P. Hesse

• **P.P.I. STUDIOS**  
147 W. 33rd St., New York, NY 10001  
(212) 279-1631  
Studio Manager: John Eyd

• **PRIVATE BABY SOUND**  
50 Amsterdam Ave. Ste 13F, New York, NY 10023  
(212) 246-5923  
Owner: Mitch Race  
Studio Manager: Mitch Race, J.M. Rodriguez

• **PRIVATE SESSIONS**  
24 E. Washington Ave., Pleasantville, NJ 08232  
(609) 645-7848  
Owner: Roll Venze  
Studio Manager: Ernie Fedencic

• **PRODIGAL**  
*also REMOTE RECORDING*  
3400 Pendleton Dr., Wheaton, MD 20902  
(202) 635-5588  
Owner: Bill Burns  
Studio Manager: Alan Wonneberger  
Engineers: Alan Wonneberger, Bill Burns  
Dimensions of Studios: Studio A: 27 x 27 x 8, Studio B: 51

# PRODIGITAL

**PRODIGITAL**  
Wheaton, MD

x 56 x 20 and 150 seat concert hall with 25 x 35 stage  
**Dimensions of Control Rooms:** 25 x 26 x 8  
**Tape Recorders:** Otari MX 5050 MKIII 8 track, (2) MX 5050 MKIII, 2 track  
**Mixing Consoles:** Seck 1882, 18 x 8 x 2, Studiomaster 16X4, 16 x 4  
**Monitor Amplifiers:** BGW McIntosh NAD  
**Monitor Speakers:** B&W 801F, Audiotekniques Big Beds (4), Electro Voice: Sentry  
**Echo, Reverb & Delay Systems:** Lexicon digital delay and MICMIX reverb  
**Other Outboard Equipment:** JVC VP 900 digital audio processor, JVC AE 900 digital audio editor, JVC VP101 digital audio processor and JVC FC 900 and 901 digital audio standards converters, UREI 1176 limiters, MXR 1/4 octave graphic EQ, Bode ring modulator  
**Microphones:** Neumann KM 86, Sanken CU 41, Shure SM81, Electro Voice RE16, JVC MU 6200E Super Beam tunable array mic.  
**Instruments Available:** Steinway B&D grand pianos, Bosendorfer grand piano  
**Video Equipment & Services:** JVC CR 850 U 1/4 inch editing decks, JVC BR8600U VHS editing decks, JVC BR 6400U direct drive VHS decks

Rates: \$60 \$100/hr depending on services  
**Extras:** Digital audio equipment sales and consulting, digital audio standards conversion, digital audio mastering and editing, CD mastering services including CD-ROM premastering, real time and high speed cassette duplication, record pressing and complete packaging services, archival transfers (78 RPM records and wire recordings, etc.), music composing and arranging services.  
**Direction:** Moving towards fully digital audio recording with digital audio for video and full video post-production

•• **PRODUCTION ONE**  
*also REMOTE RECORDING*  
 610 S. Second St., Philadelphia, PA 19147  
 (215) 925-1124  
**Owner:** Michael St. John, Jeffrey A. Singer  
**Studio Manager:** Jack L. Miller

• **PZ PRODUCTIONS**  
 98 Luquer St., Brooklyn, NY 11231  
 (718) 237-1802  
**Owner:** Phil Zwickler

• **QUANTA**  
 Rd. 2 Felter Hill Rd., Monroe, NY 10950  
 (914) 496-7993  
**Owner:** Byron Lovelace  
**Studio Manager:** Byron Lovelace

•• **QUARTER TIME PRODUCTIONS**  
 367 Middlesex Ave., Metuchen, NJ 08840  
 (201) 549-6920  
**Owner:** J. Abelson, E. Hibbard, B. Ortega  
**Studio Manager:** J. Abelson, E. Hibbard, B. Ortega

•• **R&R CHRISTIAN SOUND RECORDING STUDIO**  
*also REMOTE RECORDING*  
 8 Center St., Fairchance, PA 15436  
 (412) 564-2581, 564-2769  
**Owner:** Randy Rhodes  
**Studio Manager:** Raymond Rhodes, Randy Rhodes

• **RAG TRACK SOUND**  
*also REMOTE RECORDING*  
 P.O. Box 30604, Washington, DC 20030  
 (202) 584-9207  
**Owner:** Robert A. Grady  
**Studio Manager:** Pausena Grady, Robert A. Grady

•• **RAIL PRODUCTIONS EDUCATIONAL RADIO**  
 Programs by subscription  
 P.O. Box 976, Ossining, NY 10562  
 (914) 941-8175  
**Owner:** Richard Perykasz

•• **RAINBOW AUDIO**  
*also REMOTE RECORDING*  
 1 Maple St., P.O. Box 89, N. Springfield, VT 05150  
 (802) 886-8422  
**Owner:** Terry Ruppert  
**Studio Manager:** Terry Ruppert

• **RAM RECORDING**  
*also REMOTE RECORDING*  
 420 East Ave., Northvale, NJ 07647  
 (201) 767-6166  
**Owner:** Joseph and Herry Costantino  
**Studio Manager:** Joseph Costantino

•• **RAMA DAMA RECORDS**  
*also REMOTE RECORDING*  
 219 State Rd., Eliot, ME 03903  
 (207) 439-5541  
**Owner:** Lonnie Londin  
**Studio Manager:** Lonnie Londin

•• **RAPID TRANSIT PRODUCTIONS**  
*also REMOTE RECORDING*  
 25-40 31st Ave., Astoria, NY 11106  
 (718) 721-6077  
**Owner:** Matt Melnick, Ray Palagy  
**Studio Manager:** Matt Melnick

•• **RATMAN RECORDING**  
*also REMOTE RECORDING*  
 25-40 31st Ave., Long Island City, NY 11106  
 (718) 721-6077  
**Owner:** Matt Melnick  
**Studio Manager:** Matt Melnick

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• **R C N Y SOUND STUDIO**  
167 W 81st St Ste 5C, New York, NY 10024  
Owner: Ivan A. Rodriguez  
Studio Manager: Ivan A. Rodriguez

• **REAL TO REEL**  
1119 West 7th, Erie, PA 16502  
(814) 456-1527  
Owner: Bruce Bennett  
Studio Manager: Karen Bennett

• **RECORDED PUBLICATIONS LABS**  
also *REMOTE RECORDING*  
1100 State St., Camden, NJ 08105  
(609) 963-3000  
Studio Manager: Ernest W. Merker

• **RECORDED SOUND LTD**  
also *REMOTE RECORDING*  
630 Fulton Bldg., Pittsburgh, PA 15222  
(412) 288-9999  
Owner: Copper Street  
Studio Manager: Jack Givens

• **THE RECORDING UNIT**  
30 Bernadette St., Fitchburg, MA 01420  
(617) 345-2521  
Owner: C.A. Calman  
Studio Manager: C.A. Calman

• **RECORDINGS**  
also *REMOTE RECORDING*  
336 Belmont St., Watertown, MA 02172  
(617) 926-0546  
Owner: Sam Neppin

• **REEL WAVE PRODUCTIONS**  
also *REMOTE RECORDING*  
PO Box 1095  
Sutland, MD 20746  
(301) 420-5881  
Owner: Hampton Hiywood  
Studio Manager: Hampton Hiywood

• **REEVES AUDIO RECORDING STUDIO**  
Yonkers (Colonial Heights), NY  
(914) 793-6496  
Owner: Jim Reeves  
Studio Manager: Jim Reeves  
Engineers: Jim Reeves, Alex Reeves  
Dimensions of Studios: 20 x 15  
Dimensions of Control Rooms: 12 x 15  
Tape Recorders: Ampex AG440 w/dbx 2-track, Tascam 7030 w/dt x 2 + 1/4-track, American Concorde 505 2-4-track TEAC 3340 4-track Tascam 80 8 w/dbx 8-track (2) K-mwood KX6030 cassette decks  
Mixing Consoles: Customized Tascam 13 20 x 8 x 4 x 2 + 4 FX and stereo comp  
Monitor Amplifiers: Crown DC 300 Marantz lb, Yamaha, K-mwood Fisher 100C tube  
Monitor Speakers: Altec 848A control room monitors Auratone 3C EPI 110C EPI 100V studio playback  
Echo, Reverb & Delay Systems: Yamaha REV7 Master Room III reverb Sound Workshop 242A stereo reverb Fisher K 10 spring reverb Lexicon Prime Time  
Other Outboard Equipment: Eventide Harmonizer H910 Aphex C Aural Exciter MXR flangers MXR DDL Boss Chorus Reverb Mayer noise gates 1bx 160 limiters misc tape delays phono pre amp  
Microphones: Neumann U67 U87 KM84 Sennheiser 441 (2) E.V. RE20 Sny condenser EC 21 (10) Shure SM57, AKG 224E and Sennheiser SM 10 direct boxes various guitar pickups Sony and Panasonic Electro-mics Altec lavaliere  
Instruments Available: Weber 6 foot grand acoustic piano Ampeg B15 bass amp Fender and Ampeg guitar amps Ludwig 5 piece drum kit w/Rogers chrome snare and Zildjian cymbals plus vocal booth and drum booth  
Video Equipment & Services: IVC HR 2200U 1/2 inch VHS portable deck w/Panasonic WV 3300 color video camera w/assorted lenses Sony video camera B&W Sanyo monitors 16mm sound projection  
Rates: Basic rate: \$25/hr

• **REL SOUND MUSIC STUDIO**  
also *REMOTE RECORDING*  
144 Fenner St., Fall River, MA 02724  
(617) 672-6695  
Owner: Robert E. Low-squ  
Studio Manager: Robert E. Low-squ

## NORTHEAST STUDIOS



## 4/8 TRACK

• **DAVID RENZZ PRODUCTIONS**  
also *REMOTE RECORDING*  
30 Union City Rd., Prospect, CT 06712  
(203) 758-3168  
Owner: David Renzz  
Studio Manager: David Renzz

• **RESMIRANDA RECORDINGS**  
only *REMOTE RECORDING*  
P.O. Box 58, Manchester Village, VT 05254  
(802) 362-1998  
Owner: Jerry Barnes  
Studio Manager: Joan Barnes

• **RES-STUDIO**  
69 Park Dr #21, Boston, MA 02215  
(617) 437-0747  
Owner: Richard Schumacher  
Studio Manager: Richard Schumacher

• **RETROMEDIA SOUND STUDIOS INC.**  
32 W. Front St., Red Bank, NJ 07701  
(201) 842-3853  
Owner: John J. Noll

• **RIDGE RECORDING**  
also *REMOTE RECORDING*  
50 S. 5th St., Park Ridge, NJ 07656  
(201) 391-9057  
Owner: Joseph D. Arrigo Henry Booth

• **RIEDEL AUDIO SERVICES**  
also *REMOTE RECORDING*  
109 Commack Rd., Islip, NY 11751  
(516) 277-9418  
Owner: Richard F. Riedel  
Studio Manager: Richard F. Riedel

• **ROANE RECORDING STUDIOS**  
7 N. Cottenet St., Irvington-on-Hudson, NY 10533  
(914) 591-9187  
Owner: Stephen Roane  
Studio Manager: Stephen Roane

• **ROARK ASSOCIATES**  
22 Brookview Ave., Delmar, NY 12054  
(518) 439-8205  
Owner: Michael J. Roark  
Studio Manager: Michael J. Roark

• **ROCKIN' DOCTORS RECORDING CO.**  
also *REMOTE RECORDING*  
124 Watchung Ave., West Orange, NJ 07052  
(201) 676-9224  
Owner: Michael Frank  
Studio Manager: Arlene Susan

• **ROCKS VILLAGE RECORDING**  
also *REMOTE RECORDING*  
77 Old Amesbury Line Rd., Haverhill, MA 01830  
(617) 372-8866  
Owner: Tom and Meg Daley  
Studio Manager: Meg Daley

• **BILL RODITSKI MUSIC SERVICES**  
also *REMOTE RECORDING*  
404 Park Ave., Clarks Green, PA 18411  
(717) 586-2605  
Owner: Bill Roditski  
Studio Manager: Bill Roditski

• **ROOFTOP SOUND RECORDING**  
15 Locust Ln., Womelsdorf, PA 19567  
(717) 272-2826  
Owner: Rooftop Productions  
Studio Manager: Tom Plasket

• **ROSEMARY MELODY LINE RECORDING CO.**  
also *REMOTE RECORDING*  
P.O. Box 1078, Vineland, NJ 08360  
(1-609) 696-0943  
Owner: Windrose Industries and Communications  
Studio Manager: Dennis Link

• **ROSEWOOD PRODUCTIONS**  
also *REMOTE RECORDING*  
Box 364, New Castle, PA 16101  
(412) 654-3023  
Owner: Wes Homner  
Studio Manager: Wes Homner

• **ROSS-GAFFNEY**  
21 W. 46th St., New York, NY 10036  
(212) 719-2744  
Owner: James Gaffney  
Studio Manager: Richard Weigle

• **RUBBER BALL PRODUCTIONS**  
696 Edgewood Pl., N. Brunswick, NJ 08902  
(201) 249-9241  
Owner: Terry Hughes  
Studio Manager: Terry Hughes

• **RUFF CUT STUDIO**  
Wantagh, NY  
(516) 826-6064  
Owner: Bill Heyman  
Studio Manager: Bill Heyman

• **SADLER RECORDING STUDIO, INC.**  
also *REMOTE RECORDING*  
118 E. 28th St., New York, NY 10016  
(212) 684-0960  
Owner: John H. Sadler  
Studio Manager: Rick Klejmont  
Engineers: John Sadler, Rick Klejmont, Ernest Ucko  
Tape Recorders: Ampex 350 w/AutoTec C-5 electronics, mono: (2) Ampex AG-350, 2-track; (2) Ampex AG-440A, 2-, 4-track; Tascam 25-2, 2-track; TEAC 3340S, 4-track; Scully 284-8, 8-track  
Mixing Consoles: Allen & Heath (custom modified), 16 x 8  
Monitor Amplifiers: Crowns  
Monitor Speakers: KLH, Auratones  
Echo, Reverb & Delay Systems: Orban 111/B reverb, Fairchild 659A reverb, Lexicon Model 92 digital delay  
Other Outboard Equipment: Aphex Type B Aural Exciter, UREI LA-4 compressor/limiters, Kepex, Orban 526A, Soundcraftsmen EQ, Pultec filters  
Microphones: Electro-Voice RE20, RE16, 647A, AKG D202E1, D224E, C451C; Synchron S-10; Sony ECM-50  
Instruments Available: Sohmer baby grand piano, Yamaha DX7 synth, Casio 401 keyboard, Yamaha RX-21 drums  
Video Equipment & Services: Sony VO 5850, Sony VO 5800, Sony RM-440 editing system (1/4-inch); AG 6300 1/2-inch VHS (edit source); Panasonic graphics camera; VHS Beta and U-matic video tape duplication  
Rates: On request  
Extras: Complete audio tape duplication: reel-to-reel and cassette. Cassette duplication direct from 15 ips 2-track master onto cassette at high speed without need for duplication master. Quality equal to real time. Plus live sound effects and music libraries. We also specialize in audio/video location recordings of conferences, seminars, etc., as well as "on site" cassette duplication and sales  
Direction: Expect to install soon 16-track video sweetening w/full audio sync capabilities

• **SAFE SOUND**  
251 W. 30th Rm. 6RE, New York, NY 10001  
(212) 594-2414  
Owner: Al Basi, Thomas G. Neilsen  
Studio Manager: Al Basi

• **SANSOM STUDIO**  
also *REMOTE RECORDING*  
1231 Sansom St., Philadelphia, PA 19107  
(215) 923-6011  
Owner: David J. Sasa/VAI Inc.  
Studio Manager: David J. Sasa

•• SAXON RECORDING  
also REMOTE RECORDING  
26 Sidney St., Rochester, NY 14609  
(716) 482-0976  
Owner: David Anderson  
Studio Manager: David Anderson

•• FRANK SCHEIDT AUDIO PRODUCTIONS, INC.  
67 Chestnut St. Ste. 800, Rochester, NY 14604  
(716) 232-5210  
Owner: Frank Scheidt  
Studio Manager: Milly Scheidt

• SCHULER'S  
1447 N. 55th St., Philadelphia, PA 19131  
(215) 473-3207  
Owner: Leroy Schuler  
Studio Manager: Leroy Schuler

• SCREAMIN' WEASEL STUDIO  
18 Main St., Framingham, MA 01701  
(617) 875-0909  
Studio Manager: Peter Larson

• SEMPLE STREET SOUND  
210 Semple St., Pittsburgh, PA 15213  
(800) 345-6977  
Owner: Jack Napor  
Studio Manager: Victor Levites

• PEDRO SILVA STUDIO  
165 Clermont Ave., Brooklyn, NY 11205  
(718) 852-6143  
Owner: Pedro-Pablo Silva  
Studio Manager: Pedro Silva

•• SINCLAIR BROS. COMMUNICATIONS  
also REMOTE RECORDING  
866 James Pl., Uniondale, NY 11553  
(516) 489-2670  
Owner: Beresford Sinclair II, Armando Sinclair  
Studio Manager: Beresford Sinclair II, Armando Sinclair

•• SMILING EARS SOUND  
only REMOTE RECORDING  
8786 Cloudleap Ct. #31, Columbia, MD 21045  
(301) 997-8544  
Owner: Gary Zeichner  
Studio Manager: Wendy Zeichner

• SNICKER DOODLES PRODUCTIONS  
19508 Dubarry Dr., Brookeville, MD 20833  
(301) 774-6446  
Owner: Skip McCloskey  
Studio Manager: Skip McCloskey

•• SOJ RECORDING  
146 W. 46th St., New York, NY 10036  
(212) 869-0226  
Owner: John Castellano  
Studio Manager: Liz Irons

•• THE SONG STUDIO  
Post Office Sq., Orleans, MA 02653  
(617) 255-8063  
Owner: Robert Tucker, Jim Giberti  
Studio Manager: Jim Giberti

•• SONGWORKS  
also REMOTE RECORDING  
P.O. Box 11, Emerson, NJ 07630  
(201) 599-0468  
Owner: Michael Guttilla, Julian Hernandez  
Studio Manager: Julia Guttilla

• THE SONGWRITERS ADVOCATE  
42 Maple Hurst Rd., Rochester, NY 14617  
(716) 266-0679  
Owner: Jerry Englerth  
Studio Manager: Jerry Englerth

• SOUL SHADOW PRODUCTIONS  
2860 Beverly Rd., Oceanside, NY 11572  
(516) 536-5753  
Owner: Mano  
Studio Manager: Mano

• SOUND CHASERS  
also REMOTE RECORDING  
111 Taylor Ave., E. Meadow, NY 11554  
(516) 735-4832  
Owner: Joe Giordano, Jim Pantazis

• SOUND OF GLASS  
127 Central St., W. Boylston, MA 01583  
(617) 835-2005  
Owner: Charles Blaum  
Studio Manager: Charles Blaum

•• SOUND SORCERER  
also REMOTE RECORDING  
P.O. Box 37, Manorville, NY 11949  
(516) 878-6049  
Owner: George L. Bush Jr.  
Studio Manager: Bushy

• SOUND VOYAGES  
also REMOTE RECORDING  
556 Rt. 23, Franklin, NJ 07416  
(201) 884-6058  
Owner: Joseph Nastasi  
Studio Manager: Joseph Nastasi

•• SOUND CHEST STUDIO  
2 Sherbrooke Dr., Smithtown, NY 11787  
(516) 265-9697  
Owner: Richard G. L'Hommedieu  
Studio Manager: Mark Smith

•• SOUNDS EXQUISITE  
also REMOTE RECORDING  
12917 Clarion Rd., Ft. Washington, MD 20744  
(301) 292-6145  
Owner: Kenneth La Capna  
Studio Manager: Kenneth La Capna

•• SOUNDSCAPE  
284 Ashland Ave., Buffalo, NY 14222  
(716) 884-3576  
Owner: James V. Calabrese  
Studio Manager: J.V. Calabrese

•• SOUNDSPACE PRODUCTIONS  
also REMOTE RECORDING  
4123 Main St., Amherst, NY 14226  
(716) 835-9221  
Owner: William J. Walton  
Studio Manager: Giuseppe Allano

•• SOUNDTEK INC.  
also REMOTE RECORDING  
1780 Broadway, New York, NY 10019  
(212) 489-0806  
Owner: Edward Remusat  
Studio Manager: John Vogel

• SOUNDTRAX OPTICAL SOUND RECORDING  
315-C Howard Ave., Rockville, MD 20850  
(301) 279-0666  
Owner: Leonard Schmitz  
Studio Manager: Leonard Schmitz

•• SPIRIT AND TRUTH CHRISTIAN STUDIO  
2020 Broadway, Schenectady, NY  
(518) 372-8745, 372-8705  
Owner: Spirit and Truth Christian Church  
Studio Manager: Steve Doggette, Dwayne Lovely

• SPLASH PRODUCTIONS, INC.  
123 W. 28th St., New York, NY 10001  
(212) 695-3665  
Owner: Daniel Joseph Dee  
Studio Manager: Daniel Joseph Dee

•• SPLICE OF LIFE, INC.  
Sparhawk St., Brighton, MA 02135  
(617) 782-3384  
Owner: Annie Beth Doff  
Studio Manager: Annie Doff  
Engineers: Brian Ales, David Zuckerman, Coleman Rogers  
Dimensions of Studios: Main room, 23 x 24 w/variable acoustics, (2) isolation booths 10 x 12 and 6 x 10.  
Dimensions of Control Rooms: 13 x 15.  
Tape Recorders: Otari 5050 MKIII, 1/2-inch 8 track, Otari MX 5050 MKII, 1/4-inch 2-track; TEAC A700 1/4 inch 2 track; Sony TC-640, 1/4-inch 2-track  
—LISTING CONTINUED ON NEXT PAGE



FROM START TO FINISH . . . **ian**

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Mixing Consoles: Sound Workshop Series 30, 17 x 8  
 Monitor Amplifiers: Haller 220, SAE MK IVcm, Biamp  
 Monitor Speakers: Tannoy LRM 12B (time aligned), Ya  
 maha NS 10M, Auratones, AR 10 BX  
**Echo, Reverb & Delay Systems:** Lexicon PCM60 and  
 PCM70 reverb, Yamaha D 1500, Lexicon PCM41, and  
 Korg SDD 1000 delays  
**Other Outboard Equipment:** Ashly and dbx compres  
 sors, Ashly and Valley People noise gates, Ashly and Syme  
 trix parametric EQ, dbx 150 noise reduction, EXR Exciter  
**Microphones:** Neumann U87, Sennheiser MD421, AKG  
 451, AKG D12, Shure SM57, Electro Voice RE20, Altec  
 C 71, AKG 414, Beyer M500  
**Instruments Available:** Kawai 6 foot grand piano, Rhodes  
 73, Hammond B-3 w/Leslie, Fender Twin Reverb guitar  
 amp, Polytone bass amp  
**Rates:** Call for more information

•• **SPRING STUDIO**  
 Fishkill Rd., Nelsonville, NY 10516  
 (914) 265-2625  
 Owner: Donald Hurtig  
 Studio Manager: Donald Hurtig

•• **STARBOUND RECORDING**  
 Annapolis, MD  
 (301) 757-2193  
 Owner: Harry Brookes

•• **STARDUST RECORDING STUDIO**  
 615 Valley Rd., Upper Montclair, NJ 07043  
 (201) 746-2359  
 Owner: George Louvis  
 Studio Manager: George Louvis

•• **STEA SOUND**  
*also REMOTE RECORDING*  
 26 Buena Vista Dr., Westport, CT 06880  
 (203) 227-7113  
 Owner: Len Stea  
 Studio Manager: Len Stea

•• **STRAIGHT UP MUSIC**  
 1904 Mass Ave., Cambridge, MA 02140  
 (617) 547-3789  
 Owner: Larry Luddecke  
 Studio Manager: Larry Luddecke

•• **STROBE LIGHT SOUND STUDIO**  
*also REMOTE RECORDING*  
 1219 Bergen St., Brooklyn, NY 11213  
 (718) 771-3411  
 Owner: Andrei Strobert  
 Studio Manager: Andrei Strobert

•• **THE STUDIO**  
*also REMOTE RECORDING*  
 220 Westbury Ave., Carle Place, NY 11514  
 (516) 334-7750  
 Owner: Professional Recording Services, Inc  
 Studio Manager: H.G. La Torre

• **STUDIO A**  
*also REMOTE RECORDING*  
 87 Sherry Ave., Bristol, RI 02809  
 (401) 253-8428  
 Owner: Jack Anderson  
 Studio Manager: Ellen Lynch

• **STUDIO B.K.**  
 458B 142 St., Neponsit, NY 11694  
 (718) 945-0252  
 Owner: Brian E. Kane  
 Studio Manager: Brian E. Kane

•• **STUDIO 84**  
 84B Forge St., Jamesburg, NJ 08831  
 (201) 521-1369  
 Owner: William Lenk  
 Studio Manager: "Mr. Bill"

• **STUDIO 55 PRODUCTIONS**  
*also REMOTE RECORDING*  
 42-55 Colden St. Ste. 11P, Flushing, NY 11355  
 (718) 762-1264  
 Owner: George Lerner  
 Studio Manager: George Lerner  
 Engineers: George Lerner, B.S.  
 Dimensions of Studios: Main 16 x 28, auxiliary 14 x 16  
 Dimensions of Control Rooms: 12 x 16.  
 Tape Recorders: TEAC (reel reel) 5100 4-track, TEAC

# NORTHEAST STUDIOS



## 4/8 TRACK

(cassette) 8trDA 4 track; Phase Linear 8000 2 track; (2)  
 Pioneer 8181 cassette decks (customized)  
**Mixing Consoles:** Fender (CBS Labs) M12 24 (two of  
 above one right channel, one for left channel) Complete  
 customized  
**Monitor Amplifiers:** Phase Linear D500 (3), SAE mark  
 XXV Pioneer SPEC 1 and 2  
**Monitor Speakers:** Altec Lansing A 19 (6) custom, ESS  
 Professional #6.  
**Echo, Reverb & Delay Systems:** (2) Phase Linear 1100  
 dynamic expander and noise reduction, MXR system for  
 delay, etc. Roland Chorus Master  
**Other Outboard Equipment:** SAE Mark XXVII-B 1/2 octave  
 EQ (2) (3) Phase Linear parametric EQ, Phase Linear  
 5100 Sound Analyzer (2) Phase Linear 8100 linear turn  
 tables  
**Microphones:** Shure SM58, SM57, SD565, AKG D1000,  
 various E Vs  
**Instruments Available:** Full drums (Gretsch), lead guitar  
 (Gibson Les Paul), keyboards, (2) 100W Marshall stacked  
 lead and bass systems (4 x 12) 2 (4 x 15) 2 Others upon  
 request  
**Video Equipment & Services:** 1/2 track VHS color at  
 request 24 hr notice  
**Rates:** Special for cassette (stereo) 2 track demo \$25/hr  
 plus tape. 4 track \$35/hr includes tape.

•• **STUDIO 5C**  
*also REMOTE RECORDING*  
 18-05 215th St., Bayside, NY 11360  
 (718) 225-3215  
 Owner: Richard Solomon  
 Studio Manager: Richard Solomon

•• **STUDIO 44**  
 44 Country Corners Rd., Wayland, MA 01778  
 (617) 358-2388  
 Owner: Buddy MacLellan  
 Studio Manager: Scott MacLellan

• **STUDIO GO**  
 805 N. 5th St., Philadelphia, PA 19123  
 (215) 925-3294  
 Owner: David Orr  
 Studio Manager: David Orr

• **STUDIO K GOSPEL RECORDING**  
*also REMOTE RECORDING*  
 P.O. Box 177-79 Lewiston St.  
 Mechanic Falls, ME 04256  
 (207) 345-9073  
 Owner: Mustard Seed Ministries  
 Studio Manager: Stephen D. Kilbrith

•• **STUDIO N**  
 706 Waverly St., Framingham, MA 01701  
 (617) 872-6843  
 Owner: Dave Nodiff Recording  
 Studio Manager: P. Nodiff

• **THE STUDIO OF ELECTRONIC MUSIC, INC**  
 P.O. Box 334, 25 Carver Circle, Simsbury, CT 06070  
 (203) 658-5290  
 Owner: Molava/Mead  
 Studio Manager: Pam Molava

• **STUDIO 35 PRODUCTIONS INC**  
 50 Kane St., Baltimore, MD 21224  
 (301) 633-7600  
 Owner: The Register Group  
 Studio Manager: Alan Field

•• **STUDIO 237**  
 Yonkers, NY  
 (914) 476-1905  
 Owner: Victor J. Mandragona  
 Studio Manager: Victor J. Mandragona

•• **STUDIO 2005**  
 2005 Benson Ave., Brooklyn, NY 11223  
 (718) 372-4971  
 Owner: Joseph Cardinale  
 Studio Manager: Frank Cardinale

•• **S U ELECTRONIC LABS**  
 Susquehanna University, Selinsgrove, PA 17870  
 (717) 374-0101  
 Owner: Susquehanna University  
 Studio Manager: Jack Fries

•• **SUE'S SOUND KITCHEN**  
 9 Rowe St., CoRam, NY 11727  
 (516) 736-1495  
 Owner: Carl P. Davino  
 Studio Manager: Sue Davino  
 Engineers: Carl P. Davino  
**Dimensions of Studios:** 22 x 15  
**Dimensions of Control Rooms:** 12 x 16.5  
**Tape Recorders:** Otari MX5050 8SHD, 8 track, TEAC 32-  
 2, 2 track, Onkyo TA RW11, cassette, JVC KD D4, cassette,  
 TEAC X 3, 2 track, TEAC V 350C, cassette  
**Mixing Consoles:** Ramsa WR TM20, 20 x 16 x 2, Sound  
 Workshop 1280 8EQ, 12 x 8 x 2  
**Monitor Amplifiers:** AB Systems 9220, AB Systems 205b,  
 Tapco CP 120  
**Monitor Speakers:** UREI 813Bs, Yamaha NS 10s  
**Echo, Reverb & Delay Systems:** Urso Major 323 digital  
 reverb, Roland SRV 2000 digital reverb, Yamaha R 1000  
 digital reverb, Electronic 1024 DDL, Super Time Lane 2048,  
 DDL, Korg SDD 1000 DDL  
**Other Outboard Equipment:** dbx noise reduction Type 1  
 all tracks, dbx 160X comp. Channel compressor, Omni  
 Craft GT 4 noise gates, Loft4 funnel gate/limiter, Aphex  
 Aural Exciter, MXR dit-h shift doubler.  
**Microphones:** AKG, Sennheiser, E-V, Shure  
**Instruments Available:** Korg DW 6000 digital synthe-  
 sizer, Yamaha CP 10 piano, Roland 909 drum machine,  
 Marshall, Legend, GK amps, Slingerland drums.  
**Rates:** \$35/hr (appointment only)

•• **SUMMER SOUND**  
*also REMOTE RECORDING*  
 1551 Monroe Ave., Rochester, NY 14618  
 (716) 442-1631  
 Owner: Bob Manni  
 Studio Manager: Bob Manni

•• **SUN GROUP RECORDING STUDIOS**  
 1133 Broadway #1527, New York, NY 10010  
 (212) 255-1000  
 Owner: A. Custer  
 Studio Manager: Julie Grower, Rick Inguanti, Curtis  
 Hucks

• **SUNRISE STUDIOS**  
*also REMOTE RECORDING*  
 877 State Rd., Princeton, NJ 08540  
 (609) 683-4131  
 Owner: Wesley Derbyshire  
 Studio Manager: Wesley Derbyshire

•• **SUNSHIP CENTRAL**  
*also REMOTE RECORDING*  
 4 McKenney Circle, Andover, MA 01810  
 (617) 470-2836  
 Owner: Greg Welch  
 Studio Manager: Greg Welch

• **SURF AND TURF STUDIO**  
 P.O. Box 416, Ocean View, DE 19970  
 (302) 539-5490  
 Owner: John Remy  
 Studio Manager: John Remy

• **SYNC STUDIOS**  
*also REMOTE RECORDING*  
 42 Pondview Dr., Southington, CT 06489  
 (203) 621-6839  
 Owner: George Dombrowski  
 Studio Manager: Dan Masucci

• **SYNESTHETICS, INC**  
*also REMOTE RECORDING*  
 58 Walker St., New York, NY 10013

(212) 431-4112

Owner: Victor Friedberg, Charles Harbutt, Mic Holwin, David Meieran, John Swierzbis, Paul Zinman.

Engineers: Paul Zinman

Dimensions of Control Rooms: 13 x 13.

Tape Recorders: Ampex ATR 102, (1/2 inch head stack available) 2 track; Otari MX 5050, 2 track; Scully 280, 2 track; Scully 280, 4-track; Sony PCM F1 digital 2 track.

Mixing Consoles: TAC Scorpion, 16 x 8 x 2.

Echo, Reverb & Delay Systems: Lexicon PCM60, Delta Lab CompuEffectron.

Other Outboard Equipment: Kepex, UREI limiter, dbx, Dolby.

Microphones: Neumann, Sennheiser, Beyer, Shure, Electro Voice.

Instruments Available: (3) Yamaha DX7s, Casio CZ1000, Serge Modular Synthesis System w/digital interface, Yamaha RX11, MP 401, custom MIDI interfaces, (2) Compaq micro computers, custom and commercial software.

Video Equipment & Services: Interformat editing: 3/4 inch, VHS; audio sweetening; integrated audio/video facilities; composition, arranging, effects, remixing, overdubs; duplication.

Rates: Call or write.

•• SYNTAX RECORDING

P.O. Box 622, Kenmore Station, MA 02215

(617) 738-6324

Owner: John Hartcorn

Studio Manager: Judy Dorr

Engineers: John Hartcorn.

Dimensions of Control Rooms: 18 x 22 x 9.

Tape Recorders: Otari S050 MKIII, 8 track; Revox B77, 2 track.

Mixing Consoles: Soundcraft 200, 16 x 4 x 2.

Monitor Amplifiers: Crown D150, Scott IC35.

Monitor Speakers: Yamaha NS-10M.

Echo, Reverb & Delay Systems: Lexicon PCM60; Yamaha REV7, R1500 DDL, R1000 reverb; Boss DE200.

Other Outboard Equipment: (2) dbx 160X comp./lim., dbx 166 comp./lim./gate, (3) Troisi parametric EQs, UREI 150 stereo 10 band graphic EQ, Ashly SC-33 dual noise gate, Eventide H910 Harmonizer, Aphex Type C Aural Exciter

Microphones: AKG 414, Beyer Soundstar MKIII, AKG 1000.

Instruments Available: Linn 9000; Sequential Prophet 2000, Oberheim DMX, OB 8; Roland Super Jupiter w/programmer, Juno 106, MSQ 700; Yamaha DX7; Korg Poly 800; Moog source; Sequential Circuits Pro One; Mini Doc by Garfield; Macintosh 512K w/external disk drive; Marshall and Peavey amps.

Rates: \$17.50/hr.

•• T.A. STUDIOS

2 Brooklawn Rd., Wilbraham, MA 01095

(413) 596-3616

Owner: Thomas A. Boilard

Studio Manager: Thomas A. Boilard

•• TAPE TRACKS, LTD.

also REMOTE RECORDING

16 W. 46th St., New York, NY 10036

(212) 575-9673

Owner: Frank Tomano

Studio Manager: Karen Taylor

•• TECHNO-RUBBLE

also REMOTE RECORDING

165 Linden St., New Britain, CT 06051

(203) 224-1811

Owner: Steven J. Wytas

Studio Manager: Steven J. Wytas

• TELE-COMMERCIAL PRODUCTIONS INC.

also REMOTE RECORDING

380 Union St. Ste. 101, W. Springfield, MA 01089

(413) 739-0500

Owner: Frederick and Helen Speckels

Studio Manager: Helen Speckels

•• 3D-TV CORPORATION

P.O. Box 133, New York, NY 11374

(212) 843-6839

Studio Manager: F. Dittle

•• THUNDER MILL

P.O. Box 282, Center Valley, PA 18034

(215) 965-4197

Owner: David Karr

Studio Manager: Suzanne Ryan

•• TOMMY CAN YOU HEAR ME

also REMOTE RECORDING

Hester St., Little Ferry, NJ 07643

(201) 440-6934

Owner: A. Caliero

Studio Manager: A. Caliero

•• TRAX-EAST

32 Beebe Ave., Spotswood, NJ 08884

(201) 251-3187

Owner: Eric Rachel

Studio Manager: Eric Rachel

•• TRAXX RECORDING STUDIO

24 Crestway KC, New Fairfield, CT 06812

(203) 746-3561

Owner: Jim Beck

Studio Manager: Jim Beck

•• TULCHIN STUDIOS

also REMOTE RECORDING

240 E. 45th St., New York, NY 10011

(212) 986-8270

Owner: Harold M. Tulchin

Studio Manager: Susannah Eaton Ryan

•• TURTLE MUSIC STUDIOS

also REMOTE RECORDING

51 W. 81st St., New York, NY 10024

(212) 362-3386

Owner: Gregory L. Neu

Studio Manager: Gregory L. Neu

•• TWO PIE ARE MUSIC

42 W. 13th St., New York, NY 10011

(212) 741-2867

Owner: Tom Desisto, Terry Blaine

Studio Manager: Tom Desisto, Terry Blaine

•• UNDERGROUND SOUND

426 Ehrhardt Rd., Pearl River, NY 10965

(914) 623-2670

Owner: Rick Colarelli, Pete Acocella

Studio Manager: Pete Acocella

•• UNITED RECORDING

681 5th Ave., New York, NY 10022

(212) 751-4660

Owner: Anita Adams

Studio Manager: Lee Rand

•• THE UNITED STATIONS RADIO NETWORK

1440 Broadway, New York, NY

(212) 575-6100

Owner: The United Stations

Studio Manager: Joe Maguire

•• UNIVERSITY OF LOWELL

also REMOTE RECORDING

College of Music, Lowell, MA 01854

(617) 452-5000

Studio Manager: William Moylan

•• THE VELCRO STUDIO

Turnpike Rd. Box 74, Sennett, NY 13150

(315) 253-7591

Owner: The Velcros

Studio Manager: James A. Frech, Ronald Thompson

•• VIBE STUDIO

also REMOTE RECORDING

16 S. 36th Ave., Long Port, NJ 08403

(609) 823-1968

Owner: Lucio Calabrese

Studio Manager: Mr. Wonderful

•• VIDEO SOUND & MELODY

28-10 Astoria Blvd., Astoria, NY 11102

(718) 545-6021

Owner: Alexandra Saddler

Studio Manager: Joseph Gaffney

•• VOICE PLUS

also REMOTE RECORDING

177 E. 87th St., New York, NY 10128

(212) 996-2121

Owner: Acoustique Corp.

Studio Manager: Dan Finton

—LISTING CONTINUED ON NEXT PAGE

SOUND SYSTEM

# BUZZ

ITS TOO BAD YOU  
CANT ALWAYS KEEP IT CLEAN

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ITS ONLY TEMPORARY  
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---

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(214) 741-2027

Circle #121 on Reader Service Card

Engineers: Dan Finton, Dennis Coleman  
 Dimensions of Studios: Studio A: 10 x 12, Booth 6 x 9  
 Dimensions of Control Rooms: 16 x 17.5  
 Tape Recorders: (2) Sony APR 5002, 2-track, (2) Otari MKIII/2, 2 track, Otari MKIII/8, 8 track, Otari 5050BQ, 4 track, Fostex A 8, 8-track; (2) Scully 280, 2 track  
 Mixing Consoles: Amez/TAC Scorpion, 16 x 8 x 2 w/4 sends  
 Monitor Amplifiers: (3) Amber 70s  
 Monitor Speakers: Dahlquist DQM-9s (main), Rogers LS 3 5As (near), TOA RS-21Ms  
 Echo, Reverb & Delay Systems: Eventide H969 Harmonizer, Lexicon PCM60  
 Other Outboard Equipment: (2) Valley People Gain Brain IIs, (2) Kepex IIs, Orban 622B 2 ch. parametric EQ, UREI 545 parametric EQ, 2 ch. graphic EQ, Orban 418A 2 ch limiter, Orban 516C De-esser, (2) Technics SL1200 MKII turntables, Denon 1800 CD player, Sound Ideas CD six library and production music  
 Microphones: (2) Neumann U89s, (2) Beyer 160s, Beyer M130  
 Rates: Call for rates  
 Extras: High speed and real time cassette duplication real time reel dupes  
 Direction: We are a voice-oriented stereo production facility designed with the serious producer in mind. We provide high quality recording and post production for radio productions, soundtracks or narrations. Availability is 24 hours, and we are conveniently located

•• VOICES & OTHER MEDIA INC.  
 also REMOTE RECORDING  
 16 E. 48th St., New York, NY 10017  
 (212) 935-9820  
 Owner: Richard Leonard  
 Studio Manager: Lorraine Zemba

•• WALKWORTH STUDIOS  
 542 Walnut St., Newtonville, MA 02160  
 (617) 332-5805  
 Owner: Geoffrey C. Wadsworth  
 Studio Manager: Geoffrey C. Wadsworth

•• WATERFRONT RECORDING STUDIO  
 32 Main St., Elba, NY 14058  
 (716) 757-9357  
 Owner: Scott W. Schuler, Kelly D. Schuler  
 Studio Manager: Scott W. Schuler, Kelly D. Schuler

•• WCKW STUDIOS  
 On the Hill, Maynard, MA 01754  
 (617) 897-6163  
 Owner: Kell/Vee Enterprises  
 Studio Manager: Prof. Curtis Vee and Kellman

•• WCVY BROADCAST CENTER  
 also REMOTE RECORDING  
 40 Reservoir Rd., Coventry, RI 02816  
 (401) 821-8540  
 Owner: Ken Grady  
 Studio Manager: Russ Dasta

•• WEBCO  
 8705 Deanna Dr., Gaithersburg, MD 20879  
 (301) 253-5962  
 Owner: Wayne E. Busbice  
 Studio Manager: Wayne E. Busbice

•• WEREWOLF RECORDING  
 Harwood Ave., North White Plains, NY 10603  
 (914) 761-9653  
 Owner: Steve Fernandez, John Winhimer  
 Studio Manager: Steve Fernandez, John Winhimer  
 Engineers: Steve Fernandez, John Winhimer  
 Dimensions of Studios: 10 x 16  
 Dimensions of Control Rooms: 10 x 11  
 Tape Recorders: Tascam 38, 8 track, TEAC 2340X, 4 track, Revox B77, 2 track, Nakamichi cassette  
 Mixing Consoles: Tascam M 15, 16 x 8 x 2, Tascam 3A 8 x 4 x 2  
 Monitor Amplifiers: Crown  
 Monitor Speakers: Little Reds with Audio Lab crossovers, Auratones  
 Echo, Reverb & Delay Systems: Lexicon PCM60, Furman RV-20, DeltaLab, Korg, Ibanez delays  
 Other Outboard Equipment: dbx noise reduction, dbx 160X compressor/limiter, Symetrix 522 compressor/limiter, Audioarts stereo parametric, Gate-X noise-gates, Aphex Aural Exciter, Rockman, computer MIDI sequencing w/texture software  
 Microphones: AKG, E V, Sennheiser, Shure  
 Instruments Available: DX7, Mirage, Poly 61, Oberheim stretch DX drum machine, Simmons SDS5, Ludwig drums, Les Paul, Strat, Guild D 2s, Kramer and Fender basses, Music Man, Yamaha, and Peavey amps  
 Rates: Please call

# NORTHEAST STUDIOS



## 4/8 TRACK

• WESTMINSTER MEDIA  
 also REMOTE RECORDING  
 Church Rd. at Willow Grove Ave., Glenside, PA 19038  
 (215) 572-3834  
 Owner: Westminster Ministries  
 Studio Manager: James L.R. Klukow

•• WESTMONT SOUND  
 37 E. Cuthbert Blvd., Westmont, NJ 08108  
 (609) 858-8842  
 Owner: Daniel A. and Anne T. Levinson  
 Studio Manager: Daniel A. Levinson

•• WHARF RAT SOUND  
 401 E. 76th St., New York, NY 10021  
 (212) 249-7571  
 Owner: Mondo Magnetics Inc.  
 Studio Manager: Adam H. Lehman  
 Engineers: Adam Lehman, independents  
 Tape Recorders: Otari 5050 8MK3, 8 track, Tascam 40 4 4 track, Technics 1500, 2 track, Tascam 122, cassette-assorted other cassettes  
 Mixing Consoles: Tapco/E V C12 12 x 4 x 2, Tascam Model 1, 8 x 2  
 Monitor Amplifiers: Crown D60  
 Monitor Speakers: Ohm C2  
 Echo, Reverb & Delay Systems: Ecoplate III, Orban reverb, Ibanez 2500 delay, Ibanez harmonizer/delay, MXR delay  
 Other Outboard Equipment: Crown graphic EQ, Soundcraftsman graphic EQ, Orban parametric EQ, (2) Valley People Dyna-Mite (4 channels) noise gates and limiter, (2) dbx 161 limiters  
 Microphones: (2) AKG 414s, (2) Sennheiser 441s, (2) 421s, RCA BK5 ribbon, Beyer M500, 260 AKG D200C1, E V RE15, assorted Fostex, Audio Technica and Sony microphones  
 Instruments Available: 13 yr. old Kawai baby grand piano (6 foot), Ludwig drum kit, Yamaha DX7, Prophet 600, Yamaha RX11, assorted percussion, all for no extra charge. Other available through rental.  
 Rates: \$30/hr. Block rates available. attentive budget consideration

• WHEEL TO WHEEL  
 only REMOTE RECORDING  
 238 Hickory Rd., East Windsor, NJ 08520  
 (609) 448-6889  
 Owner: Hans Schneider

•• WHITE MOUNTAIN RECORDING  
 1 Knight St., Rochester, NH 03867  
 (603) 332-9666  
 Owner: Bob Meehan  
 Studio Manager: Bob Meehan

•• WHITEHALL STUDIO  
 26 Whitehall Rd., Rochester, NH 03867  
 (603) 332-8614  
 Owner: Alphonse B. Therrien  
 Studio Manager: Alphonse B. Therrien

•• WINDROSE COMMUNICATIONS  
 also REMOTE RECORDING  
 732 Montrose St., Vineland, NJ 08360  
 (609) 691-4682  
 Owner: Dennis Link  
 Studio Manager: Frank Biddissee

•• WINDY ACRES  
 Old Village Rd., Shelburne, MA 01370  
 (413) 625-9036  
 Owner: Jack Baker  
 Studio Manager: Jack Baker  
 Engineers: Jack Baker

Dimensions of Studios: 14 x 18  
 Dimensions of Control Rooms: 11 x 16  
 Tape Recorders: Tascam 80 8 8 track, Tascam 35 2, 2 track, Pioneer 2 track  
 Mixing Consoles: Sound Workshop 1280B Super EQ, 12 x 8, Tascam 3, 8 x 4  
 Monitor Amplifiers: Yamaha B2  
 Monitor Speakers: ADS910, Auratones  
 Echo, Reverb & Delay Systems: PCM60, Orban 111, MXR digital delay  
 Other Outboard Equipment: Ashly parametrics, dbx limiters and compressors, Ashly limiters and compressors  
 Microphones: AKG 414EB, Shures, Electro Voice, Sennheisers  
 Instruments Available: Wurlitzer piano, Fender bass, assortment of guitars and synthesizers  
 Rates: Available upon request

• WLCC INC.  
 also REMOTE RECORDING  
 313 Kingston Ave., Brooklyn, NY 11213  
 (718) 773-4774  
 Owner: C. Halberstam  
 Studio Manager: C. Halberstam

•• WOLFRIDGE RECORDING STUDIO  
 30 Hancock St., Rochester, NH 03867  
 (603) 332-2827  
 Owner: Dan Cormier  
 Studio Manager: Dan Cormier

•• RICH WOODS AUDIO/VIDEO  
 also REMOTE RECORDING  
 Marlboro, NY 12542  
 (914) 236-7885  
 Owner: Rich Woods

• WOOLY MAMMOTH STUDIO  
 Box #492, Alpine, NJ 07620  
 (201) 768-5797  
 Owner: Bill Willis  
 Studio Manager: Bill Willis

•• THE WORKS  
 30 Dunbridge Heights, Fairport, NY 14450  
 (716) 223-2968  
 Owner: Greg Gilmore  
 Studio Manager: Greg Gilmore, Andy Ryckaert

•• WSKG PUBLIC RADIO  
 also REMOTE RECORDING  
 Box 3000, Binghamton, NY 13902  
 (607) 775-0100  
 Owner: Southern Tier Ed. Television Association  
 Studio Manager: Tom Hill

•• ROBERT WYNN PRODUCTIONS  
 also REMOTE RECORDING  
 120 Washington Ave., Collingswood, NJ 08108  
 (609) 858-2522  
 Owner: Robert Wynn  
 Studio Manager: Robert Wynn

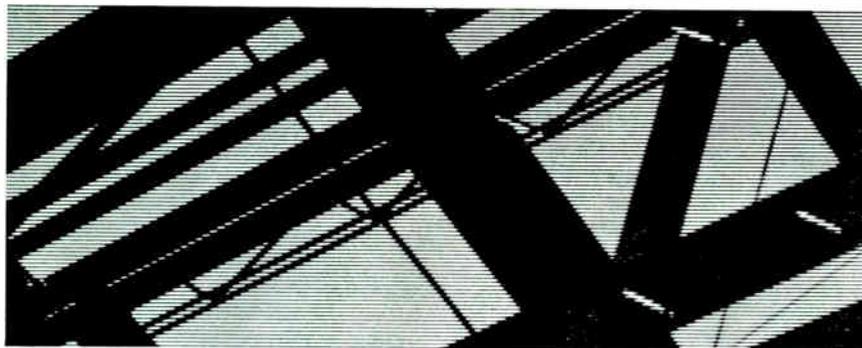
•• YUKMOUTH BROWN RECORDING STUDIO  
 PO Box 241, Summit, NJ 07901  
 (201) 464-9527  
 Owner: Lawrence J. Kucher  
 Studio Manager: James Fox

•• ZALMO SOUNDS  
 also REMOTE RECORDING  
 Ditmas Ave. & East 8th St., Brooklyn, NY 11218  
 (718) 633-4166  
 Owner: Sherman Shabbier  
 Studio Manager: Sherman Shabbier

•• ZAX TRAX  
 also REMOTE RECORDING  
 20 Franklin St., Frederick, MD 21701  
 (301) 663-0241  
 Owner: Zachary Mabry  
 Studio Manager: Zachary Mabry

• ZELMAN PRODUCTIONS  
 also REMOTE RECORDING  
 623 Cortelyou Rd., Brooklyn, NY 11218  
 (718) 941-5500  
 Owner: Sidney M. Zelman  
 Studio Manager: Jerry Krone

# NORTHEAST STUDIOS



# 16 TRACK

••• **ADD MUSIC, INC.**  
also **REMOTE RECORDING**  
160 E. 48th St., New York, NY 10017  
(212) 486-0278  
Owner: Jesse Bromberg  
Studio Manager: Jesse Bromberg

••• **AIR CRAFT STUDIOS**  
Dormont Square, Pittsburgh, PA 15216  
(412) 343-5222  
Owner: Lost In Music Inc  
Studio Manager: Barney Lee  
Engineers: Barney Lee, Henry Yoder  
Dimensions of Studios: Studio A 19 x 30 Studio B 13 x 20, Vocal Booth 9 x 9 triangular  
Dimensions of Control Rooms: 13 x 20  
Tape Recorders: Ampex Model MM 1200 16 track Otari MKIII 8 track, (2) Otari 5050B 2-track  
Mixing Consoles: Allen & Heath Series B Syncon 26 x 24  
Monitor Amplifiers: Crown Nikko, SAE  
Monitor Speakers: JBL 4430, Yamaha NS 10M, Little-Davids 6000  
Echo, Reverb & Delay Systems: DeltaLab DL4, Orban stereo reverb Ecoplate reverb, ADA flange, echo, chorus etc ADA one second delay (2) Yamaha REV7  
Other Outboard Equipment: Signal gates, UREI compressor/limiter, parametric EQ, de esser, Valley People Kexex and Gain Brain Other services RealTime cassette duplication with Nakanichi decks  
Microphones: Neumann AKG Shure Sennheiser E V Calrec, Sony  
Instruments Available: 7 foot Baldwin grand piano, CP70 Yamaha grand, Minimoog, Yamaha RX11 drum machine Yamaha DX7 synthesizer, Oberheim OB SX, Fender Rhodes, BC Rich, Gibson, Fender, Gunan guitars  
Rates: 8 track \$45/hr plus tape, 16 track \$55/hr plus tape

••• **AIR SOUND**  
1116 Boylston (rear), Boston, MA 02115  
(617) 247-4186  
Owner: Rick Kuethe, Glenn Lacey  
Studio Manager: Rick Kuethe Glenn Lacey

••• **ALLAN STUDIOS**  
also **REMOTE RECORDING**  
21 Whitman Ave., Syosset, NY 11791  
(516) 921-6564  
Owner: Allan Kashkin  
Studio Manager: Allan Kashkin

••• **THE AMERICAN UNIV. RECORDING STUDIO**  
4400 Massachusetts Ave. NW, Washington, DC 20016  
(202) 585-2745  
Owner: The American University  
Studio Manager: Josh Schneider

••• **AMPHION RECORDING**  
114 Brooklyn St., Rockville, CT 06066  
(203) 871-1786  
Owner: Amphion Enterprises, Inc  
Studio Manager: Ed Adams

••• **ANDERSEN MOBILE AUDIO**  
also **REMOTE RECORDING**  
76D Rte. 28, West Hurley, NY 12491  
(914) 678-5211  
Owner: Chris Andersen  
Studio Manager: Melody Huffer

••• **ANTHEM PRODUCTIONS**  
901 Pine Valley Circle, Westchester, PA 19382  
(215) 431-2963  
Owner: Charles Fisk  
Studio Manager: Skip Hempsey

••• **AT&T POST & IMAGES**  
also **REMOTE RECORDING**  
60 Columbia Tpk. Morristown, NJ 07960  
(201) 829-7237  
Owner: AT&T Information Systems  
Studio Manager: Steve Ellis

••• **ATLANTIC CITY ENT STUDIOS**  
2718 Atlantic Ave., Atlantic City, NJ 08401  
(609) 344-2835  
Owner: Gary Battistella, John Mulhern  
Studio Manager: Bob Kimmel

••• **AUDIO DEPARTMENT, INC.**  
110 W. 57th St., New York, NY 10019  
(212) 586-3503  
Owner: Joe Danis  
Studio Manager: Jane Blecher

••• **AUDIO IMAGE**  
95 Little Tree Ln., Hiltion, NY 14468  
(716) 392-9500  
Owner: Larry Ellis  
Studio Manager: Larry Ellis

••• **AUDIO RADIANCE SOUND AND RECORDING**  
also **REMOTE RECORDING**  
34 Hockanum Rd., Hadley, MA 01035  
(413) 584-1272  
Owner: Chris Dixon  
Studio Manager: Chris Dixon  
Engineers: Chris Dixon, Glenn Jubilee  
Dimensions of Studios: 12 x 25  
Dimensions of Control Rooms: 12 x 13  
Tape Recorders: Scully 280 16 track, Scully 280, 8 track.

TEAC 3440, 4-track; TEAC 1230, 2-track; TEAC ASSORX cassette.

Mixing Consoles: Soundcraft 400B, 24 x 8 x 2.  
Monitor Amplifiers: McIntosh, BGW, Crown.  
Monitor Speakers: JBL, Auratone.  
Echo, Reverb & Delay Systems: Korg SDD 3000 digital delay, Yamaha R1000 digital reverb, Orban 106cx reverb, Roland Space Echo, MXR flanger/doubler DeltaLab ADM 1024 digital delay.  
Other Outboard Equipment: dbx 160x compressor, (2) Ashly SC50 compressors, Ashly SC33 stereo gate, Audioarts 1/3 octave EQ, Scott RTA  
Microphones: Sennheiser, Shure, EV, Beyer, AKG, Altec.  
Instruments Available: Fender Stratocaster, Mesa/Boogie with JBL, Marshall cabinet, Takamine acoustic guitar, electric 12 string, pedalboard, bass, Rhodes, Casio, Roland drum machine, other stuff available with advance notice  
Video Equipment & Services: VHS deck for viewing  
Rates: Various packages available, please call.

••• **AUDIO TRACK SPECIALISTS**  
also **REMOTE RECORDING**  
260 Ohio St., Johnstown, PA 15902  
(814) 539-4197  
Owner: Robert J. Capotosto Jr  
Studio Manager: Robert J. Capotosto Jr

••• **AVI VISUAL PRODUCTIONS LTD.**  
also **REMOTE RECORDING**  
10 E. 21st St., New York, NY 10010  
(212) 505-9155  
Owner: Tom Prezioso

••• **AVID RECORDERS**  
also **REMOTE RECORDING**  
P.O. Box 1727, Wallingford, CT 06492  
(203) 284-2000  
Owner: D.E. Ferrara  
Studio Manager: Loyalty Pearson

••• **BAKER ST. STUDIOS**  
10 Wheeler Ct., Watertown, MA 02172  
(617) 924-0065  
Owner: Baker, Baker, & Baker  
Studio Manager: Tracey Pope  
Engineers: Roger L. Baker, Darleen Wilson, Rick Kolow, Andy Mendelson, Tracey Pope, John Plister  
Dimensions of Studios: 40 x 20, w/5 x 6 iso booth on wheels, variable acoustics and video hard cyc  
Dimensions of Control Rooms: 15 x 18 Design by Abaddon/Sun.  
Tape Recorders: Otari MTR-90, 16-track; Otari 7800, 8-track; Otari MTR-10, 2-track; (3) Akai cassette decks  
Mixing Consoles: Tangent (w/automation) 3216, 24 x 36  
Monitor Amplifiers: Crown DC300 (monitors), Crown DC60 (2 for headphones)  
Monitor Speakers: UREI 811, Auratones  
Echo, Reverb & Delay Systems: Ecoplate large plate, Alesis XT digital reverb, Biamp spring, DeltaLab DL-4 digital delay, (2) Ibanez 230 analog delay, A/DA STD-1 stereo delay.  
Other Outboard Equipment: Eventide Phaser, MXR Autophaser, dbx 160x comp/limiters, UREI 1178 dual comp/limiters, UREI 546 dual 4-band parametric EQ, MXR pitch transposer, Orban sibilance controller, (4) loft noise gates, (4) Kexex, (2) Gain Brains, Furman parametric EQ, (2) MXR 31-band graphic EQ, dbx noise reduction all channels  
Microphones: Neumann U67, U47, KM84; AKG 451s, E V RE20, RE55, RE16, CS15; Sennheiser 421s, 441; Shure SM57s; Beyer 160, 260; RCA 77-DX; AKG D12-E; Crown PZMs.  
Instruments Available: Steinway grand piano, Hammond organ w/ Leslie, Wurliizer electric piano, ARP Omni, Moog, Casio CZ-101 digital programmable synth, Fender and Ampeg tube amps  
Rates: 16-track \$345/10 hrs; 8-track \$245/10 hrs.

••• **BAM MEDIA SERVICES**  
also **REMOTE RECORDING**  
53 Parkview Terr., Lincroft, NJ 07738  
(201) 530-1030  
Owner: Brian Mackewich  
Studio Manager: Brian Mackewich

••• **BIRCH RECORDING STUDIO**  
also **REMOTE RECORDING**  
113 W. Main St., Secretary, MD 21664  
(301) 943-8141  
Owner: Paul R. Birch  
Studio Manager: Steve Wallace

••• **BLUE DIAMOND**  
 also **REMOTE RECORDING**  
 Box 102C Chubbick Rd., Canonsburg, PA 15317  
 (412) 746-2540  
 Owner: Joe Diamond  
 Studio Manager: Joe Diamond

••• **BOSTON PUBLIC SCHOOLS/  
 HUMPHREY CENTER**  
 75 New Dudley St., Boston, MA 02118  
 (617) 442-5200  
 Owner: Boston Public Schools  
 Studio Manager: Phil Worrell, Tessil Collins

••• **THE BURLINGTON SOUND FACTORY/  
 ESQ. PRODUCTIONS**  
 also **REMOTE RECORDING**  
 415 Laurence St., Burlington City, NJ 08016  
 (609) 386-2531  
 Owner: Gary Brown, Michael Capozzoli, Paul Kerber  
 Studio Manager: Michael Capozzoli

••• **BYGOSH MUSIC RECORDING**  
 RR #1, Brookfield, VT 05036  
 (802) 276-3393  
 Owner: Bobby Gosh  
 Studio Manager: Bobby Gosh

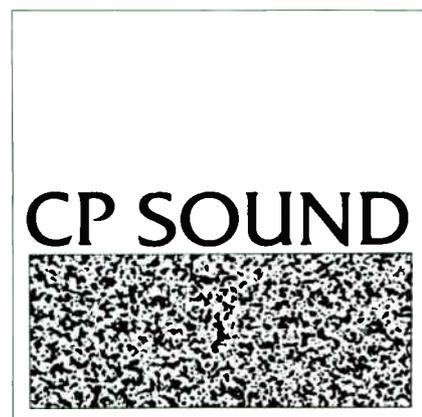
••• **C&C AUDIO-VIDEO STUDIOS**  
 also **REMOTE RECORDING**  
 E. New St. Box 581-A, Glassboro, NJ 08028  
 (609) 881-7645  
 Owner: Ed Candelora, Jr.  
 Studio Manager: Terri Candelora

••• **CABIN FEVER RECORDING**  
 P.O. Box 735, Fishers, NY 14453  
 (716) 924-4453  
 Owner: Bob Potter  
 Studio Manager: Bob Potter

••• **CHESTNUT SOUND, INC.**  
 also **REMOTE RECORDING**  
 1824 Chestnut St., Philadelphia, PA 19103  
 (215) 568-5797  
 Owner: Joseph F. Allonsi, Jr.  
 Studio Manager: Joseph F. Allonsi, Jr.

••• **COAST COMMUNICATIONS**  
 also **REMOTE RECORDING**  
 Ste. 32 Independence Mall, Wilmington, DE 19803  
 (302) 654-2713  
 Owner: Mitchell E. Hill  
 Studio Manager: Robert Bowersox

••• **CONCEPTION RECORDERS**  
 73 Bath St., Ballston Spa, NY 12020  
 (518) 885-5228  
 Owner: Ed Carbone  
 Studio Manager: Ed Carbone



CP SOUND  
 New York, NY

••• **CP SOUND**  
 also **REMOTE RECORDING**  
 200 Madison Ave., New York, NY 10016  
 (212) 532-5528  
 Owner: Steve Dwork

# NORTHEAST STUDIOS

## 16 TRACK

Studio Manager: Peter Bengston  
 Engineers: Steve Dwork, Peter Bengston.  
 Dimensions of Studios: 10 x 14.  
 Dimensions of Control Rooms: Control A: 12 x 17, Control B: 11 x 18.  
 Tape Recorders: Otari 16-track; Ampex MM 1000 8-track; (3) Ampex 440s 2-, 4-track and mono; Nagra portable.  
 Mixing Consoles: API 24 x 16, Quad Eight custom, 12 in x 4 out.  
 Monitor Amplifiers: Crown.  
 Monitor Speakers: JBL 4313, Auratones.  
 Echo, Reverb & Delay Systems: Quad Eight & G.B.S.  
 Other Outboard Equipment: UREI 1/2 octave EQ; UREI "Little Dipper"; UREI 1178, API EQ; API compressor; Pultec, Kepex, Gain Brains, etc.  
 Microphones: Neumann U87s; AKG 414s, Shure; E-V; Sony; RCA.  
 Rates: Mono thru 16-track—record, edit, mix \$110/hr.; A-V programming and pulsing \$125/hr.; BTX "Softouch" SMPTE video synchronizing system \$140/hr.  
 Extras: Film transfer facilities, 16mm and 35mm, American and European sync standards, complete audio visual slide pulsing and computer programming, full A-V road show capability, music and effects libraries. Cassette, open reel and all A-V format duplication.  
 Direction: Our basic objectives are to provide excellent mixing and narration facilities with as much flexibility as possible, while maintaining a reasonable rate structure.

••• **CRYSTAL SOUND RECORDING**  
 also **REMOTE RECORDING**  
 1343 Riverdale Rd., W. Springfield, MA 01089  
 (413) 737-3819  
 Owner: James M. Koppel  
 Studio Manager: James Koppel

••• **D.C. MOOD CREATIONS, LTD.**  
 also **REMOTE RECORDING**  
 15 Vails Ln., Ossining, NY 10562  
 (914) 762-3880  
 Owner: Don Cohen  
 Studio Manager: Mitch Cohen

••• **DE LANE PRODUCTIONS**  
 176 Strasmer Rd., Depew, NY 14043  
 (716) 683-1367  
 Owner: Joe Palmer  
 Studio Manager: Joe Palmer

••• **DEUEK STUDIOS-STUDIO TOO**  
 850 Main St., Dalton, MA 01226  
 (413) 684-0198  
 Owner: Gregory K. Steele, Matt Lesco  
 Studio Manager: Gregory K. Steele  
 Engineers: Gregory K. Steele, Matt Lesco, Max Mattoon.  
 Dimensions of Studios: 30 x 45 x 11; 18 x 24; 8 x 10 (isolation booth).  
 Dimensions of Control Rooms: 16 x 18.  
 Tape Recorders: Tascam MS 16 w/auto locator, 16-track; Tascam 58 w/auto-locator, 8 track; Otari MX-5050 II, w/remote 2-track; Ampex AG-351, 2 track; Tandberg TD 20A, 2-track; (2) Tandberg TCD 310 MKII, Akai GX-F31, Onkyo TA-RW99 cassette decks.  
 Mixing Consoles: (2) Ramisa WR 8816, linked for 32 x 8.  
 Monitor Amplifiers: Yamaha P 2200, Harman-Kardon Clatone 12.  
 Monitor Speakers: JBL 4425, KEF 103.2, Auratones, AKG: K 141s, K 240s, K 130s headphones.  
 Echo, Reverb & Delay Systems: (3) Lexicon PCM60s, Lexicon PCM42, A/DA D1280, Loft 450, A/DA STD-1, Yamaha D-1500.  
 Other Outboard Equipment: dbx noise reduction on all machines, dbx and Audioarts comp/limiters, Aphex Type B, (2) API 550 equalizers, MXR dual 15 band EQ, MXR auto flangers, MXR numi limiters, Ashly SC 33 dual noise gate, custom noise gates, custom auto pan, Burwen DNF 1201.  
 Microphones: AKG 414 EB, (2) C t-0, D 2000E; Beyer

MC-734, (2) M-201, M-260; Countryman: (2) EM-101, (2) Iso Max III; Sennheiser: (2) MD-441, (2) MD-421; Shure: (2) SM-81 (2) SM-57 (2) SM-53; Electro-Voice RE20. Axe direct boxes.  
 Instruments Available: Yamaha DX7 w/Apple IIe, Passport MIDI-8+, DX-Pro voicing library, Decillionix DX-1 sampler, Passport MIDI interface with drum sync, Korg KMS-30 MIDI to tape sync, Yamaha CP-70, Cable upright piano, LinnDrum, Gibson Les Paul, Fender Precision bass, Hammond B-3 w/925 Leslie cabinet, Mesa Boogie, Fender Twin Reverb, Pignose, E-mu Drumulator, Latin Percussion rack.  
 Rates: 16-track \$45/hr.; 8-track \$25/hr.; programming \$18/hr.; block booking and pre-payment discounts available.

••• **DIGITAL SOUND**  
 210-J Church St., Philadelphia, PA 19106  
 (215) 922-1340  
 Owner: John Hodian  
 Studio Manager: Bruce Henry

••• **DYNAMIC RECORDING**  
 also **REMOTE RECORDING**  
 2846 Dewey Ave., Rochester, NY 14616  
 (716) 621-6270  
 Owner: David R. Kaspersin  
 Studio Manager: Phyllis G. Bishop

••• **EAST COAST PRODUCTIONS**  
 1509 Jarrett Pl., Bronx, NY 10461  
 (212) 409-4900  
 Owner: Vic Vanzo, Bruce Alcott, Tom McDonald  
 Studio Manager: Vic Vanzo

••• **EASTWIND RECORDING**  
 6820 Ellicott Dr., E. Syracuse, NY 13057  
 (315) 463-6759  
 Owner: Michael Jaffarian  
 Studio Manager: Michael Jaffarian

••• **EDEN GARDEN STUDIO, INC.**  
 27 Garrett Rd., Upper Darby, PA 19082  
 (215) 622-0477  
 Owner: Dennis A. Caruso, Joan M. Caruso  
 Studio Manager: Joan M. Caruso

••• **EMBASSY RECORDING STUDIO**  
 260 Amity St., Amherst, MA 01002  
 (413) 549-7640  
 Owner: Steffan Fantini  
 Studio Manager: Anthony DeMana

••• **ERNY RECORDINGS**  
 also **REMOTE RECORDING**  
 1410 E. Carson St., Pittsburgh, PA 15203  
 (412) 431-4848  
 Owner: David W. Erny  
 Studio Manager: Sharon Beddard Erny

••• **ETC. STUDIOS**  
 also **REMOTE RECORDING**  
 554 W. 235th St., Riverdale, NY 10462  
 (212) 796-5949  
 Owner: Terry Terrell  
 Studio Manager: Jon Terrell

••• **EUPHORIA SOUND STUDIO**  
 also **REMOTE RECORDING**  
 90 Shirley Ave., Revere, MA 02151  
 (617) 284-9707  
 Owner: Howard Cook  
 Studio Manager: Simon Ritt  
 Engineers: Gordon Hookailo, Mark Lemaire, Lynda Stephens, Howard A. Cook.  
 Dimensions of Studios: Studio A: 30 x 26, iso booth 1: 12 x 12, iso booth 2: 18 x 12, Studio B: MIDI room 18 x 10.  
 Dimensions of Control Rooms: 14 x 14  
 Tape Recorders: Otari MTR-90 2-inch, 16 track with Auto Locate (CB-113 remote control unit); Otari MX 5050 1/2 inch, 8 track with remote; (2) Otari MX 5050 2-track (1/2-track or 1/4-track playback); (4) Aiwa F 660 cassette decks.  
 Mixing Consoles: Soundcraft 800 series mixing console 18 x 16.  
 Monitor Amplifiers: Crown Micro Tech 1000, Dunlap Clarke Dreadnaught 500 watts, Marantz 500 watts, Sony TA-AX35 integrated stereo amplifier.  
 Monitor Speakers: Altec Lansing model 604 (2 pair), Yamaha NS 10s, Auratone Super Sound Cubes.  
 Echo, Reverb & Delay Systems: Lexicon Model 200 digital reverberator, Master-Room XL 305 reverb, (2) Lexi-  
 —LISTING CONTINUED ON PAGE 162

# **MANNY'S PROFESSIONAL AUDIO DIVISION**

NEW YORK CITY'S LARGEST MUSIC DEALER HAS EXPANDED TO INCLUDE A FULLY OPERATIONAL PRO AUDIO DIVISION. COMPLETE WITH DEMONSTRATION FACILITIES AND OUR SPECIALIZED SALES STAFF, WE CAN ASSIST YOU IN SELECTING ANYTHING FROM MICROPHONES TO A COMPLETE MULTI-TRACK RECORDING STUDIO. WE SHIP WORLDWIDE. WE'RE JUST A PHONE CALL AWAY.

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212 819-0576**

con PCM42 digital delay processor, Lexicon Prime Time digital delay, Yamaha Model E-1010 analog delay, Lexicon PCM70.

**Other Outboard Equipment:** (2) Valley People multifunction dynamic processor, dbx 20/20 computerized equalizer/analyzer, (3) dbx 900 series parametric equalizer, (2) dbx 900 series compressor/limiters, (2) dbx 900 series noise gates, dbx 900 series De-esser, SAE Mark XVII stereo octave equalizer, Delta Graph model EQ-10 graphic equalizer, (2) Furman sound parametric equalizers, dbx 161 compressor/limiter, (2) Ashly peak limiter/compressors, Biamp quad limiter, Symetrix signal gate, (2) Countryman direct boxes, MXR graphic equalizer. Ashly quad limiting noise gates, Ashly stereo noise gates.

**Microphones:** (2) Neumann U89, (2) Crown PZMs, (4) Shure SM57s, (3) AKG 451s, (4) Sennheiser 421s, AKG 414, (2) Sony ECM 56s, (2) Sony ECM 22Ps, Sony ECM 33P, (2) Electro-Voice RE20s.

**Instruments Available:** Yamaha G3 grand piano, JX 3P Roland synthesizer, Casio 401 keyboard, Yamaha Portasound keyboard, Gibson Les Paul custom, Gibson SG, Rockman, E-mu systems SP-12 sampling drum computer, Oberheim Xpander XP-1 analog mega synth, Yamaha DX7 keyboard digital FM synth, Yamaha TX-218 rack w/two TFI modules, Roland JX-3P 6 voice analog synthesizer, Akai S612 polyphonic sampler.

**Rates:** 16-track \$38/hr., MIDI studio \$25/hr., 8-track \$28/hr.

#### ••• FANTASIA STUDIOS

20 Thompson St., Boston, MA 02136

(617) 364-6685

Owner: Michael P. Russo

Studio Manager: James Fleming

#### ••• FANTASMAS

261 Wykagyl Sta., New Rochelle, NY 10804

(914) 576-2835

Owner: WAC Productions, Inc.

Studio Manager: Julia Craig

Engineers: Billy Cobin, Horacio Malvicino

Dimensions of Studios: 15 x 20, 20 x 20, 10 x 6.

Dimensions of Control Rooms: 15 x 20.

Tape Recorders: Fostex B16DM, 16-track; Tascam 2-track.

Mixing Consoles: Allen & Heath Brenell CMC24, 421.

Monitor Amplifiers: Crown.

Monitor Speakers: JBL 100.

Echo, Reverb & Delay Systems: PCM60, ART 01A, PCM42, SD2000, Eventide 969.

**Other Outboard Equipment:** (2) dbx 160 Dyna-Mite, Gatex rack, Vocoder, MiniDoc, SMPTE System, MSQ 700 w/disk drive, JLC MIDI Bay, Apple 211G.

**Microphones:** (6) Sennheiser 241, Neumann U47.

**Instruments Available:** RX11, (2) DX7, (2) TX Module, Matrix-12, Super-Jup.-Mod, Poly 800, (2) EX800, Drumulator; (all hard-wired); small African and Brazilian percussion; brass: slide and valve trombones, trumpet, baritone horn.

#### ••• FAR & AWAY STUDIOS, INC.

also REMOTE RECORDING

Box 63 RD 1, Chester, NY 10918

(914) 294-7763

Owner: Far & Away Studios, Inc.

Studio Manager: Jim Lynch

#### ••• FILMSPACE INC.

615 Clay Ln., State College, PA 16801

(814) 237-6462

Owner: Tom Keiter, Jim Summerson

Dimensions of Studios: 25 x 25 x 12

Dimensions of Control Rooms: 16 x 12 x 10.

Tape Recorders: Tascam (w/ full dbx NR) 85-16B, 16-track;

Otari (w/dbx Type 1 NR) MX 5050, 4-track; Otari (w/dbx

type 1 NR) MX 5050, 2-track; Ampex ATR 700, 2-track;

Dennon (cassette (DRM-44HX) 2-track; Sony and JVC 3/4-

inch video w/time code.

Mixing Consoles: Amek-TAC Matchless 26 x 24, Hill

Audio Multimax 16 x 2.

Monitor Amplifiers: Hafler 500, Hafler DH-200, Carver

PM-200, Phase Linear Model 200-Phase Two.

Monitor Speakers: JBL 4425s, ADS LB10s, Auratone 5Cs.

Echo, Reverb & Delay Systems: Lexicon PCM60, (2)

Biamp MR-140, (2) DeltaLab ADM 1024.

**Other Outboard Equipment:** BTX SMPTE time code Inter-

lock system w/Softouch keyboard, (2) Shadows, Cypher

TL generator, (2) Kepex gates, (2) dbx 161 compres-

sors, (2) MRX limiters, dbx 902 De-esser, Biamp EQ 230.

**Microphones:** Neumann U87, AKG 414s, AKG D-330

BT, Sennheiser 421, Shure SM57s and 58s, Shure SM81,

and other quality mics.

**Instruments Available:** Yamaha CP-80 electric grand,

Yamaha RX 11 drum computer, misc. percussion.

**Video Equipment & Services:** Complete 3/4 inch off-line

editing w/time code, using BTX Interlock. Full audio post-

production for film and video, including commercials, indus-

trials, and multi-image.

## NORTHEAST STUDIOS



# 16 TRACK

**Rates:** Call for quotes.

**Extras:** Other major equipment: Amek, Cypher, Otari, Sony, Tascam.

**Direction:** 2-, 4-, and 16-track audio recording, BTX Softouch Interlock to complete Sony 3/4-inch off-line editing. Full production services in all areas of film, video, audio and multi-tape.

#### ••• FISHTRAKS

also REMOTE RECORDING

62 Congress St., Portsmouth, NH 03801

(603) 431-5492

Owner: Thomas A. Daly, Bruce M. Lawson

Studio Manager: Jeff Landroche, Holly Whiteside

#### ••• FLIP SIDE SOUND PRODUCTIONS, INC.

3616B Falls Rd., Baltimore, MD 21211

(301) 467-3547

Owner: Jim Ball, John Ball

Studio Manager: Barbara Patterson

#### ••• 40 WAX

386 High St. (Borden Mansion), Fall River, MA 02720

(617) 679-1993

Owner: John Winters, James Winters

Studio Manager: Michael Crabtree

#### ••• FOR PLAY STUDIO

also REMOTE RECORDING

338-11th St., Cresskill, NJ 07626

(201) 568-8976

Owner: Robert C. Cevasco

Studio Manager: Robert C. Cevasco, Carl Bonomo

#### ••• FUN CITY STUDIOS

340 E. 22nd St., New York, NY 10010

(212) 677-6032

Owner: Wharton Tiers

Studio Manager: Wharton Tiers

#### ••• FV SOUND LTD. STUDIOS

17 E. 45th St. 8th Fl., New York, NY 10017

(212) 697-8980

Owner: Fred Vernon

Studio Manager: Lea Mane Braak

#### ••• GAMUT PRODUCTIONS, INC.

also REMOTE RECORDING

Latrobe 30 Shopping Plaza, Latrobe, PA 15650

(412) 539-3211

Owner: Todd J. Wilkins

Studio Manager: Todd J. Wilkins

Engineers: Todd J. Wilkins, Robin Leachman.

Dimensions of Studios: 16 x 22 x 8-10.

Dimensions of Control Rooms: 16 x 11 x 8-10.

Tape Recorders: Tascam 85-16, 16-track w/dbx, Otari

5050B 2-track w/dbx, Technics cassette RS-B100 2-track

dolby B.C. dbx

Mixing Consoles: Ramsa WR-8816 16 x 4 x 2.

Monitor Amplifiers: Harman Kardon.

Monitor Speakers: JBL 4411, Auratone Roadcubes.

Echo, Reverb & Delay Systems: Roland SDE 3000, Lexi-

con PCM 41, Eventide 910 Harmonizer, MICMIX XL-305

reverb, Valley People Dyna-Mite, Ashly SC-50 limiters.

**Microphones:** Crown PZMs, AKG C535, AKG D12E, Au-

dio-Technica B13R, Shure, etc.

**Instruments Available:** Roland TR 707 Rhythm Compos-

er, various others.

**Video Equipment & Services:** 3/4 inch video services

available featuring WV-555 Panasonic camera, VO-6800

Sony deck.

**Rates:** 16-track rec/mix: \$30/hr

#### ••• RAY GANTEK PRODUCTIONS

93 Androssy Ave., Fairfield, CT 06430

(203) 332-7178

Owner: Ray Gantek

Studio Manager: Ray Gantek

#### ••• CHRIS GATELY AUDIO

only REMOTE RECORDING

P.O. Box 526, Bryn Mawr, PA 19010

(215) JBL-3605

Owner: Christopher D. Gately

Studio Manager: Albert Leslie Powell

#### ••• GIFT HORSE STUDIOS

also REMOTE RECORDING

5555 Allentown Blvd., Harrisburg, PA 17112

(717) 652-0215

Owner: Richard Hower

Studio Manager: Richard Hower

#### ••• GLASSWING STUDIOS

6002 Ager Rd., Hittesville, MD 20782

(301) 559-3556

Owner: Richard Sales, JoAnne Sales, Jay Yarnall

Studio Manager: Richard Sales

#### ••• GOLD-TRAC RECORDING

also REMOTE RECORDING

Rt. 2 Box 150-C, Cumberland, MD 21502

(301) 724-3221

Owner: David L. White

Studio Manager: David L. White

#### ••• GOLDING STUDIOS

also REMOTE RECORDING

28 Wilson Ave., Chalfont, PA 18914

(215) 822-1086

Owner: Christopher Golding

Studio Manager: Molly Beck

#### ••• GRAY WOLFF PRODUCTIONS

103 Harvest Rd., Fairport, NY 14450

(716) 381-4881

Owner: Curt DeWolff, Dave Hayden

#### ••• GREEN VALLEY RECORDING

RD 2 Box 281, Hughesville, PA 17737

(717) 584-2653

Owner: Richard and Alison Rupert

Studio Manager: Richard Rupert

#### ••• JOHN GUTH PRODUCTIONS

also REMOTE RECORDING

48 S. Franklin Ave., Bergenfield, NJ 07621

(201) 385-7435

Owner: John Guth

Studio Manager: Brenden Harkin

#### ••• HALLMARK RECORDINGS

51-53 New Plant Ct., Owings Mills, MD 21117

(301) 363-4500

Owner: Max Brecher

Studio Manager: Max Brecher

#### ••• HIGH HEEL STUDIOS

11110 Hiddentrail Dr., Owings Mills, MD 21117

(301) 363-0749

Owner: Bernard Geher, Arnold Geher

Studio Manager: Arnold Geher

Engineers: Arnold Geher, Ralph Rizzo.

Dimensions of Studios: Main room: 23 x 9, drum room:

16 x 11.

Dimensions of Control Rooms: 11 x 14.

Tape Recorders: Otari MX70, 16-track; Otari MTR10, 1/4-

inch 2-track; Tascam 58, 8-track; Tascam 52, 2-track; Naka-

michi BX300 cassette; (2) Tascam 122 cassette.

Mixing Consoles: NEOTEK Series III 28 x 24, Ramsa

8716 16 x 4.

Monitor Amplifiers: Crown PSAII, DC300, D150.

Monitor Speakers: JBL 4333, Yamaha NS10, Auratone

5C.

Echo, Reverb & Delay Systems: Yamaha REV7 digital

reverb, Lexicon PCM60 digital reverb, Lexicon Prime Time

II, PCM 42 digital delays, DeltaLab harmonizer.

**Other Outboard Equipment:** Orban parametric EQs,

Orban De-esser, dbx 900 series gates and compressors,

dbx 160X compressors, UREI 1178 compressor, Valley Peo-

ple Dyna-Mites, Ashly stereo noise gates, SMPL Systems

SMPTE computer.

**Microphones:** Neumann U89, AKG 414, AKG 451, Senn-

heiser, EV, Shure, Beyer.

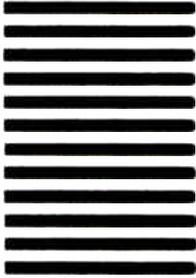




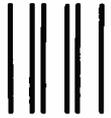
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**Mix Magazine**  
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**Clinton, Iowa 52735**

**Instruments Available:** Yamaha RX11 drum computer, Oberheim DMX drum computer, Yamaha DX7, Ensoniq Mirage, Roland Juno-60, Fender Rhodes, Simmons SDSS electronic drums, Pearl acoustic drums.  
**Rates:** Please call for rates.

••• **HIGHLAND STUDIOS**  
 5 West Pittsburgh St., Delmont, PA 15626  
 (412) 468-6661  
 Owner: Highland Studio Associates  
 Studio Manager: Mark S. Valenti

••• **HI-TOUCH STUDIOS**  
 also **REMOTE RECORDING**  
 10200 Owen Brown Rd., Columbia, MD 21044  
 (301) 596-6612  
 Owner: N.B. Tharp

**Extras:** Analog tracks SMPTE synced to 8 digital MIDI tracks and LinnDrum (be your own band!). Many instruments available. Complete production services. Record pressing. Cassette duplication. Video services. MIDI software.

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••• **INHOUSE STUDIO**  
 also **REMOTE RECORDING**  
 210 Sidney St., Cambridge, MA 02139  
 (617) 864-DEMO, 661-4153

Owner: Congressional Records, Inc.  
 Studio Manager: Stacie Smith-Collett  
 Engineers: Monty McGuire, Jim Wheaton.

**Dimensions of Studios:** 12 x 12.  
**Dimensions of Control Rooms:** Live end/Dead end 15 x 20.

**Tape Recorders:** Fostex B-16D, 16-track; Otari MX5050/MKIII, 8-track; Otari MTR-10, 2-track.

**Mixing Consoles:** Audioarts 3224 32 x 24, Roland Automation CPE-800 15 x 15.

**Monitor Amplifiers:** Yamaha, Crown, and Biamp.

**Monitor Speakers:** Tannoy M-1000 Super Reds, Yamaha



**INHOUSE STUDIO**  
 Cambridge, MA

NS10s, JBL 4312s, Auratone 5Cs.

**Echo, Reverb & Delay Systems:** Lexicon 700, Roland RE-201 tape-echo/reverb, Akai MIDI digital delay, Yamaha R-1000, Master Room Plate synthesizer, (2) Yamaha D1500 MIDI digital delay, Lexicon PCM-42EXs, Roland SDE-3000, Ursa Major Space Station, (2) Lexicon Prime Time, DeltaLab DL-4 and ADM 64 Effectron, Loit 440 delay/flanger, DeltaLab 1050ms Effectron Jr.s, Boss DE-200s, dbx-906 flanger.

**Other Outboard Equipment:** Eventide H949 harmonizer, Aphex II studio version, Aphex Compellors and type B Aural Exciters, Dynedige exciter, Gatex and Omni Craft 4 channel noise gates, Audioarts 1200 and Symetrix 501 Peak RMS compressor/limiters, Orban stereo synthesizers, (2) Audicarts 4100 Parametric EQ/Preamplifier, (2) Biamp 1/3 octave EQ MXR pitch transposer, Ibanez HD-1000, Valley People Dyna-Mite, Gatex, Ashly SC-33 stereo noise gate, MXR dual 1/3 octave EQ, (2) Echoplex tape echo.

**Instruments Available:** Yamaha DX7, Yamaha TX-816 rackmount digital synthesizers w/KX-5 remote, Roland MKS-80 Super Jupiter and programmer, Ensoniq Systems Emulators I and II, Oberheim OB-8, Oberheim Xpander and synthesizer expander module, Roland IX-3P and PG-800 programmer, Roland Vocoder Plus, Roland MKS-30

Planet-S and MKB-300 MIDI keyboard controller, Korg EX-800 synthesizer expander and remote, Akai S612 MIDI digital sampler w/MD280 sampler disk drive, LinnDrum, Oberheim DMX, Yamaha RX11, E-mu Systems SP12, 360 MIDI bass, IBM-XT with MIDI software, MSQ-700, MSQ-100 sequencers, SBX-80 sync box, and both proprietary and Roland MPU-401 MIDI processing.

**Video Equipment & Services:** Computer-controller MIX-to-PIX w/SMPTE and MIDI interface, IVC 825OU 3/4-inch, Magnavox 12-inch, 25-inch Sony monitor, Adams-Smith synchronizer

••• **IN LINE RECORDING**  
 Cinnaminson, NJ 08077  
 (609) 829-7457

Owner: Stephen A. McAleer

Engineers: Steve McAleer.

**Dimensions of Control Rooms:** 10 x 10.

**Tape Recorders:** Tascam MS-16 w/dbx 1-inch, 16-track; Sony digital PCM501ES processor, 2-track; Sony Super-Beta 1/2-inch VCR; TEAC V-406C cassette.

**Mixing Consoles:** NEOTEK Series I-recording, 16 x 4 x 2. **Monitor Amplifiers:** Haller DH-500, Yamaha R-500.

**Monitor Speakers:** JBL 4312, Infinity RS-10B, Auratone.

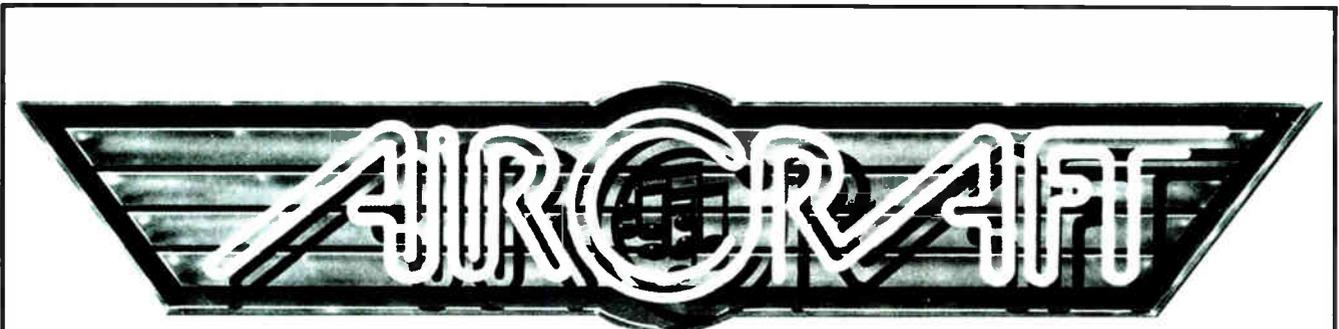
**Echo, Reverb & Delay Systems:** Lexicon PCM60 digital reverb, Lexicon PCM41 digital delay, DeltaLab 1050 digital delay.

**Other Outboard Equipment:** Ashly SC-52 compressor/limiter, Omni Craft GT-4A noise gate, Audio Control Octave graphic equalizer, Monster Cable, (2) Electronic Specialists ISO-21 Magnum A.C. isolators, (3) Yamaha MM-10 preamplifiers, (2) Tascam DX-8DS dbx N.R. units. **Microphones:** AKG C-414EB/P48, (2) Audio Technica 450D microphones (however, microphones are not primarily used; the various instruments are routed directly into the console.)

**Instruments Available:** Yamaha C7 7' 4" grand piano, Yamaha DX9 digital synthesizer, Roland IX-3P synthesizer, Yamaha RX15 digital drum computer, 360 systems digital MIDI-bass, Gibson Les Paul Standard guitar, Fender Telecaster guitar, Fender Precision bass, Acoustic G-120 amplifier, (2) Roland Cube-60 keyboard amps, Garcia classical guitar.

**Video Equipment & Services:** The "synthesizer" studio centers around the direct-into-console with processing approach with either yours or our instruments. Overall system noise and distortion is extremely low. Original compositions. Available on weekends.

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••• **INNER EAR RECORDING**  
also **REMOTE RECORDING**  
118-17 97th Ave., Richmond Hill, NY 11419  
(718) 849-5725  
Owner: Steven Vavagiakis  
Studio Manager: Steven Vavagiakis  
Engineers: Steven Vavagiakis, Matt Schottenfeld  
Dimensions of Studios: 24 x 20 w/ two iso booths  
Dimensions of Control Rooms: 20 x 18  
Tape Recorders: McIntosh 16 w/ Autolocator, Otari MX5050 3D, Tascam 40-4, Otari 5050B and Crown 2-track, Sony TC K81 and Technics M280 cassette decks.  
Mixing Consoles: Tangent Series 4 32 x 16 x 4 x 2.  
Monitor Amplifiers: (2) McIntosh 2100s, Crown DD-150 for cue system  
Monitor Speakers: UREI 811 As, MDM-4 near fields, Tannoy SRM12Es, Auratones, AKG K-140s.  
Echo, Reverb & Delay Systems: Ecoplate II reverb/ reversion plate, Eventide 910, Roland SDE-1000 and SDD 3000 DDLs, Lexicon PCM60 digital reverb.  
Other Outboard Equipment: 12 channels dbx noise reduction, 4 channel Dolby A noise reduction, (2) UREI compressor/limiters, 2 Orban 622B Parametric Equalizers, UREI 535 graphic EQ, Symetrix and OmniCraft noise gates, Eventide Harmonizer, Eventide 4L201 flanger, dual V15 turntable, Jensen transformer direct boxes.  
Microphones: Neumann tube SM69, tube KM56, KM86, Neumann KML, AKG 451, D12E, D707E, Electro-Voice RE-20, 1711, (2) Beyr-r 260 Ribbons, (4) Sennheiser 421s, Shure 57 and 58, Capps condenser, Sony ECM22P  
Instruments Available: Vintage Steinway grand, Fender Rhodes, Yamaha DX7, Emulator II, Sequential Circuits Pro-1, Oberheim DX, Simmons SDS-V Drum sets by Leedy, Slingerland, Gretsch and Sonor, (4) Dresden tympani, Mueser vitraphone, Leedy and Deagan xylophones, orchestra bells, Deagan chimes, Assorted percussion and sound effects.  
Video Equipment & Services: Anything required within 48 hours  
Rates: Call for brochure and rate sheet. Package deals available

••• **INTERFACE RECORDING**  
also **REMOTE RECORDING**  
2524 E. Scenic Dr., Bath, PA 18014  
(215) 837-1955  
Owner: Guy Bartolacci  
Studio Manager: Guy Bartolacci

••• **IRIS SOUND**  
also **REMOTE RECORDING**  
237 Main St., Royersford, PA 19468  
(215) 948-3448  
Owner: David Ivory  
Studio Manager: David Ivory

••• **JOE'S RECORDING STUDIO**  
also **REMOTE RECORDING**  
981 S. Broad St., Trenton, NJ 08611  
(609) 394-5637  
Owner: Vann Waller, Robyn Gately  
Studio Manager: Vann Waller

••• **KENNEDY MUSIC AND RECORDING**  
also **REMOTE RECORDING**  
5253 Montour St., Philadelphia, PA 19124  
(215) 533-2380  
Owner: David H. Kennedy  
Studio Manager: David H. Kennedy

# NORTHEAST STUDIOS



# 16 TRACK

••• **KNO STUDIO**  
84 N. Summit Ave., Patchogue, NY 11772  
(516) 475-7772  
Owner: Barry Knoedl  
Studio Manager: Barry Knoedl

••• **KNOCKOUT RECORDS**  
1401 N. George St., York, PA 17404  
(717) 843-4230  
Owner: Jerrold D. Duncan  
Studio Manager: Roy Smith II

••• **LAGRANGE STUDIOS**  
6315 LaGrange Ln., Baltimore, MD 21212  
(301) 377-7705  
Owner: Steve Mace  
Studio Manager: Steve Mace

••• **LAKEWOOD STUDIOS**  
also **REMOTE RECORDING**  
WNYK-FM S. Boulevard, Nyack, NY 10960  
(914) 358-3833  
Owner: R. Reitz  
Studio Manager: Scott "Woodman" Suckling

••• **CHARLES LANE STUDIOS**  
also **REMOTE RECORDING**  
7 Charles Ln., New York, NY 10014  
(212) 242-1479  
Owner: Michael F.I. Lynch  
Studio Manager: Cliff K. Petroll  
Engineers: Cliff Petroll, Flonan Paymer  
Dimensions of Studios: 20 x 30  
Dimensions of Control Rooms: 12 x 16  
Tape Recorders: Tascam 85-16B, 16-track; Otari 5050B, 2-track; Technics digital audio processor SU-110 2-track; Technics RS-B100, cassette; Nakamichi 582Z, cassette.  
Mixing Consoles: Soundtracs CM4400 28 x 24 w/ microprocessor controlled digital routing Stramp (portable) MX8500 18 x 16.  
Monitor Amplifiers: Crown DC-300A, Crown D-150, Stramp 8300  
Monitor Speakers: TAD, Auratones.  
Echo, Reverb & Delay Systems: Dynacord DRS-78 digital echo and reverb, DeltaLab CompuEffectron, Sound Workshop 242A reverb.  
Other Outboard Equipment: dbx 160 and 160X compressors, BSS DPR 402 compressor/limiter de-esser, Gate noise gates, Pultec EQP-1A equalizer, BSS AR116 direct boxes and BSS AR 130 Phasecheck system, Aphex Aural Exciter "Type C."  
Microphones: Neumann U47, AKG C12A, AKG C60, RCA 77DX, Beyr M88, Altec 633, Shure SM56, SM57, SM10, 565.  
Instruments Available: Hammond B3 organ, Fender Rhodes, Krakauer upright piano, Sunn and Fender amps, Ludwig drums.  
Video Equipment & Services: Panasonic AG-6200 VCR  
Rates: \$25-\$50/hr., call for details

••• **DICK LAPELL PRODUCTIONS, LTD**  
also **REMOTE RECORDING**  
250 W. 54th St. Ste 800, New York, NY 10019  
(212) 586-3700  
Owner: Dick and Dota LaPell  
Studio Manager: Dota LaPell

••• **MICHAEL LEVINE'S STUDIO**  
36 W. 38th St. 5th Fl., New York, NY 10018  
(212) 354-4125  
Owner: Michael Levine  
Studio Manager: David Baum

••• **LION'S DEN RECORDING STUDIOS**  
242 W. 30th St. Suite IIE, New York, NY 10001  
(212) 695-8140-1  
Owner: Bob Crawford, Josef Armillas  
Studio Manager: Bob Crawford

••• **LIPS MUSIC**  
also **REMOTE RECORDING**  
84 Kraft Ave., Bronxville, NY 10708  
(914) 961-9637  
Owner: Alan Hembergar  
Studio Manager: Brian O'Malley

••• **LOUDVILLE STUDIO**  
also **REMOTE RECORDING**  
P.O. Box 23, South Hadley, MA 01075  
(413) 527-3201  
Owner: Bruce Seifried  
Engineers: Bruce Seifried  
Dimensions of Studios: 10 x 12  
Dimensions of Control Rooms: 15 x 18  
Tape Recorders: Tascam 85-16B, 16-track; Ampex 351, 4-track; Tascam 3440, 4-track; Technics RS1520, 2 track; Sony PCM F-1, 2 digital; (3) Aiwa AD-F660, cassette.  
Mixing Consoles: Ramsa WR T820, 20 x 16; Roland 30 channel automated mixdown.  
Monitor Amplifiers: NYAL Moscode 300; SAE MKIII cm, Harman Kardon Citation II (tube/modified).  
Monitor Speakers: Tannoy SRM 12B; Auratones; AKG K240 headphones.  
Echo, Reverb & Delay Systems: Lexicon 200, Lexicon PCM60; Lexicon PCM41; tape echo; custom stereo spring system.  
Other Outboard Equipment: UREI 1176LN; dbx 160X; Valley People 430 Dyna-Mites; API 525 compressors; Aphex Exciter; GateX gates; EXR Exciter; dbx 150; Eventide Instant Phaser; Rane 2/1 octave EQ.  
Microphones: Neumann U67; Sennheiser MKH416, 441, 421; AKG 451; Countryman EM-101; RCA 44BX; Altec 626; Beyr M500; Shure SM57; Electro-Voice RE16; Western Electric 639; Crown PZM.  
Video Equipment & Services: Post-production audio for video.  
Rates: Flexible pricing schedule. Please inquire.

••• **M&M STUDIOS**  
32-6 Woodlake Rd., Albany, NY 12203  
(518) 452-1475  
Owner: Don Millard  
Studio Manager: Lawrence Moonan

••• **MAINFRAME PRODUCTIONS**  
55 Bethune St. #16B, New York, NY 10014  
(212) 691-6715  
Owner: Anton Sanko  
Studio Manager: Anton Sanko



**MANOR PRODUCTIONS**  
Red Bank, NJ

••• **MANOR PRODUCTIONS**  
also **REMOTE RECORDING**  
60 English Plaza, Red Bank, NJ 07701  
(201) 530-0040  
Owner: Phillip Bertola, Peter Bertola  
Studio Manager: Sal Bertolo  
Engineers: Phillip Bertola, Peter Bertola, Tim Hixon  
Dimensions of Studios: 30 x 40 studio room, 5 x 5 iso booth.  
Dimensions of Control Rooms: 14 x 16  
Tape Recorders: Otari MX70, 16 track; Otari MX50/50 BII 1/2 track; Tascam 122 cassette master, Kenwood KW

5060, mono 1/2-track; Technics RS-B12, stereo duping.  
**Mixing Consoles:** Yamaha RM2408, 24 x 8.  
**Monitor Amplifiers:** Crown 150, Crown 300, Kenwood DLD linear drive, (2) English E-50 quads.  
**Monitor Speakers:** ARI, Polk audio, E-V Sentry 500.  
**Echo, Reverb & Delay Systems:** Yamaha REV7, Yamaha D1500, Yamaha GC2020, Lexicon PCM 42 and 60.  
**Other Outboard Equipment:** dbx; Yamaha; Lexicon; Dolby; Technics duplicating decks; Tascam; access to most any outboard equipment, major music center on premises. Also, complete 400 watt PA system for rehearsals.  
**Microphones:** Shure, E-V, Neumann, AKG.  
**Instruments Available:** Yamaha grand piano, Pearl GLX Pro Line drums series w/Zildjian and Paiste cymbals, Takamine acoustic-electric guitar, Guild S65-D electric solid body guitar, G&L L-1000 bass; Ibanez blazer bass; Peavey T-40 bass; Lowrey organ; Sunn bass top and bottom; Juno TNT 130 bass amp; Mesa Boogie guitar amp; Juno-106 keyboard; Yamaha RX11 drum comp.; access to any instruments. DX keyboards available and most any series.  
**Video Equipment & Services:** SMPTE synchronizer.  
**Rates:** Please call Phil for rates on recording and rehearsal time.

••• MEGAPHONE

also REMOTE RECORDING

Stes. 200, 300, 45 Casco St., Portland, ME 04101  
 (207) 772-1222

Owner: Megaphone

Studio Manager: John Etnier

Engineers: John Etnier, John Stuart, Martin Gleitsman, Michael McInnis.

Dimensions of Studios: Studio A: 35 x 15.

Dimensions of Control Rooms: A 15 x 20; B 15 x 20; C 14 x 10, synthesizer control room: 10 x 12.

Tape Recorders: Otari MX-70 16-track; Otari 7800, 8-track; Otari MTR-12-2, 2-track; (2) Otari 5050BQII, 4 track; (5) Otari 5050, 2-track; Sony PCM-F1, 2-track.

Mixing Consoles: Sound Workshop 34B Diskmix 28 x 24, Tangent 3216, 21 x 16. Tangent 3216, 12 x 16.

Monitor Amplifiers: (2) Bryston 4Bpro, Yamaha 2002M, Crown 150.

Monitor Speakers: UREI 813B, Klipsch Heresy, Yamaha NS-10, others.

Echo, Reverb & Delay Systems: (4) Yamaha REV7, Lexicon PCM60, Eventide 969 Harmonizer, Lexicon PCM-42, Korg SDD-2000, Korg SDD-1000, Loft 440, Marshall Time modulator.

Other Outboard Equipment: Aphex Compellors, (2) dbx 160, Valley People Dyna-Mite, Valley People 610, Orban 536A EQ, Aphex C, Symetrix 522, much more

Microphones: B\*K 4006, AKG tube, Neumann 87 and 84, AKG 414, Crown PZM, and many more.

Instruments Available: (12) synthesizers, controlled by MIDI/SMPTE sequencing, (2) drum machines, Steinway grand piano, Hammond organ, Boogie amps, Leslie 925, Musser manmba, more.

Video Equipment & Services: Complete video layback and post, featuring JVC 8250 deck and Fostex synchronizers.

Rates: Vary from room to room.

••• METRO GNOME RECORDING STUDIO

RR #2, Bedford, NY 10506

Owner: Scott Harris

••• MIDNIGHT MODULATION

2211 Pine Ln., Saugerties, NY 12477

(914) 246-4761

Owner: Michael Bitterman

Engineers: Michael Bitterman.

Dimensions of Studios: 20 x 20.

Dimensions of Control Rooms: 10 x 8

Tape Recorders: Tascam 85-16B, 16-track; Tascam 80-8, 8-track; Otari 5050B, 2-track; Tascam 122 cassette 2-track; Sony PCM-501 digital 2-track.

Mixing Consoles: Sound Workshop 30.

Monitor Amplifiers: BGW 750B, Symetrix.

Monitor Speakers: JBL 4411 (control room); Klipsch Cornwall (studio); TOA cubes, Yamaha NS-10.

Echo, Reverb & Delay Systems: Ursa Major 8 x 32 digital reverb; Lexicon PCM41 digital delay, Effectron 1024, Marshall Time Modulator, Lexicon PCM70.

Other Outboard Equipment: dbx 160X limiter/compressor; UREI 1176LN limiter/compressor; DOD graphic EQ; Marshall Time Modulator, Valley People Dyna-Mite, Orban 622B parametric EQ, Aphex Aural Exciter.

Microphones: Neumann U87 (2); E-V RE20; Sennheiser 421 U (2); Shure SM57 (2), SM81 (2); Sony ECM 33, ECM 250; AKG 414 P48 EB; RCA 77DX; Crown PZMs.

Instruments Available: Yamaha grand piano, ARP 2600, LinnDrum computer, Yamaha DX7, Super Jupiter, Akai sampler, Yamaha CXSM computer.

Video Equipment & Services: VHS documentation of recording session. (Call for rates)

Rates: \$25/hr.

Extras: We offer full production services. We are songwriters and musicians and we can produce a session or album  
 —LISTING CONTINUED ON NEXT PAGE

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for you. We offer arrangers and musicians to fit your needs. Our new "California Room" serves many purposes and we know you'll find Midnight Mod a fun place to work. We have only raves about our studio—our clients are our best sponsors.

**Direction:** The most beautiful and relaxed studio in the Hudson Valley has had the top people record here. We have available the finest name musicians in Woodstock for your session. John Hall, The Band, The Fugs, Jules Shear, Artie Traum, John Sebastian and Gary Burke are just a few of our recent activity. The key to Woodstock recording is eclecticism—all styles from jazz folk-new wave-rock cabaret are all handled with individual style. We are here to service the songwriters and musicians. Our track record has proven this.

••• **MIRACLE SOUND PRODUCTIONS**

73-43 195 St., Fresh Meadows, NY 11366  
(718) 479-4389

**Owner:** Philip J. Molite  
**Studio Manager:** Nancy Molite  
**Engineers:** Matthew Molite  
**Dimensions of Studios:** 24 x 15  
**Tape Recorders:** Tascam 85 16B, 16 track, Otari 5050B, 2-track; Tascam 122 cassette, 2 track, Tascam 3300SX, 2-track  
**Mixing Consoles:** Soundcraft Model 600 24 x 8 x 2 x 16  
**Monitor Amplifiers:** JBL/UREI 6260 and 6230  
**Monitor Speakers:** TOA 380SE, Auratone T6b, Auratone cubes.

**Echo, Reverb & Delay Systems:** Lexicon 200, Ursa Major Space Station, Lexicon PCM41, Eventide Harmonizer H949, Roland Space Echo.

**Other Outboard Equipment:** Orban 526A de-esser, Symetrix 501 compressor dbx 160 compressor Aphex ComPELLOR, Symetrix SG 200 noise gates, EXR Exciter

**Microphones:** Neumann TLM 170, Sennheiser 421, Shure SM58 Audio Technica and others

**Instruments Available:** OBB, OBX, Prophet 5, Yamaha DX7, Oberheim Xpander, DSX and Roland MSQ 700 sequencers, LM 1 and LinnDrum computers, Garfield MiniDoc, Moog source, Minimoog, ARP 2600, Roland Vocoder SVC 350, plus misc MIDI accessories Fender Strat and Precision Bass, Music Man 212 amp, Emulator II w/library + hard disk, Linn 9000 w/disk drive, (2) Yamaha TX7s

**Rates:** On request

••• **MIRROR SOUND STUDIOS**

also **REMOTE RECORDING**  
1731 Cinnaminson Ave., Cinnaminson, NJ 08077  
(609) 829-9413

**Owner:** Ken Fordyce  
**Studio Manager:** Ken Fordyce

••• **MODERN WORLD MEDIA PRODUCTIONS**

also **REMOTE RECORDING**  
5219 Overhill Rd., Baltimore, MD 21207  
(301) 944-4242

**Owner:** Joel Peck  
**Studio Manager:** Steve Haskin

••• **MUSIC MASTER RECORDING**

35 W. Bayview Ave., Englewood Cliffs, NJ 07632  
(201) 585-2865

**Owner:** Alexander C. Lim  
**Studio Manager:** Alexander C. Lim

••• **MUSITECH PRODUCTIONS**

19 Huron Ave., Cambridge, MA 02138  
(617) 354-7088

**Owner:** Peter C. Johnson, Peter B. Bell  
**Studio Manager:** Tom Clark

••• **NEVESSA PRODUCTION**

also **REMOTE RECORDING**  
1 Artist Rd., Saugerties, NY 12477  
(914) 679-8848

**Owner:** Chris Andersen  
**Studio Manager:** Meldoy Hufler

••• **NEW BREED STUDIOS**

251 W. 30th St., New York, NY 10001  
(212) 714-9379

**Owner:** Stewart Lerman, Andrew Ebberbach  
**Studio Manager:** Stewart Lerman  
**Engineers:** Andrew Ebberbach, Stewart Lerman, David Kumin, Robin Danar, Indies.

**Dimensions of Studios:** 20 x 15, 14 x 12, 7 x 10  
**Dimensions of Control Rooms:** 20 x 15  
**Tape Recorders:** Fostex B-16D, 16 track; Otari 5050IIB, 2-track, Tascam 3440, 4-track; Nakamichi MR-1, cassette; JVC CR8250U ¼ inch video recorder; JVC BR6400U, ½ inch video recorder

**Mixing Consoles:** Ramsa 820, 20 x 16 x 2, Fostex 2050, 16 x 2.

**NORTHEAST STUDIOS**



**16 TRACK**



**NEW BREED STUDIOS**  
New York, NY

**Monitor Amplifiers:** BGW, Crown  
**Monitor Speakers:** E-V505, Yamaha NS 10M, Auratones  
**Echo, Reverb & Delay Systems:** Lexicon PCM70, Prime Time, Ursa Major, REV7

**Other Outboard Equipment:** Valley People Dyna-Mites, dbx 160, Symetrix

**Microphones:** Neumann 87, 47; (2) AKG 414, (2) SM81, (2) RE 20, AKG D12 E, Senn 421, 441, Beyer 500 Ribbon  
**Instruments Available:** Yamaha U3 piano, DX7, TX7, Linn, SP-12, RX 11.

**Video Equipment & Services:** Synchronous Technology "SMPL" SMPTE reader-generator, Fostex 4030, 4035 syn chronizer, lock-up ¼-inch VTR, ½-inch VTR. Video post production and audio for video sweetening

**Rates:** Please call

••• **NEW ENGLAND SOUND**

also **REMOTE RECORDING**  
P.O. Box 75, Medfield, MA 02052  
(617) 376-5619

**Owner:** Chris Johnson, Bryan Cetlin  
**Studio Manager:** Chris Johnson  
**Engineers:** Chns Johnson, Bryan Cetlin, James Phillips  
**Dimensions of Studios:** 20 x 15 x 8

**Dimensions of Control Rooms:** 10 x 15 x 8  
**Tape Recorders:** Otari MX 70, 16 track, Tascam 80 8, 8 track; Otari MX 5050B, 2-track; 3M M-56, 2-track; Nakamichi 7002XE, cassette; NAD 6040A cassette.

**Mixing Consoles:** Soundcraft 600 Series 24 x 16; Tangent (remote only) 1204, 16 x 4

**Monitor Amplifiers:** McIntosh 2100, Crown DC300 Ed cor headphone amplifier.

**Monitor Speakers:** Altec 604C, Klipsch Heresy, Auratones, Yamaha NS10s, Fostex TS-20 and AKG K240 head phones.

**Echo, Reverb & Delay Systems:** Lexicon PCM60, Lexicon PCM41, DeltaLab Effectron 256, DeltaLab Effectron 1024, MXR flanger doubler

**Other Outboard Equipment:** (2) Ashly SC33 compressors, (2) Ashly SC50 stereo noise gates, (2) MXR 31 band equalizers, MXR dual 15 band equalizer, ADC patch bay

**Microphones:** (2) E-V PL95, (10) Shure SM57, (2) Shure SM58, Beyer M500, Beyer M90, AKG 190E, AKG D12E, Neumann U87, Countryman direct box, (4) Kelsey direct box

**Instruments Available:** LinnDrum machine, Roland TR606 drum machine, Prophet V synth, Rhodes chroma synth, Arp Omni synth, 1958 Precision Bass, Yamaha GZ-12 guitar amp. Complete computer based MIDI keyboard set up available for an additional \$20/hr. (2) Yamaha TX7, Roland SX8P and Super Jupiter, Akai S6 12 sampler, and more)

**Video Equipment & Services:** Audio for video including, advertising, cable TV, and rock video

**Rates:** \$20/hr. 16-track, \$50/hr. remote 8-track.  
**Extras:** In-house production services available including: writing, arranging and studio musicians. Complete follow through from concept to finished product. Complete artist development including song selection, presentation, preparation of songs for recording, full record production and more.

**Direction:** Currently involved in the production of singles, EPs and albums for Boston area singers, songwriters and bands. We are experienced in all phases of songwriting, recording and album production. Send for our free cassette tape sampler and promotional package.

••• **NEW LONDON COUNTY RECORDING ARTS**

also **REMOTE RECORDING**  
229 Pequot Trail, Pawcatuck, CT 06379  
(203) 599-5293

**Owner:** Ron Drago  
**Studio Manager:** Red T. Cook



**NEW MUSIC STUDIOS**  
Agawam, MA

••• **NEW MUSIC STUDIOS**

2A Mansion Woods Dr., Agawam, MA 01001  
(413) 789-2264

**Owner:** Kirk Cirillo  
**Studio Manager:** Kirk Cirillo  
**Engineers:** Kirk Cirillo, Gary Maziarz, Rich Devlin.  
**Dimensions of Control Rooms:** 18 x 26 main room, 4 x 7 iso booth, 8 x 9 keyboard room, tuned room, floating floor, carpeted.

**Dimensions of Control Rooms:** 15 x 13 tuned room, floating floor.

**Tape Recorders:** Tascam MS 16 16 track, Otari 5050B II, 2-track

**Mixing Consoles:** Audioarts 8X 32 x 8 x 24 w/patch bay 320 pts

**Monitor Amplifiers:** Hafler P500s  
**Monitor Speakers:** RWD-L52 JBL ADS. All speakers wired with monster cable

**Echo, Reverb & Delay Systems:** Lexicon PCM70, Lexicon PCM60, Yamaha REV7

**Other Outboard Equipment:** Lexicon, HD, DeltaLab and DOD delays, Audio Digital TC 2 delay, LD1500 harmonizers (2); Ashly noise gates (2) SPII Exciters (4); Audioarts compressor/limiters (4); dbx 180 Type I 31 band ¼ octave graphs (2).

**Microphones:** AKG C414s, C451s; Sennheiser 441s, 421s; Electro Voice RE-20s, RE 10s, PL-20s, PL-10s, Crown PZM-160 (2); Shure 57s; Beyer M 500s. We use monster cable.

**Instruments Available:** Kawai GE1 acoustic grand; Memorymoog Plus, Juno 106, Source, CP-70B, DX7, TX 816, Matrix 12; E mu SP 12 drum machine; Linn Sequencer; MIDI bass; Apple Ie computer w/DX7 Pro and MIDI software, Marshall, Roland, Fender, Dean Markley studio amps; effects pedals; Simmons drums. We have an extensive DX7 sound library.

**Rates:** \$35/hr., block rates available and vary with project

**Extras:** We offer the following at additional rates: computer programming, keyboard programming, use of computer sound creation and MIDI programming. We have a MIDI supported keyboard and control room.

**Direction:** We are located in a private home and operate as a private studio. We keep a very relaxed atmosphere and offer a lounge, listening room and kitchen. Product knowledge and a dedication to the art of recording music is what we are all about.

••• **OAKWOOD RECORDING**

Box 185A RD 4, Millford, NJ 08848  
(201) 995-2824

**Owner:** Rob Attinello  
**Studio Manager:** Rob Attinello

••• ODYSSEY SOUND STUDIO

350 Chelsea Ave., Long Branch, NJ 07740  
(201) 870-3554

Owner: Thomas Maggio

Studio Manager: Thomas Maggio

Engineers: Thomas Maggio

Dimensions of Studios: 18 x 25.

Dimensions of Control Rooms: 15 x 25.

Tape Recorders: Tascam 85-16b w/dbx, 16-track; Ampex ATR 102, 2-track; Otari 5050, 8-track; Otari 5050B, 2-track; Tascam 44, 4-track; Tascam 52, 2-track; Eumig FL-1000, cassettes

Mixing Consoles: Soundcraft Series II/sweep EQ 24 x 16 x 8 x 2

Monitor Amplifiers: Kenwood LO-7s, Crown.

Monitor Speakers: B&W 801s, JBL 4411s, Auratone.

Echo, Reverb & Delay Systems: Lexicon 224X/LARC, H910 Harmonizer, FL 201 flanger, Effectron ADM-256, AKG-BX 10-11.

Other Outboard Equipment: Aphex II-S, UREI 1176 LNs, UREI 539s, Eventide Omnipressors, Orban 622-B EQ, Orban 516 de-esser, 30 channels dbx noise reduction, dbx 160X, Orban 245F stereo synth.

Microphones: Wide selection of AKG condenser and dynamic, Sennheiser, Beyr Sony, Shure, RCA, Crown

Instruments Available: LinnDrum, Yamaha C-3 grand piano, Hammond B-3/Leslie, Fender Rhodes, Slingerland drums, Yamaha DX7, Emulator II.

Rates: Available upon request.

••• PINE BROOK PROD. LTD.

500 Moodus Rd., East Hampton, CT 06424  
(203) 267-8655

Owner: Cliff Oliveira, Bob Russo

Studio Manager: Cliff Oliveira

••• POWER HOUSE RECORDING

413 Cooper St., Camden, NJ 08102  
(609) 963-0333

Owner: Nise Productions Inc

Studio Manager: Mike Nise

••• PRINCE ENTERPRISES

251 W. 30th St., New York, NY 10001  
(212) 736-1724

Owner: Igor Yahilevich

Studio Manager: Dave Cook

••• PULSE WAVE UNDERGROUND

SYNTH & RECORDING STUDIO  
19 Norwood Terr., Trumbull, CT 06611  
(203) 268-1018

Owner: John P. Mozzi

Studio Manager: John P. Mozzi

Engineers: John Mozzi, Ed McPadden.

Dimensions of Studios: 22 x 25 x 7

Dimensions of Control Rooms: 13 x 16 x 7.

Tape Recorders: MCI JH-100, 16-track, Otari MX 5050 MKIII-8, 8-track, Otari MX 5050 MKIII 2B, 2 track; TEAC V-417C, 2-track; Nakamichi BX 150, 2-track.

Mixing Consoles: Soundcraft 1600P 32 x 24

Monitor Amplifiers: Yamaha P2200, Yamaha P2100

Monitor Speakers: JBL 4411, Yamaha NS-10M.

Echo, Reverb & Delay Systems: Lexicon PCM60, Lexicon PCM70, (3) Korg SDD3000, (3) Korg SDD2000.

Other Outboard Equipment: (2) dbx 160X, dbx 166, Audioarts 4200A par. EQ, Korg DVP1 digital harmonizer, Orban 622B par. EQ, Orban 536 A de-esser, (2) Rane RE 27 EQs, U.S. Audio Gate.

Microphones: (2) AKG 414E, AKG D12E, (2) AKG 535, (2) Sennheiser 441, (7) Sennheiser 421, (2) Sennheiser 431, Sennheiser, AKG 222E

Instruments Available: Korg DW-8000, Korg EX-8000, Korg Mono/poly, Korg Trident, Oberheim OBX, Emulator II, Yamaha RX11, assorted MIDI gear, assorted percussion

Rates: On request.

••• READY OR NOT STUDIOS

799 Broadway, New York, NY 10003  
(212) 982-2406

Owner: Ron Johnson III

Studio Manager: Ron Johnson III

••• RECORDINGLY YOURS

70 High St., Saco, ME 04072  
(207) 282-6330, 284-4433

Owner: Harry Chamberlin

Studio Manager: Jaymie Chamberlin

••• RED ROCK RECORDING

RD #1 Box 208, Saylorsburg, PA 18353  
(717) 992-5777

Owner: Kent Heckman

Studio Manager: Lois Browsey

Engineers: Kent Heckman, Mark Heath

Dimensions of Studios: 9 x 12, 11 x 13

Dimensions of Control Rooms: 11 x 13

Tape Recorders: Sony/MCI JH24-16, 16-track (transformerless) with Autolocator III, Otari MX5050B, 2-track, (2) TEAC C3-RX cassette decks.

Mixing Consoles: Audioarts Engineering BX (transformerless) 24 X 8 X 2; Hill Multimix 16 x 4 x 2 submixer, 384 point patch bay

Monitor Amplifiers: Yamaha NS10, JBL 4425, Auratone, AKG K240 headphones, Fostex T20 headphones.

Monitor Speakers: Hafler DH 500; headphones: Nikko Alpha II

Echo, Reverb & Delay Systems: Lexicon 200 digital reverb, Lexicon PCM70 digital reverb and effects processor, Effectron 1024, Korg SDD-2000 sampling delay.

Other Outboard Equipment: Aphex Compellor, (4) Valley People Dyna-Mite noise gate/compressor/limiters, (2) dbx 160X compressors, dbx 180 noise reduction.

Microphones: Neumann U87, AKG 414, Shure SM81, SM57, Sennheiser 441, 421, Audio-Technica ATM 31, Stewart active direct boxes.

Instruments Available: A total MIDI system consisting of MacIntosh 512 computer with Imagewriter, Southworth Total Music software, E mu SP-12 turbo drum machine, and Yamaha DX7 with TX416 rack; LinnDrum, Yamaha U-1 acoustic piano, Mesa Boogie, Rockman, 1953 Les Paul, Rickenbacker 12 string, Ibanez guitars and basses.

Rates: 8-track \$30/hr., 16-track \$45/hr.

••• REEL TIME 15

15 Union St., New London, CT 06320  
(203) 444-1743

Owner: Tommy McKissick, Tommy Perrone

Studio Manager: Andre Danford, Dave Dennis

••• RESOLUTION

also REMOTE RECORDING

1 Mill St., The Chace Mill, Burlington, VT 05401

(802) 862-8881

Owner: Schubart, Taylor, Couture

Studio Manager: Michael Couture

••• RIK TINORY PRODUCTIONS

180 Pond St. Box 311, Cohasset, MA 02025  
(617) 383-9494

Owner: Rik Tinory

Studio Manager: Richard F. Tinory Jr.

••• ROAR PRODUCTIONS INC.

also REMOTE RECORDING

6655-H Dobbin Rd., Columbia, MD 21045

(301) 596-0600

Owner: Steven Rosch

Studio Manager: Gary Zeichner

••• ROOFTOP PRODUCTIONS

102 Greenwich Ave., New York, NY 10011  
(212) 741-5892

Owner: Russ Landau, Ken Mazur

Studio Manager: Russ Landau, Ken Mazur

••• ROUNDHOUSE STUDIOS

8 Grace Ave., Wolcott, CT 06716  
(203) 879-9871

Owner: Robert Taylor

Studio Manager: Joseph E. Miko

••• ROXY RECORDERS, INC.

648 Broadway 3rd Fl., New York, NY 10012  
(212) 475-6571

Owner: Roxy Recorders, Inc.

Studio Manager: Mike Frnese

••• S.S. SOUND STUDIOS

32 Rolling Lane, Trenton, NJ 08690  
(609) 587-2279

Owner: John Bailey, Dave Kalokitis

Studio Manager: Dave Kalokitis

••• SABER SOUND SYSTEMS, INC.

also REMOTE RECORDING

18 Dillon Ave., Port Jefferson Station, NY 11776  
(516) 928-7974

Owner: Shareholders

Studio Manager: Allen Varela

••• SAINTS & SINNERS SOUND STUDIO

also REMOTE RECORDING

432 Western Ave., Albany, NY 12203  
(518) 454-5278, 454-5178

Owner: College of Saint Rose Music Division

Studio Manager: Mary Anne Nelson

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••• SANCTUARY RECORDING STUDIOS  
31-A Roseland Ave., Caldwell, NJ 07006  
(201) 228-4084  
Owner: Vito Capurso, Joseph Borges, Richard Fezzi  
Studio Manager: Vito Capurso

••• SCHEMBRIVISION  
also REMOTE RECORDING  
2156 Stuy Ave., Bronx, NY 10473  
(212) 863-2986  
Owner: Salvador Schembrini  
Studio Manager: Jose Hinoposa, Sal Schembrini

••• SEAR SOUND  
235 W 46th St., New York, NY 10036  
(212) 582-5380  
Owner: Walter Sear  
Studio Manager: Bill Titus

••• SECOND STORY SOUND  
5 Wyngate Pl., Great Neck, NY 11021  
(516) 466-4075  
Owner: R. Greening  
Studio Manager: Fingrat Gizzelwald

••• SGAM RECORDING  
also REMOTE RECORDING  
84 Parkside Dr., Suffern, NY 10901  
(914) 368-0886  
Owner: Bill Sgamati  
Studio Manager: Bill Sgamati

••• SHUSTER SOUND  
also REMOTE RECORDING  
29 Burt Court, Valley Stream, NY 11581  
(516) 791-2985  
Owner: Bob Shuster  
Studio Manager: Bob Shuster  
Engineers: Bob Shuster  
Dimensions of Studios: 12.5 x 24  
Dimensions of Control Rooms: 9'5" x 15'

Tape Recorders: Tascam MS 16, 1 inch 16 track, Tascam 70HB, 1/2 inch 8 track, Scully 280, 7 inch 4 track, Scully 280, 1/4 inch 2 track, TEAC 3300S 1/4 track stereo, Akai GX220, 4 track stereo, JVC KD75, KDA77, KD10 cassette  
Mixing Consoles: Yamaha RM1608 16 x 8, Sony MX 20 8 x 4  
Monitor Amplifiers: H/H V800, Sansui AV8600  
Monitor Speakers: Custom Airtone/JBL, Yamaha NS 10M Visonik Davi 7000, Auratone 5C  
Echo, Reverb & Delay Systems: Grampian spring reverb, ART DR1 A digital reverb, Korg SDD1000 digital delay (2) Echoplex tape delay (original built-up type)  
Other Outboard Equipment: dbx 160 comp/limiter, Orban 245E stereo synth-sizer, Omni Craft GT 4 noise gates, Dolby noise reduction, Delta Graph EQ, URF1 digital metronome/clock, Akai CD D1 Compact Disc player, Technics SL1500 MKII turntable, Feeders contain an air conditioning free parking

Microphones: All major types of expensive new and vintage Neumanns, Shure, E-V, AKG, Sony, Boyer, etc. Also Jensen type direct boxes.  
Instruments Available: Baby grand piano, drums, amps  
Video Equipment & Services: 1/2 inch U-Matic, 1/2 inch JVC VHS, Sony TV monitors, Ikegami monitors, video duplication, film transfers  
Rates: Call for rates; by appointment only

••• SILVER LININGS, INC.  
also REMOTE RECORDING  
25 Huntington Ave., Boston, MA 02116  
(617) 262-9289  
Owner: Arklay F. King  
Studio Manager: Barbara Pfister

••• SID SOUND PRODUCTIONS  
also REMOTE RECORDING  
PO Box 5001, Seabrook, NJ 08302  
(609) 455-7354  
Owner: Jeff Duffield  
Studio Manager: George Duffield  
Extras: JBL 4311 monitors, mixers by E-V, AKG, Crown, TEAC decks, Sound Workshop console, digital delay by MXR, Lexicon limiters by Ashly, digital reverb by Yamaha, full percussion, Baldwin grand, Fender Rhodes, Juno 100 Prophet 5 real time cassette duplication, arrangers, and studio musicians  
Direction: Mostly involved in album and demo production. In 1989, will be increasing activity in single production

••• SID SOUND PRODUCTIONS OF FALMOUTH  
367 U.S. Route One, Falmouth, ME 04105  
Owner: Gregory C. Luck  
Studio Manager: Gregory C. Luck  
Engineers: Gregory C. Luck, Kirk Hughes  
Tape Recorders: Tascam MS 16, 16 track, TEAC 2340, 4 track  
Mixing Consoles: Yamaha MC1604 16 x 4  
Monitor Amplifiers: Hallett 500  
Monitor Speakers: Polk  
Echo, Reverb & Delay Systems: Advent Soundspacer 4 channel

••• SOUND INVESTMENTS RECORDING STUDIO  
also REMOTE RECORDING  
Rear 727 N. Sumner Ave., Scranton, PA 18504  
(717) 346-4299  
Owner: Thomas Borwick  
Studio Manager: Thomas Borwick

••• SOUND ON SOUND RECORDING  
also REMOTE RECORDING  
255 W 95th St., New York, NY 10025  
(212) 864-8112  
Owner: David Anlen  
Studio Manager: David Anlen  
Engineers: David Anlen, Wesley Derbyshire, Michael McCrackin  
Dimensions of Studios: 20 x 20  
Dimensions of Control Rooms: 12 x 12  
Tape Recorders: Tascam MS 16, 16 track, Otari MX 5050R2 2 track, Tascam 122, 2 (cassette)  
Mixing Consoles: Ramsa WR T820, 20 x 8 x 2  
Monitor Amplifiers: Crown DI50A  
Monitor Speakers: JBL 4401  
Echo, Reverb & Delay Systems: Roland SRV 2000 digital reverb (2) DeltaLab Comp. 4800, CE1700 NVM digital delays, (2) Korg SDD 2000 DDIs  
Other Outboard Equipment: (2) dbx 160 compressor/limiter (2) gates (each one is stereo), Roland Boss effects pedals, Microphones: (2) Neumann U87, Shure SM58, (4) Shure SM57, Shure SM81, Shure SM7  
Instruments Available: Yamaha SBC7000 electric guitar, Carvin X-amp, Yamaha electric grand piano, Yamaha DX7, Rhodes Polaris synthesizer, G&L electric bass, Axe and Whirlwind direct boxes, Oberheim DX drum machine, Yamaha OX7 sequencer  
Video Equipment & Services: Roland SBX 80 synchronizer (SMPTe, MIDI, timing bytes)  
Rates: \$25/hr. Block rates also available; call for details

••• SOUND POTENTIAL STUDIO  
also REMOTE RECORDING  
Box 1382, New London, NH 03257  
(603) 526-4579  
Owner: Gerald R. Putnam  
Studio Manager: Gerald R. Putnam

••• SOUND PRODUCTIONS OF FALMOUTH  
367 U.S. Route One, Falmouth, ME 04105  
Owner: Gregory C. Luck  
Studio Manager: Gregory C. Luck  
Engineers: Gregory C. Luck, Kirk Hughes  
Tape Recorders: Tascam MS 16, 16 track, TEAC 2340, 4 track  
Mixing Consoles: Yamaha MC1604 16 x 4  
Monitor Amplifiers: Hallett 500  
Monitor Speakers: Polk  
Echo, Reverb & Delay Systems: Advent Soundspacer 4 channel

# NORTHEAST STUDIOS



# 16 TRACK

••• SLOYER SOUND STUDIO  
719 W Broad St., Bethlehem, PA 18018  
(215) 691-5056  
Owner: William Sloyer  
Studio Manager: Gary Sloyer

••• THE SOUND CENTER  
52 Lily Pond Ln., Katonah, NY 10536  
(914) 232-7550  
Owner: Joseph Knowlton  
Studio Manager: Joseph Knowlton

••• SOUND COTTAGE  
also REMOTE RECORDING  
P.O. Box 513, Port Jefferson Station, NY 11776  
(516) 928-9397  
Owner: James Rattazzi  
Studio Manager: Irene Rattazzi

••• SOUND INVESTMENTS RECORDING STUDIO  
also REMOTE RECORDING  
Rear 727 N. Sumner Ave., Scranton, PA 18504  
(717) 346-4299  
Owner: Thomas Borwick  
Studio Manager: Thomas Borwick

••• SOUND ON SOUND RECORDING  
also REMOTE RECORDING  
255 W 95th St., New York, NY 10025  
(212) 864-8112  
Owner: David Anlen  
Studio Manager: David Anlen  
Engineers: David Anlen, Wesley Derbyshire, Michael McCrackin  
Dimensions of Studios: 20 x 20  
Dimensions of Control Rooms: 12 x 12  
Tape Recorders: Tascam MS 16, 16 track, Otari MX 5050R2 2 track, Tascam 122, 2 (cassette)  
Mixing Consoles: Ramsa WR T820, 20 x 8 x 2  
Monitor Amplifiers: Crown DI50A  
Monitor Speakers: JBL 4401  
Echo, Reverb & Delay Systems: Roland SRV 2000 digital reverb (2) DeltaLab Comp. 4800, CE1700 NVM digital delays, (2) Korg SDD 2000 DDIs  
Other Outboard Equipment: (2) dbx 160 compressor/limiter (2) gates (each one is stereo), Roland Boss effects pedals, Microphones: (2) Neumann U87, Shure SM58, (4) Shure SM57, Shure SM81, Shure SM7  
Instruments Available: Yamaha SBC7000 electric guitar, Carvin X-amp, Yamaha electric grand piano, Yamaha DX7, Rhodes Polaris synthesizer, G&L electric bass, Axe and Whirlwind direct boxes, Oberheim DX drum machine, Yamaha OX7 sequencer  
Video Equipment & Services: Roland SBX 80 synchronizer (SMPTe, MIDI, timing bytes)  
Rates: \$25/hr. Block rates also available; call for details

••• SOUND POTENTIAL STUDIO  
also REMOTE RECORDING  
Box 1382, New London, NH 03257  
(603) 526-4579  
Owner: Gerald R. Putnam  
Studio Manager: Gerald R. Putnam

••• SOUND PRODUCTIONS OF FALMOUTH  
367 U.S. Route One, Falmouth, ME 04105  
Owner: Gregory C. Luck  
Studio Manager: Gregory C. Luck  
Engineers: Gregory C. Luck, Kirk Hughes  
Tape Recorders: Tascam MS 16, 16 track, TEAC 2340, 4 track  
Mixing Consoles: Yamaha MC1604 16 x 4  
Monitor Amplifiers: Hallett 500  
Monitor Speakers: Polk  
Echo, Reverb & Delay Systems: Advent Soundspacer 4 channel

••• SOUND POTENTIAL STUDIO  
also REMOTE RECORDING  
Box 1382, New London, NH 03257  
(603) 526-4579  
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Studio Manager: Gerald R. Putnam

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Monitor Amplifiers: Hallett 500  
Monitor Speakers: Polk  
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367 U.S. Route One, Falmouth, ME 04105  
Owner: Gregory C. Luck  
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Tape Recorders: Tascam MS 16, 16 track, TEAC 2340, 4 track  
Mixing Consoles: Yamaha MC1604 16 x 4  
Monitor Amplifiers: Hallett 500  
Monitor Speakers: Polk  
Echo, Reverb & Delay Systems: Advent Soundspacer 4 channel

Microphones: Neumann, AKG  
Instruments Available: Kurzweil 250 digital keyboard/synth/sound sampler w/Macintosh 512 computer. Instrumental effects: chorus, phasing, flanging, stereo echo/delay, distortion  
Video Equipment & Services: Panasonic

••• SOUND SIDE RECORDING STUDIO  
53 Newbury St., Lawrence, MA 01840  
(617) 689-8071  
Owner: Carmen DiMarco  
Engineers: Jack Pinard, Ron Ronn, Carmen DiMarco  
Dimensions of Studios: 40 x 20  
Dimensions of Control Rooms: 12 x 20  
Tape Recorders: Tascam MS 16, 16 track/w autolocator; Tascam 52, 2 track master; TEAC W 44DC cassette recorders  
Mixing Consoles: Ramsa WR T820 20 x 16  
Monitor Amplifiers: Crown DC-300 and McIntosh  
Monitor Speakers: JBL 4411, Auratone  
Echo, Reverb & Delay Systems: Lexicon PCM60 digital reverb, Lexicon PCM41 digital delay  
Other Outboard Equipment: dbx compressors/limiters; Ibanez harmonizer/delay HD1500, Furman Sound QN 4 quad noise gates; Aphex Aural Exciter  
Microphones: Electro Voice RE20 (2), (2) Sennheiser MD431, (2) Sennheiser MD 421, Shure SM91, Shure SM94, AKG C-414/48, (4) Shure SM57, (2) Shure SM58  
Instruments Available: Vintage amplifiers: Vox, Fender, Ampeg, and Marshall; grand piano: Chickering; acoustic guitars: Ovation, Martin, Gibson, and many others; Fender Precision basses and Gibson basses  
Rates: \$40/hr

••• SOUND INVESTMENTS RECORDING STUDIO  
also REMOTE RECORDING  
Rear 727 N. Sumner Ave., Scranton, PA 18504  
(717) 346-4299  
Owner: Thomas Borwick  
Studio Manager: Thomas Borwick

••• SOUND ON SOUND RECORDING  
also REMOTE RECORDING  
255 W 95th St., New York, NY 10025  
(212) 864-8112  
Owner: David Anlen  
Studio Manager: David Anlen  
Engineers: David Anlen, Wesley Derbyshire, Michael McCrackin  
Dimensions of Studios: 20 x 20  
Dimensions of Control Rooms: 12 x 12  
Tape Recorders: Tascam MS 16, 16 track, Otari MX 5050R2 2 track, Tascam 122, 2 (cassette)  
Mixing Consoles: Ramsa WR T820, 20 x 8 x 2  
Monitor Amplifiers: Crown DI50A  
Monitor Speakers: JBL 4401  
Echo, Reverb & Delay Systems: Roland SRV 2000 digital reverb (2) DeltaLab Comp. 4800, CE1700 NVM digital delays, (2) Korg SDD 2000 DDIs  
Other Outboard Equipment: (2) dbx 160 compressor/limiter (2) gates (each one is stereo), Roland Boss effects pedals, Microphones: (2) Neumann U87, Shure SM58, (4) Shure SM57, Shure SM81, Shure SM7  
Instruments Available: Yamaha SBC7000 electric guitar, Carvin X-amp, Yamaha electric grand piano, Yamaha DX7, Rhodes Polaris synthesizer, G&L electric bass, Axe and Whirlwind direct boxes, Oberheim DX drum machine, Yamaha OX7 sequencer  
Video Equipment & Services: Roland SBX 80 synchronizer (SMPTe, MIDI, timing bytes)  
Rates: \$25/hr. Block rates also available; call for details

••• SOUND DESIGN RECORDING  
also REMOTE RECORDING  
Main Street Gallery—Main St., Brattleboro, VT 05301  
(802) 257-1555  
Owner: Simon Chalfoun, Billy Shaw  
Studio Manager: Simon Chalfoun  
Engineers: Bill Shaw, Joe Podlesny  
Dimensions of Studios: 28 x 30 (w/separate iso room)  
Dimensions of Control Rooms: 28 x 18  
Tape Recorders: Sony/MCI 24-16 16, 16 track wired for 24, Otari MK III, 8 track; Otari MX5050, 2 track, Revox A 77 2 track, Ampex 300, 2 track, Audiotronics Corp. AV132B, reel-to-reel duplicator; Otari DP 4050, high speed cassette duplicator, (10) Akai FX71, real time cassettes  
Mixing Consoles: Sound Workshop 30, 20 in x 20 out  
Monitor Amplifiers: Crown DC 300A, BGW, Soundcraftsmen  
Monitor Speakers: JBL 4311, custom air suspension system, Auratones  
Echo, Reverb & Delay Systems: Lexicon digital reverb, Effectron 1024, Master Room stereo reverb XL 210, Sound Workshop stereo reverb  
Other Outboard Equipment: (2) MXR flanger/doubler, Sound Workshop vocal doubler, (4) Ashly limiter/compressors, (2) Teletronix LA 2A tube compressor, (2) dbx Over Easy compressors, (2) stereo Ashly parametric EQs, EXR Exciter, (4) noise gates, Altec 27 band graphic EQ, MXR 15 band EQ, dbx noise reduction  
Microphones: Neumann U87, Neumann KM84, AKG 451, AKG SE 5E 10, AKG D 1000E, Sennheiser 441, Sennheiser 421, E V RE20, E V RE15, E V RE11, E V RE10, E V DS35, Shure SM85, Shure SM81, Shure SM58, Shure SM57  
Instruments Available: Yamaha grand piano 6' 6", Ludwig drum set, Oberheim DMX drum machine, Fender twin reverb, Fender Princeton, Crate amplifiers, Roland JX 3P synthesizer  
Rates: 16 track \$35/hr., 8, 2 track \$25/hr.; block book and prepay discounts available

••• SOUND INVESTMENTS RECORDING STUDIO  
also REMOTE RECORDING  
Rear 727 N. Sumner Ave., Scranton, PA 18504  
(717) 346-4299  
Owner: Thomas Borwick  
Studio Manager: Thomas Borwick

••• SOUND ON SOUND RECORDING  
also REMOTE RECORDING  
255 W 95th St., New York, NY 10025  
(212) 864-8112  
Owner: David Anlen  
Studio Manager: David Anlen  
Engineers: David Anlen, Wesley Derbyshire, Michael McCrackin  
Dimensions of Studios: 20 x 20  
Dimensions of Control Rooms: 12 x 12  
Tape Recorders: Tascam MS 16, 16 track, Otari MX 5050R2 2 track, Tascam 122, 2 (cassette)  
Mixing Consoles: Ramsa WR T820, 20 x 8 x 2  
Monitor Amplifiers: Crown DI50A  
Monitor Speakers: JBL 4401  
Echo, Reverb & Delay Systems: Roland SRV 2000 digital reverb (2) DeltaLab Comp. 4800, CE1700 NVM digital delays, (2) Korg SDD 2000 DDIs  
Other Outboard Equipment: (2) dbx 160 compressor/limiter (2) gates (each one is stereo), Roland Boss effects pedals, Microphones: (2) Neumann U87, Shure SM58, (4) Shure SM57, Shure SM81, Shure SM7  
Instruments Available: Yamaha SBC7000 electric guitar, Carvin X-amp, Yamaha electric grand piano, Yamaha DX7, Rhodes Polaris synthesizer, G&L electric bass, Axe and Whirlwind direct boxes, Oberheim DX drum machine, Yamaha OX7 sequencer  
Video Equipment & Services: Roland SBX 80 synchronizer (SMPTe, MIDI, timing bytes)  
Rates: \$25/hr. Block rates also available; call for details

••• SOUND POTENTIAL STUDIO  
also REMOTE RECORDING  
Box 1382, New London, NH 03257  
(603) 526-4579  
Owner: Gerald R. Putnam  
Studio Manager: Gerald R. Putnam

••• SOUND PRODUCTIONS OF FALMOUTH  
367 U.S. Route One, Falmouth, ME 04105  
Owner: Gregory C. Luck  
Studio Manager: Gregory C. Luck  
Engineers: Gregory C. Luck, Kirk Hughes  
Tape Recorders: Tascam MS 16, 16 track, TEAC 2340, 4 track  
Mixing Consoles: Yamaha MC1604 16 x 4  
Monitor Amplifiers: Hallett 500  
Monitor Speakers: Polk  
Echo, Reverb & Delay Systems: Advent Soundspacer 4 channel

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Mixing Consoles: Yamaha MC1604 16 x 4  
Monitor Amplifiers: Hallett 500  
Monitor Speakers: Polk  
Echo, Reverb & Delay Systems: Advent Soundspacer 4 channel



**SOUNDSCAPE RECORDING STUDIO**  
Poughkeepsie, NY

(3) Shure 57, AKG (the tube)  
Instruments Available: Atnepeg B-15, Rhodes 73 suitcase, Simmons SDS-9 SDS 1, Cosmic Percussion acoustic 5 piece kit, ARP Q marlet  
Rates: \$35/hr. (+ 5 hours) \$25/hr (over 5 hours), block rate \$25/hr (10+ hr more)

••• SPICER PRODUCTIONS, INC.  
also REMOTE RECORDING  
1708 Whitehead Rd., Baltimore, MD 21207  
(301) 298-1200  
Owner: William H. Spicer, Lynn M. Spicer

••• THE STAR STUDIO  
also REMOTE RECORDING  
75 Webster St. (rear), Worcester, MA 01608  
(617) 756-8890  
Owner: Jonathan Rezaehelsson  
Studio Manager: Tracy Gaumond

••• STAR TRACK  
also REMOTE RECORDING  
14 Laurel St., Putnam, CT 06260  
(203) 928-9554  
Owner: Ray Miskalazich  
Studio Manager: Ray Miskalazich

••• STARTRAX PRODUCTIONS  
162-11 76th Ave., Flushing, NY 11366  
(718) 380-2697  
Owner: Barry Hawkins  
Studio Manager: Barry Hawkins

••• STRATA STUDIOS  
1215 MacDade Blvd., Folsom, PA 19033  
(718) 237-8134  
Owner: Dennis Nardi  
Studio Manager: Dennis Nardi

••• STUDIO 44  
also REMOTE RECORDING  
44A Broadway, Mantua, NJ 08051  
(609) 468-5772  
Owner: Phil Vitale, Anne Cain  
Studio Manager: Mike Cain

••• STUDIO NEW ENTRY  
12 Crown Ct., Gaithersburg, MD 20878  
(301) 840-1422  
Owner: James P. Nally  
Studio Manager: Don Smallwood

••• STUDIO NORTH  
also REMOTE RECORDING  
P.O. Box 404, Fallston, MD 21047  
(301) 879-8054  
Owner: Pete Hagageorge, George Hagageorge, Stephen Palmieri  
Studio Manager: Stephen Palmieri  
Engineers: Stephen Palmieri, George Hagageorge, independents welcome  
Dimensions of Studios: (A) 22 x 20, (B) 10 x 12  
Dimensions of Control Rooms: 22 x 18  
Tape Recorders: Fostex B-16D, 16-track, Otari 5050 MKIII, Fostex 4050 auto limiter 8 track, Revox PR 99, 2 track, TEAC Z 5000, cassette synchronizer available.  
Mixing Consoles: Soundcraft 600 Series 32



**STUDIO NORTH**  
Fallston, MD

Monitor Amplifiers: Crown DC 300A Series II; Crest 1001 Rane HC 6.  
Monitor Speakers: JBL 4311, Yamaha NS-10M; Auratones Echo, Reverb & Delay Systems: Eventide SP 2016, Lexicon PCM41, DeltaLab ADM 1024 ADM 256, Yamaha R 1000

Other Outboard Equipment: (2) Valley People Dyna Mites, Aphex Aural Exciter, Symetrix 511 noise reduction, Symetrix 501 comp/limiter, Orban de-esser, Tascam parametric EQs, Rane GE 14 EQ, Omni Craft noise gates  
Microphones: Neumann U87, (3) Sennheiser 421; Crown PZM AKG D12E; Shure 57, 58, 85; E V PLII; (2) Audio Technica ATM 831, Countryman 101, DI, Neumann U47, AKG 460B

Instruments Available: Emulator II; Yamaha DX7, Oberheim Xpander, OB 8, DSX, DMX, Prophet 2000; Fender guitars and basses; Marshall amplifiers; Vox amplifiers, Roland Octapad.  
Rates: Available upon request

••• STUDIO NORTHEAST  
264 Reed St., Manchester, NH 03102  
(603) 623-3479  
Owner: Ray Grimard  
Studio Manager: Ray Grimard

••• STUDIO 3  
74 Elm St. P.O. Box 8643, Portland, ME 04104  
(207) 772-4446  
Owner: Tom Blackwell, Tim Tierney  
Studio Manager: Tim Tierney  
Engineers: Tom Blackwell  
Dimensions of Studios: 30 x 25  
Dimensions of Control Rooms: 15 x 20  
Tape Recorders: Tascam 85 16B, 16-track; Tascam 40 8, 8 track, Otari 5050B, 2-track; Tascam 22 2, 2 track; Tandberg 3014, cassette  
Mixing Consoles: Amek/TAC Scorpion, 20 in x 8 out.  
Monitor Amplifiers: McIntosh, Ad Com, Dynacc  
Monitor Speakers: Klipsch Heresy, Aura Clones, AKG, Koss and Pioneer headphones  
Echo, Reverb & Delay Systems: Effectron II 1024, Lexicon PCM02, Orban 111B, Loft 450EM  
Other Outboard Equipment: Valley People Dyna Mite limiter/gates, dbx 163 compressors, Orban de-esser, LoTech TS 1 23 channels of dbx noise reduction.  
Microphones: AKG, Sennheiser, Shure, Beyer, E V, TEAC  
Instruments Available: Yamaha CP-70B electric grand piano, Slingerland drums, Kimball grand piano, Linn 9300, Roland JX 3P.  
Rates: 16 track \$40/hr., 2 and 8 track \$25/hr.

••• STUDIO X  
47 Ethelbert Pl., Ridgewood, NJ 07450  
(201) 444-9147  
Owner: Bill Tesar, Rave Tesar  
Studio Manager: Bill Tesar  
Engineers: Rick Reinele, Rave Tesar, Bill Tesar  
Dimensions of Studios: (A) 17 x 12, (B) 15 x 12, isg booth 7 x 7.  
Dimensions of Control Rooms: 15 x 9  
Tape Recorders: Otari MX-70, 16 track, Otari MKIII 5050, 8 track Dokorder 1140, 4 track; Tascam 234 cassette, 4-track Technics 1520, 2-track; Sony F-1, 2 track; (2) Tascam 122, cassette.  
Mixing Consoles: Amek Scorpion 32 x 8 x 16  
Monitor Amplifiers: Crown, BGW  
Monitor Speakers: JBL 4313, Yamaha NS 10, E V 100, Auratones  
Echo, Reverb & Delay Systems: AMS RMX 16, AMS DMX 1-80s, Lexicon PCM70, Lexicon PCM42, (2) Lexicon  
—LISTING CONTINUED ON NEXT PAGE



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- SEN. 441u3 ----- 299
- EY SENTRY  
or 100el -- 359  
or 500

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• C.D.—IHF—PRO  
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con PCM41s, Yamaha REV7, ART DR-1, Ecoplate.  
**Other Outboard Equipment:** Eventide 910 Harmonizer, Vocoder, dbx 216 noise reduction w/310 cards, (6) Valley People Dyna-Mites, Drawmer dual signal gates, (2) dbx 160X comp/limiters, (2) dbx 160 comp/limiters, dbx 165-A comp/limiter, Orban 622B EQ, MXR dual 15 band EQ, Dr. Click, SBX-80, MX-1 trigger.  
**Microphones:** Assorted Neumann, AKG, E-V, Sennheiser, Shure, Sony, Countryman DIs.  
**Instruments Available:** Emulator II, E-mu SP-12, Simmons SDS-7 and SDS-V, LinnDrum, DMX, Yamaha RX11, Yamaha TX816, Yamaha DX7, Kiam concert grand piano, Fender Rhodes, Korg Poly 6, OB-8, Prophet 5, Minimoog, Slingerland drums; Marshall, Fender, Yamaha amps.  
**Rates:** Call for rates.

••• **SUPER SOUND STUDIOS**  
 c/o Jeff Gaul, Pelham, NY 10803  
 (914) 738-3988  
 Owner: Jeff Gaul

••• **THIRD STORY RECORDING**  
*also REMOTE RECORDING*  
 5120 Walnut St., Philadelphia, PA 19139  
 (215) 747-1200  
 Owner: John O. Wicks III, Scott M. Herzog  
 Studio Manager: Alexandra M. Scott

••• **THURSDAY PRODUCTIONS**  
*also REMOTE RECORDING*  
 189 Norman Rd., New Rochelle, NY 10804  
 (914) 235-7505  
 Owner: Daniel M. Welsh  
 Studio Manager: Susan J. Welsh  
 Engineers: Daniel M. Welsh, David C. Moran.  
**Dimensions of Studios:** 23 x 16 w/moveable ceiling to floor gobos, 11 x 6 drum booth with floating floor.  
**Dimensions of Control Rooms:** 12 x 11.  
**Tape Recorders:** Tascam 85-16 full dbx, 16-track; Tascam 80-8 full dbx, 8-track; Ampex 440-C mono, 2-, 4-track; Otari 5050 MKII, 2-track; Otari 5050 B, mono; Tascam 122, cassette; Sony TCM 5000, cassette (mono).  
**Mixing Consoles:** Tascam M16, 24 x 8; Carvin (remote board) MX 1202, 12 x 2.  
**Monitor Amplifiers:** McIntosh 2120, Crown D150, JVC JA 541.  
**Monitor Speakers:** JBL 4312, Auratones.  
**Echo, Reverb & Delay Systems:** Lexicon PCM60, Lexicon Prime Time, Master-Room XL305, Orban stereo reverb, MXR digital delay II w/full memory.  
**Other Outboard Equipment:** dbx limiter/comp, UREI limiters, Ashly Parametric EQ, Orban 245F, Aphex Aural Exciter B, MXR graphic EQ, Valley People line amps.  
**Microphones:** 414s, RE20, 441s, 58s, 57s, SM80, PZMs.  
**Instruments Available:** Customized Baldwin upright piano, Yamaha DX7, Synergy, Roland Juno 106, Simmons drums, E-mu Drumulator, Ludwig drums, full kit (3) snares.  
**Rates:** Available upon request, block discounts available.

••• **TRACK RECORDERS, INC.**  
 8226 Georgia Ave., Silver Spring, MD 20910  
 (301) 589-4349  
 Owner: Mark Greenhouse  
 Studio Manager: Doug Percival  
 Engineers: Mark Greenhouse, Jim Crenca, John Brittain, Ron Freeland, Josh Schneider.  
**Dimensions of Studios:** 25 x 40.  
**Dimensions of Control Rooms:** 15 x 25.  
**Tape Recorders:** 3M M56, 16-track; Scully 280, 2-track (2); TEAC 3340, 4-track; (4) Technics M205 cassette, Eumig FL 1000 cassette.  
**Mixing Consoles:** Neve 8036 16 x 8 x 16.  
**Monitor Amplifiers:** Crown, SAE.  
**Monitor Speakers:** JBL 4320, JBL 4311B, JBL L100, Auratone, Neve.  
**Echo, Reverb & Delay Systems:** Lexicon 200 digital reverb, Lexicon PCM70, Lexicon 200, EMT plate reverb, Eventide Harmonizer, Lexicon Prime Time, DeltaLab Effectron ADM 256, Fix flanger/doubler, live chamber.  
**Other Outboard Equipment:** UREI LA-3A compressor/limiters; UREI 1176 compressor/limiters; UREI 565 filter set; Pultec EQ-1A3s, Kexep noise gates, Dolby A noise reduction on all channels.  
**Microphones:** Neumann U87s, KM85s, KM84; AKG 414EBs, AKG D12E; Sennheiser 421, MD441s; Shure SM57s, SM58s; Beyers M500.  
**Instruments Available:** Kawai 9' concert grand piano, Fender Rhodes piano, Hammond B3 with Leslie cabinet, Prophet 5 synthesizer, Max/Morph synthesizer, Roland string synthesizer, instrument amps by Fender, Music Man, Ampex and Mesa Boogie, Camco studio drums, Linn LM-1 drum computer. Other instruments available on a rental basis.  
**Video Equipment & Services:** Information available upon request.  
**Rates:** \$60/hr., bulk rates available.

••• **TRAKWORKS**  
 3350 Broadway, Buffalo, NY 14227  
 (716) 681-8113  
 Owner: V. Cirilli, D. Rogelski  
 Studio Manager: V. Cirilli, D. Rogelski

# NORTHEAST STUDIOS



# 16 TRACK

••• **TRAVEL AGENCY**  
 7105 Holly Ave., Takoma Park, MD 20912  
 (301) 588-9639  
 Owner: Michael Romero  
 Studio Manager: Michael Romero

••• **TREE BEAR RECORDING**  
 584 8th Ave., New York, NY  
 (212) 302-5756  
 Owner: Samuel Tam Claiborne  
 Studio Manager: Samuel Tam Claiborne  
 Engineers: John Hechtman, Randy Lowman, Samuel Tam Claiborne  
**Dimensions of Studios:** 10 x 20 x 12.  
**Dimensions of Control Rooms:** 10 x 7 x 12.  
**Tape Recorders:** Tascam 38, 8-track; Otari MTR 70, 16-track; Nakamichi BX 300, 2-track; Tascam 42, 2-track; Tascam 122, 2-track.  
**Mixing Consoles:** Ramsa WTR 20, 20 x 16 x 2.  
**Monitor Amplifiers:** Yamaha, Phase Linear, Hafler  
**Monitor Speakers:** TOA, JVC.  
**Echo, Reverb & Delay Systems:** Roland, Yamaha, Korg, Lexicon, Eventide, Boss.  
**Other Outboard Equipment:** Gatex, Scamp Rack, Rock Iron, Digital Effects controller, Macintosh computer w/"Total Music" software/hardware package, custom queuing system, custom True Star ground wiring/patch bay, Monster Cable mic and instrument cables  
**Microphones:** AKG 414s, D12s, Shure SM57, 58, 87, Fender P2s  
**Instruments Available:** DX7, Mirage, CZ-101, Oberheim DX, Collection of vintage guitars and basses featuring Gibson and Danelectro, Peavey and Acoustic bass amps, Fender guitar amps, Leslie cabinet, Sonor drums w/Radio King snare. Many guitar effects boxes, exotic percussion, many third world instruments.  
**Rates:** Project dependent, call.

••• **TREE FROG PRODUCTIONS**  
*also REMOTE RECORDING*  
 Box 360, Hollis Center, ME 04042  
 (207) 929-5415  
 Owner: Tim McLaughlin  
 Studio Manager: Sean Canton

••• **TRIPLE "A" STUDIOS**  
*also REMOTE RECORDING*  
 236 Walnut St., So. Amboy, NJ 08879  
 (201) 721-5126  
 Owner: Martin A. Ruzsala  
 Studio Manager: Martin A. Ruzsala

••• **TRS AUDIO SERVICES**  
*also REMOTE RECORDING*  
 1116 W. 29th St., Erie, PA 16508  
 (814) 864-2308  
 Owner: Keith Vesitocco, John Mazza  
 Studio Manager: Dominic Veshecco

••• **TURTLE BEACH RECORDINGS**  
 1912 Alcott Rd., York, PA 17402  
 (717) 757-6344  
 Owner: Roy R. Smith  
 Studio Manager: Tim Pertomper

••• **TWANG RECORDING STUDIO**  
*also REMOTE RECORDING*  
 1116 W. 29th St., Erie, PA 16508  
 (814) 864-2308  
 Owner: John Mazza, Keith Veshecco  
 Studio Manager: Dominic Veshecco

••• **UNITED MASTERWORKS RECORDING CO. LTD.**  
*also REMOTE RECORDING*  
 Canaan Pl., Allendale, NJ 07401  
 (201) 848-0468  
 Owner: Bob Chapman  
 Studio Manager: Ed Chapman

••• **WATER-WHEEL-MUSIC**  
 130 Griswold St., Glastonbury, CT 06033  
 (203) 633-6940  
 Owner: David Budnes  
 Studio Manager: David Budnes

••• **WAVELENGTH SOUND**  
 12 E. 32nd, New York, NY 10016  
 (212) 686-8687  
 Owner: Todd Hembel  
 Studio Manager: Steve Zoyes

••• **WENDELL RECORDING STUDIO**  
 Lockhill Rd., Wendell, MA 01379  
 (617) 544-6466  
 Owner: Jeffrey Bauman

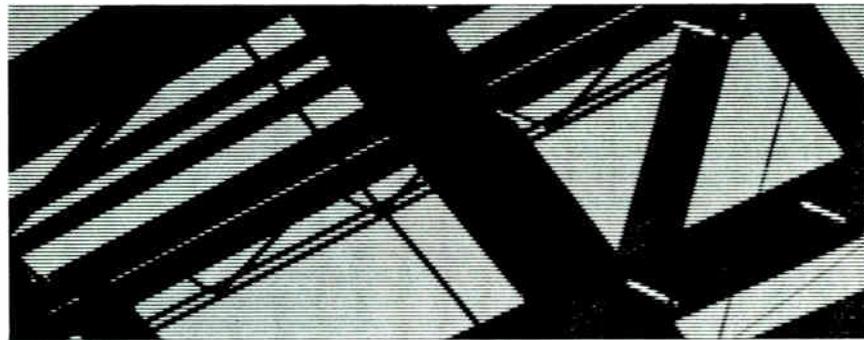
••• **WESTRAX RECORDING**  
 484 W. 43rd St., New York, NY 10036  
 (212) 947-0533  
 Owner: Peter Link  
 Studio Manager: Bob Lowe  
 Engineers: Jesse Plumley, Jeremy Harris, Todd Anderson.  
**Dimensions of Studios:** 17 x 24 w/iso vocal and drum booth  
**Dimensions of Control Rooms:** 17 x 20.  
**Tape Recorders:** Tascam 85-16B w/auto locator and dbx, 16-track; Otari MKIII, 8-track w/dbx; Otari MTR 12 1/2-inch 30 ips, 2-track; Technics 1520, 2-track w/dbx; (2) Studer/Revox A-77, 2-track w/dbx; (2) Tascam 122 cassette.  
**Mixing Consoles:** Sound Workshop series 30 36 x 16.  
**Monitor Amplifiers:** Hafler 220.  
**Monitor Speakers:** JBL 4313B, Auratones.  
**Echo, Reverb & Delay Systems:** (2) Yamaha REV7s, Ecoplate III, Lexicon PCM42, Korg SDD 2000.  
**Other Outboard Equipment:** dbx 160X compressor/limiter, UREI 1176 LN peak limiter, Drawmer noise gates, Orban 622B parametric equalizer MIDI recorder, IBM PC/AT w/Octave plateau 64-track sequencer/editor software.  
**Microphones:** Neumann U87, AKG C-12As (tube), AKG 414s, AKG 535s, AKG 451, E-V RE20, Sennheiser 421, Shure SM57.  
**Instruments Available:** Yamaha 6' grand piano, Gretsch drums, synthesizers: Yamaha DX7, TX816, Korg Poly 800, CZ-101, Oberheim OBXA, LinnDrum, Simmons snare.  
**Rates:** Call for rates. Block discounts available.

••• **WIDENER UNIVERSITY RECORDING STUDIO**  
*also REMOTE RECORDING*  
 14th & Chestnut Sts., Chester, PA 19013  
 (215) 499-4338  
 Owner: Widener University  
 Studio Manager: John A. Vanore  
 Engineers: Terry Hoffman, John Vanore.  
**Dimensions of Studios:** 40 x 50 x 16 (tiered floor and ceiling)  
**Dimensions of Control Rooms:** 18 x 10.  
**Tape Recorders:** Otari MX 70, 16-track; Otari 5050B, 8-track; Otari 5050B, 2-track; Technics 1500, 2-track; Sony digital 701, 2-track.  
**Mixing Consoles:** NEOTEK 1E 22 x 16.  
**Monitor Amplifiers:** Hafler, Crown, Yamaha.  
**Monitor Speakers:** Eastern Acoustics, Yamaha, JBL.  
**Echo, Reverb & Delay Systems:** Yamaha REV7, Lexicon PCM60, Yamaha R-1000, (2) Lexicon PCM42, Ursa Major Star Gate 626, Roland SDE-1000.  
**Other Outboard Equipment:** Valley People Gain Brain, Valley People Kexep, Orban 424 compressor/limiter, Symetrix 522, Ashly parametric equalizer, Aphex Compellor, Acoustilog Image Enhancer, dbx for multi-track, Dolby A for 2-track.  
**Microphones:** Neumann TLM-170, Neumann U87, Neumann KM84, AKG The Tube, AKG 414/P48, AKG 224, AKG 222, AKG 202, AKG D-12, RCA 77DX, RCA 44, RCA BK-11, Sony C-37P, Sony 989, Sony ECM-56, Sennheiser 421, E-V RE-20, Crown PZM, Beyers M-500, Countryman D-box.  
**Instruments Available:** Baldwin grand piano, Fender Rhodes piano, Yamaha pi-15 digital piano, Yamaha DX7 digital synthesizer, drum set, tympani, xylophone, instrument amplifiers.  
**Video Equipment & Services:** Studio is suitable for a video shoot.  
**Rates:** Call.

••• **WINGS AS EAGLES RECORDING**  
 151 Keeley Ave., Warwick, RI 02886  
 (401) 738-6914  
 Owner: Bill Montella Jr.  
 Studio Manager: Bill Montella Jr.

••• **WIZARD WORKS STUDIOS**  
*only REMOTE RECORDING*  
 2124 Saranac St., Adelphi, MD 20783  
 (301) 434-0537  
 Owner: Bill (Scruffy) Harrison  
 Studio Manager: Michael S. Glaser

# NORTHEAST STUDIOS



# 24 TRACK

••••• AAA RECORDING STUDIO  
130 W. 42nd St. Rm. 552, New York, NY 10036  
(212) 221-6627  
Owner: Fred Vargas  
Studio Manager: Mike Dacek

••••• A STEP ABOVE RECORDING  
1731 W. 3rd St., Brooklyn, NY 11223  
(212) 686-2487  
Owner: D'Exile Inc.  
Studio Manager: Joe Manzella

••••• ACTIVE SOUND PRODUCTIONS  
also REMOTE RECORDING  
314 "C" St., Boston, MA 02127  
(617) 269-0104  
Owner: Larry Lessard

••••• A/D PRODUCTIONS  
2 W. 45th St., New York, NY 10036  
(212) 302-3626

Owner: Richard Dysinger, Greg Arnold  
Studio Manager: Richard Dysinger  
Engineers: Richard Dysinger, Greg Arnold  
Tape Recorders: 3M 24-track, 3M 4-track, 3M 2-track  
Mixing Consoles: Harrison 3232 32 x 32  
Monitor Amplifiers: Crown, Hafler  
Monitor Speakers: Westlakes, Yamaha NS-10Ms, Auratone

Echo, Reverb & Delay Systems: Lexicon 200, Lexicon PCM70, ART 01A, Yamaha D 1500  
Other Outboard Equipment: Dyna-Mites, dbx 160s  
Microphones: Neumann U87, AKG 414, Sennheiser 421, E-V RE20.

Instruments Available: Baldwin grand piano, plus all synthesizers.

Video Equipment & Services: Video lock-up available, cue lock and SBX 80 SMPTE/sync tone  
Extras: Linn 9000, (2) DX7s, TX816, Mirage DMX, DSX, OBX A, comprehensive computer library of over 2500 DX7 programs, plus several sequencing software programs.

Direction: A complete 24-track MIDI production facility in midtown Manhattan. Production and creative services available.

••••• A.D.R. STUDIOS INC.  
also REMOTE RECORDING  
325 West End Ave., New York, NY 10023  
(212) 486-0856

Owner: A.D.R. Studios, Inc.  
Studio Manager: Stuart Ailyn  
Extras: Very extensive microphone collection. Microphones available for rent.

Direction: Our award-winning engineers are fully versed in all phases of audio recording and production. They are available for complete projects from pre-production meetings through production recording (studio or location) to

post-production mixing, and can provide comprehensive follow-through of all audio components. Specialized services include: album and jingle production, post-scoring and mixing, audio sweetening and mixing for film and video, audio/video production assistance, and location recording services. Credits include Hall & Oates, Billy Joel, Aerosmith, Comateens, Michael Jackson videos, Placido Domingo, Lionel Hampton, Mel Lewis & Orchestra, Taylor Wines, Coke, AT&T Communications, Lee Jeans, Time Magazine, etc.

••••• ALL STAR SOUND  
4 First Ave., Bloomfield, NJ 07003  
(201) 743-8497  
Owner: Steve Becker, Jay Vicari  
Studio Manager: Brian Bannon

••••• AMBIENT RECORDING  
9622 52nd Ave., College Park, MD 20740  
(301) 982-9288  
Owner: Ray Tilkens  
Studio Manager: Deb Tilkens

••••• ARSENAL RECORDINGS  
P.O. Box 1203, Marblehead, MA 01945  
(617) 631-9179  
Owner: Gama Skupinsky  
Studio Manager: Gama Skupinsky

••••• ASL MOBILE AUDIO/VIDEO  
only REMOTE RECORDING  
P.O. Box 791, Flushing, NY 11352  
(718) 886-6500

Owner: Aura Sonic Ltd  
Studio Manager: Steven Remote  
Engineers: Steven Remote, Paul Winnicky, Andy Surfer, Pete Lewis, independents

Dimensions of Studios: Dimensions vary depending on size of location and/or venue

Dimensions of Control Rooms: 16 x 8 x 7.10 mobile unit

Tape Recorders: Otari MTR 90, 24 track (24 x 32 track digital recording available upon request), Otari MTR 10, 1/2 inch and 1/4-inch, 2-track, (2) Otari 5050 BII, 1/4-inch 2 track, (2) Denon DRM4, cassette machines, Nakamichi DMP-100 digital processor/Sony SL-400 Super Beta Hi-Fi, Akai VS 6035 video Hi-Fi recorder

Mixing Consoles: Harrison MR-4/ARMS automation 36 x 24, (2) Sony MX 20, 8 x 4 ea.; (additional channels available upon request)

Monitor Amplifiers: (2) Yamaha P 2200, Crown D-60, Monitor Speakers: UREI 813 K+H 092 (tri-amp speakers), Yamaha NS-10M, E-V Sentry 100, Auratone 5C.

Echo, Reverb & Delay Systems: Lexicon Prime Time 93, Lexicon PCM60, Lexicon PCM41, Ursa Major Space Station, (3) Korg SDD 3000, (4) Korg-SDD2000, Klark-Teknik DN700, Klark Teknik DN780, Yamaha REV7, MXR-01, (2) Eventide 900, MICMIX XL-305

Other Outboard Equipment: (4) Valley People Dyna



## Mobile Audio/Video

ASL MOBILE AUDIO/VIDEO  
Flushing, NY

Mites, (2) Brooke Siren System DPR-402, (2) dbx 160X, (2) dbx 160, (2) UREI 1176LN, (2) Ashly SC-50, Klark-Teknik DN-360, (2) Orban 622B, MXR 170, (2) Rebis Audio RA-200 racks with (16) noise gates, (2) de-essers, (4) comp/lim., (4) para EQ, timer, (4) mic/line pre-amps

Microphones: Sennheiser: 441, 431, 421, 416, 409, 211, ME80, ME88; Shure: SM58, SM59, SM57, 5485D, PE54D, Sony: ECM 50; E-V: RE20, RE16, RE15, 644, 635A, DS 35, AKG 414EB, C451E, D-12, D 190E, E1000E; Neumann U87, KM84, Crown PZMs, Beyers M160, Realistic PZM, Brooke Siren AR116 active direct boxes, Sescom and ASL passive direct boxes; (over 80 microphones and directs).

Video Equipment & Services: Chaos Audio and Clear-Com communication, Beyer headset and mics, (2) RCA B&W 9-inch monitors, (2) Commodore 13 inch color monitors, (2) Panasonic 3-inch color monitors, Panasonic color camera (remote zoom, focus, pan and tilt), (2) RCA B&W cameras

Rates: Please call for a quotation

Extras: 76 mic/line sends and returns to the truck via 4 x 19 pair snake cable 76 x 228 (3-way Jensen splitters) over 2,000 feet of 19 pair snake cable in various lengths. Over 3,000 feet of XL mic cable in various lengths, 500 feet of video/comm cable and 1,000 feet of AC cable

Direction: Our philosophy is to bring the multi-media, multi-track control room to the concert, studio, home and/or anywhere desired to develop the visions and sounds needed. We offer our mobile unit as a complete basic track, mixdown and pre-, post-audio for video production for clients ranging from top video backgrounds to local artists and bands. We have worked with: Boy George, Elvin Jones, Ron Carter, Howard Jones, Black Uhuru, Bad Brains, The Ramones, Frank Zappa, The Police, Simple Minds, Stevie Wonder, Gene Simmons, WNEW-FM, WLIR-FM, WPIX-FM, BBC-TV, MTV, PBS, FM TOYKO

••••• ASSOCIATED RECORDING  
10 Swirl Ln., Levittown, NY 11756  
(516) 796-3698  
Owner: Nathan Schnapp  
Studio Manager: Paul Friedberger

••••• ATLANTIC RECORDING STUDIO  
1841 Broadway, New York, NY 10023  
(212) 484-6093

Owner: Atlantic Recording Co  
Studio Manager: Paul Sloman  
Engineers: Bill Dooley, Sami Uckon, Jimmy Douglass, Bobby Warner, Michael O'Reilly, Dennis King, Sam Feldman, Dan Nash, Stephen Benben.

Dimensions of Studios: Studio A 35 x 48, Studio B 18 x 33; mix room 9 x 13 (booth)

Dimensions of Control Rooms: A 17 x 22, B 18 x 22, mix room: 21 x 19

Tape Recorders: Sony 3324 (digital) 24-track, Studer A-800 24 track; A-80 2-track, MCI JH-24/24, 24-track; MCI 110B 2 track, Otari MTR 12, 2-track, Sony PCM-1610 (digital) 2-track; Audio Kinetics synchronizer available, Mitsubishi 2 track, Studer A820, 2-track

Mixing Consoles: Neve (automated) 8108 48 x 32, custom Neve 8078 w/52 x 24 x 32, SSL 6000E w/64 x 8 stereo, total recall

Monitor Amplifiers: Briston 4B bridged; Briston 3B bridged, Studer.

Monitor Speakers: UREI 813 B; Hidley/Sierra, JBL 4312, Electro Voice Sentry 100A, Yamaha NS-10M, Visonik 9000, 7000, Pioneer HPM 100, Dalco SW-3, IMF-MCR 2A, DCM-Macro, Auratone, Altac 19, Haller and Colberts, ROR, Tannoy SRM 12-B, Dahlquist DQ-10

Echo, Reverb & Delay Systems: EMT 250 and 251; Sony digital reverb, Lexicon 224X, Lexicon Super Prime Time, Eventide 1745M; Marshall AR-300; Lexicon PCM42; Korg

—LISTING CONTINUED ON NEXT PAGE

SDD 3000; Audio Digital TC-2, Ursa Major SST 282; Audio Digital TC-3 and (5) EMT stereo 140 chambers, AMS DDL, AMS Reverb; Quantec QRS

**Other Outboard Equipment:** Over 60 compressors/limiters including: Fairchild 670, Spectrasonic 610, Teletronix LA 2A and 3A, UREI 1176LN, dbx 160 and 160X, and Gain Brain II. Over 20 special processors including: Publison, Eventide SP 2016, Valley People Dyna Mite, Eventide Phaser, Eventide flanger and Harmonizer H-949, EXR-EX2 and (3) Audio + Design Scamp racks. With a full complement of equipment for each rack, over 80 equalizers including: Pultec, Lang, Aengus, Orban, Sontec, Datalatron 550A, Audio + Design and Neve. Full Valley People rack in each room.

**Microphones:** Crown PZM, Sanken C41; Beyers M88 and M160; E V RE 15, 16, 20, 55; Shure SM7, 57, 58, 81; Sennheiser MKH-415, MD 421, MD441; Neumann U47 tube and FET, U48, M49, U67, U87, KM84, KM86, U89; Telefunken 251; AKG C451, C414, C33, D12; RCA SK46, 44, 77DX; Sony C37, C48 and ECM50; B&K 4003, 4004; and more

**Instruments Available:** (2) Hammond B3 organs, LaPiana baby grand, Steinway grand, Wuritzer piano, Fender Rhodes and Rhodes Dynamite piano, Hohner Clavinet, amplifiers including Fender, Music Man, Polytone, full Ludwig drum kit and misc. percussion instruments, DX7 keyboards, LinnDrum machine, Mesa Boogie, Roland Jazz, Marshall Lead 100 amps, Polyphonic Synclavier.

**Video Equipment & Services:** Sony video monitor in each studio, BVU 800 videocassette recorders, provision for external video equipment

**Rates:** \$200/hr., 24 track analog recording/mixing

•••• **AUDIO INNOVATORS, INC**  
also **REMOTE RECORDING**  
216 Boulevard of the Allies, Pittsburgh, PA 15222  
(412) 471-6220

Owner: Norman J Cleary  
Studio Manager: Tim Benedict

•••• **AUDIO WEST RECORDING**  
678 Campbell Ave., West Haven, CT 06516  
(203) 934-7186

Owner: Joseph Mendyk  
Studio Manager: Dan Harrison

•••• **AUTOMATED SOUND STUDIO**  
1500 Broadway, New York, NY 10036  
(212) 869-8520

Owner: Gordon Enterprises Ltd.  
Studio Manager: Lorna Levine  
Engineers: Arthur Friedman, Kevin Halpin, Gary Boyle.  
**Dimensions of Studios:** A 1, shaped 60 x 45 x 36, B 30 x 25; (3) 4 track narration rooms

**Dimensions of Control Rooms:** A 20 x 20, B 15 x 15, 24 track mix room 20 x 25 w/ vocal booth.

**Tape Recorders:** (2) 24 track Studer A800s, Studer 8710, cassette tape machines; (2) Technics cassette tape machines, Studer B67, ¼ track, (2) Studer A-80, 24 track, 3M Series 79, 24 track, (5) Studer A 80, 4 track, (5) Studer B-67, 2 track, (5) Studer A 67, 2 track, Studer A 80, 2 track (4), (6) Studer A 80, mono.

**Mixing Consoles:** (2) Neve 8078 (custom) w/ Necam, 40 in x 32 out; Neve (custom) 8058, 38 in x 24 out, (3) Audi tronic 501, 24 in x 24 out

**Monitor Amplifiers:** (14) McIntosh 2100s, (8) Crown head-phone amps, McIntosh 2300

**Monitor Speakers:** (16) 604 8Gs, Big Reds, (2) JBL 4311s, (2 pair) Kirksaeters, (5) Auratones, Visonik, KLH, UREI 813A, (pair) 604E Altac, (pair) Yamaha NS10s, (pair) Fostex's, (2) Yamaha NS10

**Echo, Reverb & Delay Systems:** (6) EMT, Master Room reverb, (3) Lexicon digital 224s; (2) DDL, (2) AMS digital reverb, (2) Yamaha REV7, PCM60

**Other Outboard Equipment:** Scamp Rack Harmonizers, Orban parametrics, LA4A, LA3s, Neve compressors, Dolby, (4) 165 dbx limiters/compressors "easy over", (2) 949 harmonizers, (2) TC2s flangers, (4) Pultec equalizers, (2) LA 2 limiter

**Microphones:** Neumann U87s, U47s, KM86, 85; AKG 414s, AKG tubes, AKG 460s, PZMs, 60 assorted mics

**Instruments Available:** (2 sets) Yamaha drums, Roland jazz chorus amps, (2) Markley amps, (2) Steinway grand pianos (2) Fender Rhodes pianos, (2) Hammond B 3 organs w/ Leslie speakers, (2) Musser vibes, (5) Fender amps, assorted percussion

**Video Equipment & Services:** IVC Sony, TLS 4000 Interlock, (2) Sony 25-inch monitor.  
**Rates:** Please call

•••• **AVENUE STUDIOS, INC**  
123 4th Ave., New York, NY 10003  
(212) 477-2435

Owner: Larry Buksbaum  
Studio Manager: Larry Buksbaum  
Engineers: Godfrey Nelson, Larry Buksbaum  
**Dimensions of Studios:** 25 x 18

## NORTHEAST STUDIOS



## 24 TRACK

**Dimensions of Control Rooms:** 13 x 18

**Tape Recorders:** MCI JH 24, 24-track, Tascam 80 8, 8-track; Tascam 3440, 4 track, Otan 5050B, 2 track

**Mixing Consoles:** Sound Workshop Series 30, 20 x 8 x 2, Ramsa 208, 8 x 2.

**Monitor Amplifiers:** Crown DC-300

**Monitor Speakers:** UREI 809, Yamaha NS 10, Auratones

**Echo, Reverb & Delay Systems:** Lexicon PCM60, ART-DR-1, Orban 111B, Lexicon Prime Time, PCM 42

**Other Outboard Equipment:** Valley People 610 limiter/expander, Dyna-Mites, Symetrix gates, Aphex Aural Exciter

**Microphones:** Neumann U87, AKG 414, Sennheiser 421, 441, D12E, AKG 452, Shure SM57, Beyers 500, 201, M260

**Instruments Available:** Roland JX8P w/ programmer, Oberheim OBX, Sohmer upright piano, Mesa Boogie, Gemini I, QX7 sequencer, Oberheim DX drum machine

**Rates:** Call for rates

•••• **AZIMUTH RECORDING STUDIO**  
also **REMOTE RECORDING**  
P.O. Box L, Malaga, NJ 08328  
(609) 697-2605

Owner: Jim Langley

Engineers: Jim Langley, Mark Schultz, Ed Candeluna, Mike Holland, Mark Schultz

**Dimensions of Studios:** Main room: 18 x 24, iso booth 9 x 9 x 10, iso booth 6 x 8

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

**Tape Recorders:** Soundcraft SCM 760 24, 24 track, Otan 5050 BII, 2 track, Yamaha 4 track, (2) Technics RS BIIW, 2-track

**Mixing Consoles:** Soundcraft Series 1600 48 x 8 x 24.

**Monitor Amplifiers:** BGW Hatler, Rane, Tascam

**Monitor Speakers:** JBL, Auratone

**Echo, Reverb & Delay Systems:** Yamaha REV7, (2) R 1000, DellaLab 1050, 1024, CompuEffectron CE 1700

**Other Outboard Equipment:** (6) Valley People limiter/de-esser/gate/ducker keyer, dbx 160X, dbx 163, dbx 180, LT Sound dual channel parametric EQ, GLL graphic EQ, Boss assorted pedals

**Microphones:** AKG, E V, Neumann, Shure, Sennheiser, RCA Beyer

**Instruments Available:** Emulator II, Kurzweil, (2) Yamaha DX7, Juno 106, Minimoog, Yamaha baby el grand, LinnDrum, Oberheim DXA, sampling package for Kurzweil w/ Macintosh computer, Fender Jazz, Ovation guitar

**Video Equipment & Services:** ¾ inch video is available through our sister studio, C&C Productions in Glassboro

**Rates:** So low you wouldn't believe it! So call and find out

•••• **BALANCE SOUND STUDIOS**  
4917 Cordell Ave., Bethesda, MD 20814  
(703) 951-3900

Owner: Robert and Richard Waxman

Studio Manager: John C Biehl

Engineers: John C Biehl, Tom McCarthy

**Dimensions of Studios:** A 24 x 36, B 6 x 15.

**Dimensions of Control Rooms:** 15 x 18

**Tape Recorders:** MCI JH 24, 24 track, (2) MCI JH 110C TC, 2 track + SMPTE, Ampex 440 B, 2-track, Ampex AG-500, 2-track, (2) Ampex AG 445, 1 track; Crown 700B 4 track

**Mixing Consoles:** MCI 636 28 x 28, Crown 700 B 8 x 4

**Monitor Amplifiers:** Crown D 300, 150, UREI 6500, Crown D-75

**Monitor Speakers:** UREI 813B, Altac Lansing 9842, Auratones, Minimus 7s.

**Echo, Reverb & Delay Systems:** Lexicon 224X, Yamaha REV7, Lexicon PCM70.

**Other Outboard Equipment:** Eventide Harmonizer, Valley People Kepex IIs, Maxi Q parametrics, Effectrons, UREI LA 4s, LA-3s, 1176 comp/limiters, dbx 160s comp/limiters, Drawmer noise gates

**Microphones:** Neumann SM69s, 1187s, U67s; AKG 414, 452, Sennheiser 421 MD, Sony ECM 33Fs, C 37 FETs, E-V RE20s, PZM (Crown) 31-S; Shure SM 57, SM-81.

**Instruments Available:** Yamaha C 3 conservatory grand piano, automated MIDI room w/ IBM XT, MIDI-bass (360); TX 7 Prophet 2000 sampler; SP 12 (E-mu) Drumulator.

Yamaha RX 11 digital drums, Sequential Six Trak, Moog (Minimoog); Casio CZ-101 guitars (various), basses (various).  
**Video Equipment & Services:** Composition, arranging, MIDI beds library, production.  
**Rates:** \$85/hr. 24-track, \$55/hr. 2 track; \$35/hr. MIDI room



**THE BARGE SOUND STUDIO**  
Wayne, NJ

•••• **THE BARGE SOUND STUDIO**  
92 Lionshead Dr. West, Wayne, NJ 07470  
(201) 835-2538

Owner: Jim Bary

Studio Manager: Jim Bary

Engineers: Jim Bary, Steve Dorio, Bill Hamilton.

**Dimensions of Studios:** 17 x 27

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

**Tape Recorders:** Studer A80 VUMKIV 24, 16 track (with 16-track and 24 track heads), Otan MX 5050 2SHT, 2 track, TEAC 3340, 4 track, Studer A80, 2 track

**Mixing Consoles:** Harrison 40 x 32 (effective 7/1/86)

**Monitor Amplifiers:** SAE 2200, Yamaha P2100, Crown DC 300A, Yamaha P2100 w/Loft 402 crossover

**Monitor Speakers:** Custom built 604 based system, Yamaha NS-10, Realistic Minimus 7, Auratones

**Echo, Reverb & Delay Systems:** EMT 140TS, Eventide H910 Harmonizer, DellaLab DL 2, MICMIX XI, 305, Ibanez MD2000, Lexicon 224XL, Korg SDD3000, Loft flanger, Roland SRV1000, Lexicon PCM70

**Other Outboard Equipment:** dbx noise reduction, Sound craftsmen graphic EQ, dbx 160 compressor/limiter, Orban 622B parametric EQ, Orban de esser, Aphex CX-1 compressor/expander, Eventide flanger, Klark DN3030A graphic EQ, Drawmer gates

**Microphones:** AKG C414EB, C505E, D12E, Neumann U87, KM87; E V RE20, DS35; Shure SM57; Sony ECM 280, ECM 270, ECM 170, ECM 22, Beyers M500, RCA 77DX; Sennheiser MD421; Realistic PZMs

**Instruments Available:** Kawai grand piano, Hammond B3 w/ Leslie, Ludwig drums, percussion (various), Minimoog, ARP strings Yamaha DX7 (2 units), Marshall and Fender amps, TX 816, Juno 106, Mirage, LinnDrum

**Rates:** Available upon request

•••• **BATTERY SOUND**  
90 West St., New York, NY 10006  
(212) 227-3896

Owner: Mark Freedman

Studio Manager: Pasquini Frates

•••• **BAYSIDE SOUND STUDIOS**  
also **REMOTE RECORDING**  
P.O. Box 129, Bayside, NY 11361  
(718) 225-4292

Owner: Bayside Sound Recording Studios, Inc

Studio Manager: David Eng

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**BEARVILLE STUDIOS**  
Bearsville, NY

•••• BEARVILLE STUDIOS  
P.O. Box 135, Bearsville, NY 12409  
(914) 679-8900  
Owner: Albert Grossman  
Studio Manager: Steven Bramberg  
Engineers: Mark McKenna, Ken Lonas, Chris Isca  
Dimensions of Studios: A: 60 x 40 w/40-foot ceiling, B: 30 x 25 w/26-foot ceiling.  
Dimensions of Control Rooms: A: 19 x 20 w/10-foot ceiling; B: 23 x 18 w/10 foot ceiling.  
Tape Recorders: (3) Studer A800 MKIII, 24-track; Studer A80 MKIII, 24-track; Studer A80 RC 1/2 inch, 2-track; Studer A810 1/4-inch 2-track; Studer A820 TC 1/2-inch, 2-track; Studer B67 1/4-inch, 2-track.  
Mixing Consoles: Solid State Logic 6000 V-48, 48; Neve 8088 custom 40.  
Monitor Amplifiers: Perreaux, Crown, Phase Linear, UREI, Yamaha.  
Monitor Speakers: UREI 813A, UREI 813B, Yamaha NS-10M, Auratone, ROR cubes, Visonik, JBL, Tannoy SRM12B.  
Echo, Reverb & Delay Systems: (2) EMT 140, EMT 240, Live Chamber AMS, Lexicon 224XL, Lexicon Prime and Super Prime Time, (2) Yamaha REV7, Lexicon PCM70, PCM42.

Other Outboard Equipment: 24 channels dbx and Dolby noise reduction; Klark-Teknik DN-34, Eventide 949, 910 harmonizers; DMP cyclostatic panner; Pultec EQP and MEQ; Valley People Maxi-Q, Gain Brains IIs; Kepex IIs; Neve 32264 compressor/limiter; UREI 1176, 1178; LA 2A, LA-3A; dbx 160, 162, 165; Drawmer stereo gates; Drawmer vacuum tube comp/limiter; APSi; ROR; Aengus EQ + much more.  
Microphones: AKG, Electro-Voice, Sony, Neumann, Sennheiser, RCA, Crown PZM, Shure, Sanken.  
Instruments Available: Yamaha grand piano, Bosendorfer, Yamaha DX7, Linn II, Jupiter 8, Yamaha CP70, Musser vibes, Hammond B-3 w/Leslie, Ludwig drums, Fender Rhodes, Marshall & Fender and Roland amps, Ampeg, Guild bass amps.  
Video Equipment & Services: Full service video studio on premises and SSL stereo video mixing console.  
Rates: By hour, day or week. Lockouts and block booking, special rates.  
Extras: Spacious lodging, 100 acres property w/outdoor activities, pool, rehearsal barn for pre- and post-production, full gym and sauna, gourmet cooking available.  
Direction: Bearsville Studios provides world class rehearsal, recording and video facilities, in a relaxed country setting. We provide artists with a creative freedom in an unusual environment that combines world class technology at affordable rates

•••• BEARTRACKS RECORDING STUDIO  
278 Haverstraw Rd., Suffern, NY 10901  
(914) 362-1620  
Owner: Bay Beckenstein, Rich Calandra  
Studio Manager: Larry Swist, Chns Bubacz

•••• BEARTRACKS RECORDING STUDIO  
278 Haverstraw Rd., Suffern, NY 10901  
(914) 362-1620  
Owner: Bay Beckenstein, Rich Calandra  
Studio Manager: Larry Swist, Chns Bubacz

•••• BERKLEE COLLEGE OF MUSIC  
150 Mass Ave., Boston, MA 02115  
(617) 266-1400  
Owner: Don Puluse  
Studio Manager: Joe Hostetter  
Direction: Three 24-track and three 8 track studios. Studios have limited availability. 36 audio lines and video feed from the Berklee Performance Center (a 1,300 seat auditorium). Automated Sound Workshop consoles, Studer A800, A810, Lexicon 224XL, BTX Shadow Softouch, digital 2-track plus various outboard equipment. Detailed equipment list upon inquiry

**NORTHEAST STUDIOS**  
**24 TRACK**

•••• BIG APPLE STUDIOS, INC.  
also REMOTE RECORDING  
353 W 48th St., New York, NY 10036  
(212) 974-1755  
Owner: Bernard Fox, Larry Harlow  
Studio Manager: Larry Harlow  
Engineers: Bernard Fox, Larry Harlow, George Kazane, Sammy Velasquez, Frank D'Augusta, Andre Olivier, Jon Fausty  
Dimensions of Studios: A: 40 x 35 plus 8 x 8 vocal booth, B: electronic room plus 8 x 8 vocal booth  
Dimensions of Control Rooms: A: 18 x 16; B: 18 x 16  
Tape Recorders: Studer A 80 Mark IV, 24-track; Studer A 80 Mark III, 24-track; Studer A810, 2-track; Studer A-67, 2 track Scully 280, 4-track, (2) Scully 280, 2 track; Revox 2 track  
Mixing Consoles: Neve 8048 Custom 32 x 24, Neve 8038 Custom 36 x 24.  
Monitor Amplifiers: (4) Haller 500s, (4) Phase Linear 400s, (4) Crown 300As.  
Monitor Speakers: (4) UREI 813A, (4) JBL, (4) Yamaha, (4) Auratone  
Echo, Reverb & Delay Systems: Lexicon 224XL, Lexicon PCM41 and 42, AKG BX10, Furman, 7 foot Brick plate, Yamaha R1000 digital reverb, (2) Lexicon Prime Time, ART-DR1 digital reverb  
Other Outboard Equipment: (4) Kepex gates, (4) Roger Mayer gates, Eventide Harmonizer, (4) dbx limiters, (2) LA2As, LA3A, (2) Orban Parametric EQs, (2) MXR Graphic EQs, (2) UREI graphic EQs, (2) Blonder Tongue graphic EQs, DeltaLab Effectron II, Roland MSQ digital keyboard recorder, MXR flanger/doubler, MPC electronic drums  
Microphones: All Neumann Sennheiser, AKG, Shure, RCA, Electro-Voice, PZM  
Instruments Available: (3) Yamaha DX7s, Steinway B 8 ft grand, Hardmon 8 ft grand, Hammond B3 w/Leslie, (2) Rogers drums, (2) clavinetts, Kustom 88 electric piano, Fender Rhodes, Oberheim OBXA, Oberheim OB-8, Minimoog w/MIDI, Ensoniq Mirage sampler, ARP string synthesizer, Korg DW6000 Roland MSQ-700, Yamaha QX-1 w/SMPTE generator  
Video Equipment & Services: (2) JVC cameras w/tripods and lights, Sony and JVC 1/4 inch record and playback, (2) NEC monitors, (2) BTX Shadow and controller, (2) Tektronix sync generators w/full remote packages available



**BIG MO RECORDING**  
Wheaton, MD

•••• BIG MO RECORDING  
only REMOTE RECORDING  
12255 Veirs Mill Rd., Wheaton, MD 20906  
(301) 946-3043, 946-7364  
Owner: Ed Eastridge, John Sprung  
Studio Manager: Ed Eastridge  
Engineers: Ed Casey Jim Crenca

Dimensions of Studios: 8 x 24.  
Dimensions of Control Rooms: 8 x 24.  
Tape Recorders: (2) MCI JH-114, 24-track; Crown 844, 4 track; Tascam 58, 8 track; Revox PR 99, 2-track.  
Mixing Consoles: Custom built main console, 40 x 16 x 24, Soundcraft sub-mix 200, 16 x 4.  
Monitor Amplifiers: Crown DC-300, D-150.  
Monitor Speakers: UREI 811B, Yamaha NS-10.  
Echo, Reverb & Delay Systems: AKG BX10, Lexicon Prime Time, Eventide Harmonizer, Lexicon PCM60 and Yamaha REV7.  
Other Outboard Equipment: Valley People Gain Brain IIs, Kepex IIs, Audioarts parametric EQ, UREI LA3As, dbx 160s, Klark-Teknik stereo EQ, UREI 530 stereo EQ, Noise reduction: Dolby M-16, speakers: Yamaha NS-10.  
Microphones: Neumann U87, U89; AKG C414, C451; Sennheiser MD 421; Shure SM57, SM58; Crown PZM.  
Instruments Available: Two channel intercom system, 59 channels of stage snake with Jensen transformer mic splitter system.  
Video Equipment & Services: 19-inch color video monitor, camera switchable between stage and preview inputs.



**BIOYA RECORDING STUDIOS**  
Paterson, NJ

•••• BIOYA RECORDING STUDIOS  
32 Hoxey St., Paterson, NJ 07501  
(201) 742-7704  
Owner: Len and Lou Argese  
Studio Manager: Len and Lou Argese  
Engineers: Len and Lou Argese  
Dimensions of Studios: 24 x 26, also (2) iso booths and drum booths.  
Dimensions of Control Rooms: 20 x 20  
Tape Recorders: (2) Otari MTR-90, 24-track; Nakamichi digital processor DMP100, 2-track; Otari MTR-12 1/2-inch, 2-track, Otari MTR-12 1/4-inch, 2-track; Otari MX5050 MKII, B, 4-track; (2) Tascam cassette 122B, 2 track.  
Mixing Consoles: Sound Workshop, automated 34, 50 x 24 w/74 returns to mix  
Monitor Amplifiers: Haller, BGW, Carver, SCS.  
Monitor Speakers: Impact Audio/Emilar, Yamaha NS-10s, Auratones, Big Reds.  
Echo, Reverb & Delay Systems: Stocktronics 4000 plate, Quantec, (2) ART 01A, Yamaha R1000, Yamaha REV7, (2) Roland SDE 3000 DDLs, (3) Roland SDE 1000 DDLs  
Other Outboard Equipment: (2) Lynx Time Code modules, Roland Vocoder, Aphex Aural Exciter, Panscan, Drawmer DS201, Dyna Mite signal processors, Yamaha compressor/limiter, dbx and Dolby Type A noise reduction  
Microphones: Sennheiser 421, 441, AKG 414-C 501 Es; Neumann U89s, U47s; E V RE20, RE15, RE16; Beyer; Phillips.  
Instruments Available: Kurzweil, OB 8, DX7, Poly 800, DSX, Linn Drum, full Tama drum set, Roland DDR-30 digital drums, Dynacord digital drums  
Video Equipment & Services: Available upon request.  
Rates: Available upon request

•••• BLACKBEARD STUDIOS  
One Court Dr., Lincoln, RI 02865  
(401) 333-3377  
Owner: Richard Carr Productions, Inc  
Studio Manager: Larry Minnis  
Engineers: Larry Minnis, Tony Autore, Geoff Read  
Dimensions of Studios: 40 x 25 plus 2 separate iso booths and stage.  
Dimensions of Control Rooms: 25 x 14  
Tape Recorders: MCI JH-24, 24-track; MCI JH-110-C, 1/2-inch 2 track; Scully 280, 2 track; Revox A 77, 2-track.  
Mixing Consoles: Amek/TAC Matchless 24 x 24.  
Monitor Amplifiers: All Crown powered



**BLACKBEARD STUDIOS**  
Lincoln, RI

**Monitor Speakers:** JBL 4330, Yamaha NX-10M, Auratones.

**Echo, Reverb & Delay Systems:** EMT140 stereo plate, Lexicon 224, Lexicon PCM60, ART digital, Prime Time, PCM42s, Eventide Harmonizer, MICMIX.

**Other Outboard Equipment:** Omni Craft noise gates, UREI LA-4 comp/limiter, Ashly parametric EQ, dbx 160 limiters, Orban De-essers, Aphex, (4) Valley People Dyna-Mites.

**Microphones:** (2) Neumann U87, (3) AKG 414, Sennheiser, Shure, Beyer, E-V.

**Instruments Available:** Yamaha grand, LinnDrum, Yamaha DX7, full drum set. Available at additional cost: Emulator II, Fairlight, Kurzweil, Synclavier.

**Rates:** \$50/hr-all hours. Block and lockout discounts available.

**Extras:** Luxurious lounge, on-site safe and free parking, ground floor unloading dock, very inexpensive lodging suited to any taste. One third or less the cost of similar lodging in Boston, NY or LA. Convenient to major airports and major population centers.

**Direction:** Blackbeard is a gorgeous facility geared to a comfortable and creative environment. The room is "Live" and acoustics are controllable. Our aim is to be accommodating, professional and to put out the best product possible. Blackbeard Studios is a division of Richard Carr Productions, Inc.

•••• **BLANK TAPES INC.**  
37 W. 20th St., New York, NY 10011  
(212) 255-5313

Owner: Louis Vetter, Richie Vetter, Bob Blank

Studio Manager: Jim Doherty

Engineers: John Bradley, Joe Arlotta, Bob Blank, Mike Weisinger.

**Dimensions of Studios:** A 35 x 45 x 15. B 8 x 10. C: 20 x 30 x 12.

**Dimensions of Control Rooms:** A 20 x 26. B 16 x 18. C: 18 x 22.

**Tape Recorders:** Sony digital 3324, 24-track; (3) MCI JH-24 w/AL III, 24-track; MCI JH-110B, 4-track; Studer A-80 1/2- and 1/4-inch, 2-track; (7) MCI JH-110, 2-track; (6) Nakamichi MR-1, 2-track cassette.

**Mixing Consoles:** MCI JH-652 52 x 24. MCI JH 542-C 42 x 32, MCI JH-636 36 x 24.

**Monitor Amplifiers:** UREI, Bryston, BGW, McIntosh.

**Monitor Speakers:** UREI, E-V, Yamaha, Auratone, JBL.

**Echo, Reverb & Delay Systems:** 224XL, PCM60, PCM70, PCM42, Audicon plates, AKG BX 10s, Lexicon 200s, MXR, AcoustiComputer.

**Other Outboard Equipment:** dbx 160, dbx 165, Pultec, Orban 622B, Orban 5i6 EC, Valley Dyna-Mites, Panscan, Drawmer gates, Kepex, Roger Meyer, Eventide Harmonizers and effects, UREI 1176, UREI LA2A, UREI LA3A, UREI graphics, Marshall AR300, Prime Time, BEL BD-80.

**Microphones:** Neumann U87s, U67s, U47, KM84, AKG tubes, 414EBs, 451s, RE-20s, SM57s, RCA 44 ribbons, RCA 77 ribbons, 441s, 421s, and others.

**Instruments Available:** DX7, LinnDrum, Tama drums, Yamaha grand piano, Steinway baby grand, Emulator, percussion.

**Video Equipment & Services:** U-matic lock up, 1/4-inch and SMPTE lock up, digital, analog, video

•••• **BLUE JAY RECORDING STUDIO, INC.**  
669 Bedford Rd., Carlisle, MA 01741  
(617) 369-2200

Owner: Bob and Janet Lawson

Studio Manager: Bob Lawson

Engineers: Gragg Lunsford, Ed Goodreau, Rob Jaczko, Rob Feaster.

**Dimensions of Studios:** 40 x 30 x 13 w/iso booth.

**Dimensions of Control Rooms:** 17 x 18

**Tape Recorders:** Studer A-800, 24-track; Sony JH-114, 24-track; Studer A-820 2-track (center Time Code), Studer



**BLUE JAY RECORDING STUDIO, INC.**  
Carlisle, MA

A-80, 2-track (1/2-inch heads); Studer B 67, 2 track, dbx 700 digital, 2-track

**Mixing Consoles:** Solid State Logic 4056E 48 (w/total recall)

**Monitor Amplifiers:** Bryston 4B strapped in mono, BGW 250E, 250D, 300, others.

**Monitor Speakers:** UREI 813B, Yamaha NS-10M, Klipsch Cornwall.

**Echo, Reverb & Delay Systems:** Lexicon 224XL, Lexicon 224, AMS RMS 16, EMT 140 stereo tube, Lexicon PCM60, AMS DMX 15-80, Lexicon Prime Time II, Lexicon PCM42, Lexicon Prime Time, Urso Major Space Station, many others.

**Other Outboard Equipment:** Drawmer DS201, Ashly SC-33, dbx 904 gates, dbx 165A, 160X, and 903s, UREI 1176 and LA-4A, and LA-2As. Pultec EQP, Troisi parametric EQ, dbx 905 EQ, Orban 622-B, Ashly SC-66A, Lynx TimeLine synchronization, Dolby noise reduction.

**Microphones:** Telefunken 251 (tube); AKG C-12 (tube); Neumann U47 (tube), U87, KM86, KM84, KM64, U64; Bruel & Kjaer 4006, 4007; AKG 414, 451E, D-12; Sennheiser MD-441, MD-421; Beyer M-500, M-160; Electro-Voice RE 15, RE-20; Shure SM81, SM-57, SM-58, SM-7; Crown P2M.

**Instruments Available:** Steinway B 7-foot grand piano (1927), Kurzweil 250 advanced sampling synthesizer (10 seconds at 50K sampling rate, 12-track sequencer, MIDI), Kurzweil Sound Library w/MacAttach II and Macintosh computer, Oberheim DMX drum machine, others.

**Rates:** Upon request.

# BEARSVILLE STUDIOS

Would like to thank the following  
talent for making our new  
Studio 'B' a grand success:

A-Ha	Mike Bardiero	Bob Clearmountain
Rett Davies	Neil Dorfsman	Peter Hauke
Jimmy Iovine	Joe Jackson	Journey
Brian McGee	Max Norman	Simple Minds
Ian Taylor	Steve Thompson	'Til Tuesday

## BEARSVILLE STUDIOS

Two 48-track world class studios in a relaxed country setting on 100 acres just 2 hours from N.Y.C.

Studio A, with NEVE 8088 console (40 in put), features one of the largest recording rooms on the east coast, measuring 90' x 40' with a 40' ceiling.

Studio B, designed by George Augspurger, features the SOLID STATE LOGIC SL6000E (with total recall).

Both Studios contain STUDER A800 MARK III Tape Machines and an extensive selection of outboard gear.



The facility has a rehearsal barn for pre & post production, and comfortable lodging. Block bookings available.

For Rates & Information Contact  
Steve Bramberg  
Studio Manager  
at (914) 679-8900

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•••• **BOLOGNESE RECORDING STUDIOS**  
 989 Jerusalem Ave., N. Merrick, NY 11566  
 (516) 221-5555  
 Owner: Lou Bolognese  
 Studio Manager: David Barratt



**BOOGIE HOTEL STUDIOS**  
 Port Jefferson, NY

•••• **BOOGIE HOTEL STUDIOS**  
 709 Main St., Port Jefferson, NY 11777  
 (516) 473-6655  
 Owner: Jeffrey Kawalek, George Mancini, Bruce Stewart, David Jampol  
 Studio Manager: Jeffrey Kawalek  
 Engineers: J. Kawalek, Michael Larkin. Freelance engineers are welcome.  
 Dimensions of Studios: 50 x 60 x 20 ceiling w/2 iso booths, 15 x 20 each, 9 x 12 vocal booth.  
 Dimensions of Control Rooms: 14 x 20.5.  
 Tape Recorders: Studer A80VU MKII, 24-track; Studer A80RC, 2 track; (2) Studer B67 MKII, 2 track.  
 Mixing Consoles: Custom Neve 8000 Series 48 in.  
 Monitor Amplifiers: McIntosh, Crown, H&H, Bryston 4B.  
 Monitor Speakers: UREI 813A, JBL 4311, JBL 4313, Auratones, Mitsubishi DS-181W, Yamaha NS-10M.  
 Echo, Reverb & Delay Systems: EMT stereo plate, 2 live chambers, Hohner digital reverb system, Marshall Tape Eliminator, Yamaha REV7, Electron II.  
 Other Outboard Equipment: (2) Eventide Harmonizers, (6) Pultec, Orban 622 parametric EQ, (8) Valley People Dyna-Mites, (4) MXR phaser/flangers, (2) United Audio tube limiters, (3) Neve limiter/compressors, (2) LA3As, (2) UREI 1176s, dbx 165 limiter, (2) dbx 160s.  
 Microphones: (2) Neumann M-49s (tube-type), (3) Neumann U47s FETs, (2) U87s, KM84, KM86; AKG C451E, (2) EB414, (2) C60, (2) D1000E, D12E; Sennheiser (10) 421, (4) 441; Shure SM53, SM56, SM58, SM7, E-V 666, (2) RE20; (2) Crown PZMs, (2) Sanken RU41.  
 Instruments Available: Yamaha grand piano, Hammond B3 w/Leslie, Ludwig and Rogers drums, assorted guitar amps, Yamaha DX7, full line of Korg keyboards and synths, Marshall bass and guitar amps.  
 Rates: Call for info. Block rates available.  
 Extras: Lodging for 8-10 people, full kitchen (optional meal plans available), full bar, artists lounge w/video games, pool table, etc. Located near active town, shops, beach, water sports, Bridgeport Ferry. Boogie Hotel is also affiliated with two major mobile recording trucks, and can accommodate any remote location recording needs. Credits include Blue Oyster Cult, Honeymoon Suite, Aldo Nova, Billy Joel, John Waite, Zebra, Michael Stanley Band and many more.  
 Direction: Boogie Hotel is a truly unique concept in modern-day recording studios in that it combines the most up-to-date studio facility with the old-world charm of a private hotel, featuring gourmet cuisine and total, personalized service, all within easy access to a major metropolitan area. Every aspect of the recording process has been considered, thus freeing the artist and producer to create in a relaxed, enjoyable atmosphere. We also offer two and four song demo packages.

•••• **BROCCOLI RABE RECORDING STUDIOS**  
 15 Gloria Ln., Fairfield, NJ 07006  
 (201) 575-7460  
 Owner: Brian Drago  
 Studio Manager: Mike Cleary

•••• **CALF AUDIO**  
 also REMOTE RECORDING  
 207 S. Tioga St., Ithaca, NY 14850  
 (607) 272-8964  
 Owner: Alfred Grunwell

## NORTHEAST STUDIOS



## 24 TRACK

•••• **CARNEGIE HILL STUDIOS**  
 312 E. 95th St., New York, NY 10128  
 (212) 410-7910  
 Owner: Morrie Brown  
 Studio Manager: Geoff Keehn



**CARRIAGE HOUSE STUDIOS**  
 Stamford, CT

•••• **CARRIAGE HOUSE STUDIOS**  
 119 W. Hill Rd., Stamford, CT 06902  
 (203) 358-0065  
 Owner: West Hill Productions, Inc.  
 Engineers: Phil Magnotti, Johnny Montagnese, Alec Head, James Bruno, independents.  
 Dimensions of Studios: Main room: 30 x 30, iso booths: 8 x 8, 6 x 6; live room: 25 x 20; live room: 15 x 20.  
 Dimensions of Control Rooms: 25 x 25.  
 Tape Recorders: Otari MTR 90-II, 24-track; Otari MTR 10 1/2-inch, 2-track; Otari MTR 10 3/4-inch, 2-track.  
 Mixing Consoles: Trident Custom 80, 32 in x 24 out.  
 Monitor Amplifiers: UREI, BGW, Accoustate, Phase Linear.  
 Monitor Speakers: JBL 4435 bi-amped w/crossover, Yamaha NS-10s.  
 Echo, Reverb & Delay Systems: EMT stereo plate, 224X, live chamber, Eventide Harmonizers 949, 910, REV7s, Ursa Major Space Station, Lexicon delays, DeltaLab delays.  
 Other Outboard Equipment: UREI LA-4s, dbx 160s, Drawmer gates, comp, UREI 1176s, Dyna-Mites, Roland Dimension "D", Aphex II Aural Exciter, De-essers, Super Prime Time UREI digital metronome, and more.  
 Microphones: U87s, 89s, 47, 414s, 452s, 421s, 57s; PZMs D-12; RCA 77s, 44s; RE-20, Beyer ribbon, etc.  
 Instruments Available: Kurzweil w/Mac computer, DX7, OBX, QX 1, QX-7, TX-7, Linn, Yamaha, Simmons, Ludwigs, Tadashi grand piano, marimba, vibes, tympani, etc.  
 Video Equipment & Services: 3/4 inch, 1/2-inch decks w/monitors.  
 Rates: Project oriented pricing.  
 Extras: Living accommodations, open spaces, 45 minutes from mid-town New York City, good Italian cooking, trees to climb, fresh air, the best environment.  
 Direction: Acoustic instrument players love the sound in all our rooms, from solo guitar (Al Di Meola, Brian Keane) to larger 50-piece orchestras (Jay Chhattaway, "Invasion USA," Stephen King's "Silver Bullet," film scores). Drummers like Steve Farone, Bobby Chouinard, Dave Wekel and others have all worked our "Live Room" with outstanding results. Located on a private New England estate, this is the perfect artists studio.

•••• **DON CASALE RECORDING STUDIOS**  
 377 Plainfield St., Westbury, NY 11590  
 (516) 333-7898  
 Owner: Don Casale  
 Studio Manager: Don Casale

•••• **CELEBRATION RECORDING**  
 2 West 45th St., New York, NY 10036  
 (212) 575-9095  
 Owner: MZH & F Inc.  
 Studio Manager: Chris Tergesen  
 Engineers: Chris Tergesen, Maurice Puerto, various independents.  
 Dimensions of Studios: A: 33 x 28 plus drum room and isolation room; B: 14 x 16.  
 Dimensions of Control Rooms: A: 18 x 24; B: 15 x 17.  
 Tape Recorders: Studer A-80 MKIII, 24-track; Studer A-80 MKIII, 1/2-inch 4-, 2-track; Studer A-80 MKIII, 1/4-inch 2-track; (2) Studer A-810 full-track; 3M M79, 24-track; (2) 3M M79, 4-track; (2) 3M M79, 2-track; (2) Otari MX5050, 2-track; (2) Otari MX5050 full-track.  
 Mixing Consoles: Harrison 3232 32 in x 32 out; Harrison 3624 36 in x 24 out; Soundcraft 200 8 in x 4 out.  
 Monitor Amplifiers: Haller, Crown, Phase Linear.  
 Monitor Speakers: Westlake, Yamaha E-V, Auratone.  
 Echo, Reverb & Delay Systems: Lexicon 224X, Lexicon Model 200, EMT 140, (2) AKG BX20, Lexicon Prime Time II, Lexicon PCM 42, Ursa Major Star Gate 323, Eventide H910 Harmonizer.  
 Other Outboard Equipment: Pultec, Orban, Audionics, UREI EQ; (5) dbx compressors; (2) UREI Teletronix LA-3A limiters; (2) Universal Audio 1176 limiters; UREI Teletronix LA-2A limiter; (2) UREI digital metronomes; Dolby A-type noise reduction available throughout.  
 Microphones: Neumann U87, U67, U47, KM84, KM64; AKG 414, D224, D190; Beyer M160, M360; E-V RE20; Sennheiser 421, 441; RCA 77DX, 44BX; Sony 37; PZM.  
 Instruments Available: At no charge: Steinway grand piano, Baldwin grand piano, (2) Fender Rhodes, clavinet, tack piano, Yamaha and Ludwig drum kits, vibes, tympanis, congas, hand percussion, guitar and bass amps. All other equipment via rental.  
 Video Equipment & Services: Q:Lock 3.10.2 synchronizer, JVC B250 video cassette. Synchronization to videotape for post-scoring and video mixing: \$50/hr. extra charge. Audio relay to video cassette.  
 Rates: Competitive and flexible. Please call for quote.

•••• **CELEBRATION SOUNDS**  
 26 Summer St., Pawtucket, RI 02860  
 (401) 728-0780  
 Owner: David Correia, Dan Moretti  
 Studio Manager: Catherine Correia  
 Engineers: David Correia, Dan Moretti, Steve Badessa.  
 Dimensions of Studios: 25 x 21, 22 x 13.  
 Dimensions of Control Rooms: 16 x 14.  
 Tape Recorders: Otari MTR-90 Series II, 24-track w/autolocator; Otari MK-5050BII, 1/2-track; Revox B-77, 1/2-track; Nakamichi 680 ZX.  
 Mixing Consoles: Sound Workshop Series 34B w/ARMS II automation, full 24-track hi-resolution metering, supergrouping, and peak/shell EQ, 28 x 24.  
 Monitor Amplifiers: Crown Micro-Tech 1000, Crown DC-300A.  
 Monitor Speakers: UREI 809s, Yamaha NS-10Ms, Auratones.  
 Echo, Reverb & Delay Systems: Lexicon 200, Lexicon PCM70, Lexicon PCM41, Eventide 949.  
 Other Outboard Equipment: Valley People Dyna-Mite, (2) Ashly SC-33s, (2) Ashly SC-50s, Ashly SC-55, EXR exciter.  
 Microphones: The usual assortment.  
 Instruments Available: LinnDrum, Young Chang grand piano, Prophet 600, Apple Macintosh, CBS sound-effects library.  
 Rates: Available upon request.

•••• **CELESTIAL SOUNDS**  
 919 Second Ave., New York, NY 10017  
 (212) 355-4825  
 Owner: Toni and Celeste Pinelli  
 Studio Manager: Pete Sobel  
 Dimensions of Studios: 22 x 20 plus drum and iso booths.  
 Dimensions of Control Rooms: 21 x 17.  
 Tape Recorders: Studer A80 MKIII, 24-track; Studer A80, 1/2-inch 2-track; (2) Studer B-67, 1/4-inch 2-track; (2) Nakamichi MR-1 cassette.  
 Mixing Consoles: MCI 636 automated 36 x 44.  
 Monitor Amplifiers: (3) BGW 750B, BGW 250, (3) SAIE 250.  
 Monitor Speakers: UREI 813, Yamaha NS10M, ADS300, Auratones.  
 Echo, Reverb & Delay Systems: EMT 250 digital reverb, EMT 140 stereo plate, Lexicon Prime Time, Eventide Harmonizer, flanger, Yamaha REV7, Lexicon PCM 70, (2) Lexicon PCM-42.  
 Other Outboard Equipment: (3) Pultec: EQP-1A, (8) API 550/550A EQs, (4) Kexep II noise gates, 30 channels dbx 216 noise reduction, dbx 160, 165 comp/limiters, (2) Teletronix LA-2A limiters, UREI LA-3A, (2) UREI LA-4, (2) Orban parametric EQs, (2) Neve 4 band EQ/pre-amps; (6) Neve 3 band EQ/pre-amps.  
 Microphones: Neumann U47 tube (VF-14), U67 (tube), U87, U89, AKG C-24 stereo tube, 414EB, D224E, Sennheiser 441, 421, E-V RE20, Shure SM57.

**Instruments Available:** Steinway B grand, Dyno-My-Rhodes, Hammond B-3/Leslie. Pearl drums, Fender and Mesa Boogie amps, Sunn bass amp, Hi-watt 4 x 12 cabinet, Roto-Toms, assorted percussion. Available for rent, prior request: Drumulator, Linn, DMX, DX drum machines, Marshall 200W amp w/4 x 12 cabinet, OBX-A, OBX-B, Prophet 5, DX7, Yamaha recording series drums.  
**Rates:** \$125/hr. Block and discounted rates available.

•••• **CENTRAL STUDIO**  
 P.O. Box 7417, Silver Spring, MD 20907  
 (301) 587-3565, 831-8371  
 Owner: Kevin Mora, Alan Leary  
 Studio Manager: Monsy Morales

•••• **CENTURY III AUDIO**  
 651 Beacon St. Kenmore Sq., Boston, MA 02215  
 (617) 267-6400  
 Owner: Ross Cibella  
 Studio Manager: Ward Dilmore  
 Engineers: Rob Hill, Don Goonan, Jay Rose.  
**Tape Recorders:** Otari MTR-90, 24-track; Studer 2-track w/SMPTE; MCI JH-110B, 8-track; Otari 5050 MKII, 2-track; MTE 16/35mm dubber; Nikko cassette deck; Studer B67.  
**Mixing Consoles:** MCI 636 w/automation, 32 input; Soundcraft 24 input; Tapco 16 input, MCI 618, MCI w/automation and Trois Custom EQ.  
**Monitor Amplifiers:** Bryston, QSC.  
**Monitor Speakers:** UREI 811B, JBLs; Electro-Voice, Auratone  
**Echo, Reverb & Delay Systems:** Lexicon 200, Lexicon Prime Time II, Lexicon 1200B.  
**Other Outboard Equipment:** Aphex Type B Aural Exciter, Aphex Compellor, Orban de-esser, Dynaflex noise reduction, BTX Softouch synchronizer; Kloss video projection; Eventide Harmonizer.  
**Microphones:** Neumann, AKG, Electro-Voice, Beyer.  
**Instruments Available:** Moog synthesizer, large library of music/sound effects; DeWolfe, Valentino/Major, KPM/Bruton, Network, Chappell, CBS, Kurzweil synthesizer w/sampling and MacAltach; Roland JX8-P, Yamaha drum computer.

**Video Equipment & Services:** 30 x 60 studio w/70-foot cyc and 16-foot grid; Arriflex 35 BL-2 camera; Ikegami studio cameras; full complement of grip and lighting gear; (3) CMX edit suites, fully loaded; 3/4-inch to one-inch multi-format suite; 16/35mm neg-pos film transfer via Bosch FDL 60 2B CCD unit; large assortment of digital video effects gear, Quantel Paintbox, NEC DME/DVE, Bosch FGS-4000; Sony 2500 single frame recorder; animation stand 30 x 40 insert stage (50 x 100 stage also available) much, much more.  
**Rates:** Please call or write for information.

•••• **CIANI/MUSICA INC., C/M STUDIOS**  
 30 E. 23rd St., New York, NY 10010  
 (212) 777-7755  
 Owner: Suzanne E. Ciani  
 Studio Manager: Robert Kahn

•••• **CLASSIC SOUND**  
 548 Broadway Ste 5-J, New York, NY 10012  
 (212) 925-1839  
 Owner: Fred Hersch  
 Studio Manager: Fred Hersch, M. Denise McGrath



CLINTON RECORDING STUDIOS INC.  
 New York, NY

•••• **CLINTON RECORDING STUDIOS INC.**  
 653 10th Ave., New York, NY 10036  
 (212) 246-2444  
 Owner: Ed Rak, Bruce Merley  
 Studio Manager: Charles Mills  
 Engineers: Ed Rak, Jay Rifkin  
**Dimensions of Studios:** A: 2,000 sq. ft., 22-ft. ceiling; B: 1,200 sq. ft., 15-ft. ceiling; C: 75 sq. ft. O/D booth.  
**Dimensions of Control Rooms:** A: 450 sq. ft., B: 400 sq. ft., C: 275 sq. ft.  
**Tape Recorders:** Mitsubishi X800, 32-track digital; Mitsubishi X80, 2-track digital; Studer A800, 24-track; Studer A80, 2-track; Studer A80, 4-track; Studer A810, 2-track; Tascam 122B cassette decks, Sony 701Es digital processors.  
**Mixing Consoles:** (3) Neve 8078 w/Necam II, 40 x 32.  
**Monitor Amplifiers:** Bryston 6B, 4B; McIntosh 2500, 2300.  
**Monitor Speakers:** UREI 813B, Westlake BBSM10, Yamaha NS-10M, Visonik 9000, Visonik 803, E-V Sentry 100, Auratone 5C.  
**Echo, Reverb & Delay Systems:** EMT 140s plates, Lexicon 224XL w/Larc, AMS RMX, Audio Digital TC2s, Lexicon Super Prime Time.  
**Other Outboard Equipment:** Neve limiters, UREI LA3A, 1176s, dbx 160s, Scamp racks, Audio Digital TC2, Marshall AR300, Marshall time modulator, Lexicon Super Prime Time, Eventide 910, 949, 969, Harmonizers, Orban 622 EQs, Pultec EQP1A EQs, Dolby SP24s, Dolby 361s, Drawer noise gates, UREI 964 metronome, BTX Softouch, Shadow and Cypher sync and SMPTE equipment.  
**Microphones:** Over 100 AKG, Crown, E-V, Neumann, Sony, Shure, Sennheiser and Schoeps.  
**Instruments Available:** Steinway D 9-foot grand, Yamaha C7 7-foot grand, Dyno-my-piano Fender Rhodes, Yamaha Tour Series drums, Acoustic bass amps, Roland JC120 guitar amps, Marshall guitar amp.  
**Video Equipment & Services:** Sony 26-inch Pro Feel monitors, JVC 6650 U-Matic VCRs, w/remotes, lockup, mag transfers.  
**Rates:** Inquire.

•••• **COLUMBIA RECORDING STUDIO**  
 also REMOTE RECORDING  
 49 E. 52nd St., New York, NY 11001  
 (212) 975-2958  
 Owner: CBS Inc.  
 Studio Manager: Rob Grabowski

•••• **CONDO RECORDING**  
 also REMOTE RECORDING  
 135 Lafayette Rd. P.O. Box 653, Rye, NH 03870  
 (603) 964-5675  
 Owner: Georgeanne F. Baino  
 Studio Manager: Georgeanne F. Baino

•••• **CONNECTICUT RECORDING STUDIOS, INC.**  
 1122 Main St., Bridgeport, CT 06604  
 (203) 366-9168  
 Owner: Paul Leka  
 Studio Manager: Jo-Ann Vendittelli  
 Engineers: Carl Osgood, independents welcome.  
**Dimensions of Studios:** Main room: 30 x 15 x 11 1/2, key-board room: 24 x 12 x 12.  
**Dimensions of Control Rooms:** 20 x 13 x 10.  
**Tape Recorders:** MCI JH-114, 24-track; MCI JH-16, 16-track w/one-inch 8-track heads; MCI JH-110B, 1/2-inch 2-track; MCI JH-110A w/Dolby A, 1/4-inch 2-track; TEAC A2000R, 1/4-inch 2-track; Eumig FL-1000 cassette.  
**Mixing Consoles:** Neve 8058 MKII w/VCA faders and groups, 28 x 16 x 4.  
**Monitor Amplifiers:** (2) Crown D75, (2) H-H TPA250D, Yamaha P2200.  
**Monitor Speakers:** Big Reds w/604E and Time Sync, Yamaha NS-10M, Eastern Acoustic MS-50, Auratone 5C.  
**Echo, Reverb & Delay Systems:** Yamaha REV7, Eventide 910 Harmonizer, AKG BX20, (2) EMT 140, live chamber 67 x 20 x 11, live chamber 59 x 22 x 11, live chamber 44 x 19 x 15.  
**Other Outboard Equipment:** (2) UREI 1176LN, (2) UREI LA-3A, (2) UREI 527A EQ, (4) Pultec EQH-2, Pultec MEQ-5, A-R Gain Brain, Roger Mayer noise gate, Electro Harmonix vocoder, White 4100 EQ, Moog MKEP-EQ.  
**Microphones:** (6) Neumann U87 FET, (3) KM84, U47 FET; (3) Shure SM-57, (2) SM81; (6) Sennheiser 421; (3) E-V REV20; (2) AKG C452 E, (2) C451.  
**Instruments Available:** 7'4" Steinway piano, Steinway upright piano, Oberheim OB-Xa, Yamaha CS-80, Hohner Clavinet, Fender Rhodes electric piano, studio drum set.  
**Rates:** Please call.

•••• **COUNTERPOINT RECORDING STUDIOS, INC.**  
 723 7th Ave., New York, NY 10019  
 (212) 398-9550  
 Owner: Jerry Ragovoy  
 Studio Manager: Jane Marvin

•••• **COURTLEN RECORDING**  
 149 MaQuan St., Hanson, MA 02341  
 (617) 294-8316  
 Owner: Fred and Pat Danner  
 Studio Manager: Pat Danner

•••• **CRYSTAL RECORDING STUDIO**  
 729-731 S. Main St., Manville, NJ 08835  
 (201) 725-4619, 463-8162, 526-2337  
 Owner: The Chastie Tree, Inc.  
 Studio Manager: Joseph J. Baumgartner

•••• **D&D RECORDING INC.**  
 320 W. 37th St., New York, NY 10018  
 (212) 736-7774  
 Owner: Douglas Grama, David Lotwin  
 Studio Manager: David Lotwin

•••• **DAK AUDIO**  
 also REMOTE RECORDING  
 315 Rickert Rd., Sellersville, PA 18960  
 (215) 723-1167  
 Owner: Daniel A. Kendra  
 Studio Manager: William Gottshall

•••• **DELTA RECORDING STUDIOS**  
 16 W. 46th St., New York, NY 10036  
 (212) 840-1350  
 Owner: Bob Liebert, Sandy Raskin

•••• **BOB DIGANGI RECORDING**  
 39 Hartland Ave., Emerson, NJ 07630  
 (201) 262-6681  
 Owner: Bob DiGangi  
 Studio Manager: Bob DiGangi



DIGITAL BY DICKINSON  
 Bloomfield, NJ

•••• **DIGITAL BY DICKINSON**  
 also REMOTE RECORDING  
 9 Westinghouse Plaza  
 P.O. Box 547, Bloomfield, NJ 07003  
 (201) 429-8996  
 Owner: Frank R. Dickinson Jr.  
 Studio Manager: Lila Wassenaar

•••• **DIMENSIONAL SOUND**  
 301 W. 54th St., New York, NY 10019  
 (212) 247-6010  
 Owner: Ed Chalpin  
 Studio Manager: Charles Leighton

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## DOWNTOWN RECORDERS

BOSTON



### DOWNTOWN RECORDERS

Boston, MA

•••• DOWNTOWN RECORDERS  
 537 Tremont St., Boston, MA 02116  
 (617) 426-3455

Owner: Mitch Benoff  
 Studio Manager: Anne Richmond  
 Engineers: Joe Cuneo, Jeff Whitehead  
 Dimensions of Studios: 23 x 28 plus 4 iso booths  
 Tape Recorders: MCI JH-24, 24-track (16-track also available); MCI JH 110C, 2-track; Otari M5050B, 2-track; Revox A77H, 2-track  
 Mixing Consoles: Tangent (modified) 3216, 32 in x 24 out  
 Monitor Amplifiers: Ashly FET500s, Ashly FET200, Crown DC-300s, DC-150, Dynaco  
 Monitor Speakers: UREI 813s, Yamaha NS-10Ms JBL 4311s, Auratones  
 Echo, Reverb & Delay Systems: Lexicon 224X digital reverb w/LARC, Lexicon PCM70, Lexicon Prime Time, PCM42, 100 dome acoustic chamber, Lexicon Super Prime Time, DL-4 digital delays  
 Other Outboard Equipment: Eventide Harmonizer, dbx 165s, LA4s, 1176s, UREI 175 tubes and Ashly SC50 compressors; Valley People and Roger Mayer noise gates, Ashly SC66A parametric EQs  
 Microphones: Neumann U87s, KM-88s, KM 84; Sennheiser 441s and 421s; Shure SM81s and SM57s; AKG D12, 414s, 451s; E-V RE15, RE20s, 664; Beyers 500s, Crown PZMs  
 Instruments Available: 1920 Steinway grand piano, Hammond B-3 organ w/Leslie speaker, LinnDrum, Yamaha DX7  
 Rates: Call for rates

•••• DREAMLAND RECORDING  
 P.O. Box 383, Bearsville, NY 12409  
 (914) 338-7151

Owner: Joel Bluestein  
 Studio Manager: Joel Bluestein  
 Engineers: Dave Cook, Jay Bender, Joel Bluestein  
 Dimensions of Studios: A: 20 x 20 x 12, ambient room 40 x 45 x 33  
 Dimensions of Control Rooms: A: 20 x 20 x 10, B: 20 x 15 x 9  
 Tape Recorders: Studer A-80, 24-track; MCI JH24-16, 16-track; Ampex ATR 102, 2-track; Otari 5050, 2 track; Revox A-700, 2-track  
 Mixing Consoles: API 3232 40, MCI 428 (highly modified) 20  
 Monitor Amplifiers: McIntosh 2500, BGW 500, BGW 150, Yamaha 2200, 2100, AB150, Crown DC300  
 Monitor Speakers: UREI 813, MDM TA3, Pioneer HPM 700, Yamaha NS-10, Auratone  
 Echo, Reverb & Delay Systems: Lexicon 224, Lexicon PCM60, Ecoplate II, Effectron II, live chamber, Lexicon Prime Time

Other Outboard Equipment: UREI, 1178, 1176, LA4 limiters; 546, 527 EQs, dbx 900 series limiters, noise gates and EQs; Pultec EQP1A, EQH equalizers; White 4100 EQs, Eventide 949 Harmonizer, flanger; EXR Exciter; Delta-Lab DL5, DL2A; Valley People Dyna-Mite; Orban 442A; BTX Shadow w/Cypher reader generator  
 Microphones: Neumann Schoeps, AKG, Sennheiser, Electro-Voice, Crown, Shure, Countryman, Altec-Lansing  
 Instruments Available: 7-ft. Young Chang grand piano, Prophet V modified for MIDI and 120 presets, Yamaha DX7, acoustic and electric guitars by Martin, Fender, Gibson and Veillette-Citron; amps by Fender, Polytone Aims, Clavinet D-6, Fender Rhodes  
 Rates: Call  
 Extras: Cassette duplication, production assistance, in-house live recording of shows with video support  
 Direction: Dreamland reflects the desire for new ideas within the media community. Wired for audio and video our rooms have been intimately designed while retaining the ambience of a 100 year old church. Our staff is open minded and our space was inspired well before we redefined it with appropriate technology. Located five minutes from scenic Woodstock, NY, we offer the discerning professional a creative alternative and the perspective to make it work.

•••• DSE RECORDING  
 also REMOTE RECORDING  
 557 Bouquin Circle, Oil City, PA 16301  
 (814) 676-1060  
 Owner: Doug Suhr  
 Studio Manager: Doug Suhr

•••• EAST COAST SOUND LAB  
 also REMOTE RECORDING  
 8317 Philadelphia Rd., Baltimore, MD 21237  
 (301) 574-4223

Owner: Norman F. Noplock  
 Studio Manager: Norman F. Noplock  
 Engineers: Brent Mingle, Garry Shertinger, David Kalmbach, Norman Noplock  
 Dimensions of Studios: 30 x 33  
 Dimensions of Control Rooms: 12 x 15  
 Tape Recorders: Stephens 821B, 24-track; Ampex ATR 102, 2-track; Otari MX-5050, 2-track; TEAC 3340, 4-track; Telex duplicator (cassette) 6120, 4-track  
 Mixing Consoles: Harrison w/automation 3624 36 x 24, TEAC Model 2A 6 x 4, Biamp 8802 8 x 4  
 Monitor Amplifiers: Crown DC 300A, Ashly FET-200  
 Monitor Speakers: JBL 4411, TOA RS-21M  
 Echo, Reverb & Delay Systems: EMT Stereo Plate, Yamaha digital reverb, Lexicon Prime Time II, (2) Lexicon PCM42, Guild Echorec wheel echo, Fender tube reverb, Eventide 910 Harmonizer  
 Other Outboard Equipment: UREI 1176 limiters, UREI LA4 limiter/compressor, dbx 118 dynamic range enhancer, Dolby A, Gate noise gate/expander, Biamp 10 band graphic EQ, Telex 6120 stereo cassette duplicator  
 Microphones: Neumann U84 tube type, Neumann U87; AKG 202D; Beyers M160; Shure SM58, SM33; E-V; Sony; Altec; Sennheiser 421  
 Instruments Available: Yamaha 7'4" acoustic grand piano, Yamaha DX7, Moog and Roland synthesizers, Oberheim DMX drum machine, Emulator SP12 sampler and drum machine, Gretsch drum set, Kramer and Washburn basses  
 Rates: \$65/hr (block time available and negotiable)

•••• EAST SIDE SOUND CO. INC.  
 98 Allen St., New York, NY 10004  
 (212) 226-6365  
 Owner: Louie Holtzman  
 Studio Manager: Lew Allen

•••• EASTERN ARTISTS RECORDING STUDIO (E.A.R.S.)  
 36 Meadow St., East Orange, NJ 07017  
 (201) 673-5680, (212) 874-1358  
 Owner: Bill Galanty  
 Studio Manager: Howard Kessler

•••• EDGE TRACK  
 also REMOTE RECORDING  
 235 E. 13th St. #3-D, New York, NY 10003  
 (212) 505-9281  
 Owner: Visual Music  
 Studio Manager: Theresa Hunter

•••• EFFANEL MUSIC  
 only REMOTE RECORDING  
 66 Crosby St. 4B, New York, NY 10012  
 (212) 807-1100  
 Owner: Randy Ezratty  
 Studio Manager: Mark Shane

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•••• **ELECTRIC LADY STUDIOS**  
 52 W. 85th St., New York, NY 10011  
 (212) 677-4700  
 Owner: Alan Selby  
 Studio Manager: Michel Sauvage  
 Engineers: Dave Wittman, Michel Sauvage, Bruce Buchhalter, Ken Steiger, Jamie Chaleff, Joe Barbana, Mark Richardson  
 Dimensions of Studios: A: 38 x 35 x 16, B: 19 x 20 x 9, C: 21 x 19 x 9  
 Dimensions of Control Rooms: A: 23 x 13 x 9, B: 27 x 17 x 10, C: 21 x 16 x 8  
 Tape Recorders: Studer A800 MK-III, 24-track; Sony 3324 digital, 24-track; Studer A80, 810, B-67, 2-track; Sony 1610 digital, 2-track; Tascam 122-B, cassette.  
 Mixing Consoles: Neve 8078 40 x 24, SSL 4000E 56 x 32, SSL 6000E 72 x 32.  
 Monitor Amplifiers: Crown PSA-2, Crown PS 200 Yamaha P-2200.  
 Monitor Speakers: Westlake HRM-1, Westlake BBSM-12, Yamaha NS-10M, plus alternates.  
 Echo, Reverb & Delay Systems: EMT, Lexicon 224XL, AMS reverb, Space Station, AMS DDL, PCM42, Prime Time, many more.  
 Other Outboard Equipment: EQ: Pultec, Orban, Klark-Teknik, Neve. Compression: LA-2A, 160, 1176, ADR, Neve, Gates; Kepex, Drawmer, Dyna-Mite. Toys: assorted flangers, phasers and mystenosos.  
 Microphones: Neumann, AKG, PZM, Sennheiser, Electro-Voice, Beyer, Shure, Sony, many more.  
 Instruments Available: Latest in drum machines and synthesizers, many keyboards and amplifiers.  
 Video Equipment & Services: Complete tape lock and video playback systems.  
 Rates: Please call for rates.

•••• **DON ELLIOTT PRODUCTIONS**  
 Stonybrook, Weston, CT 06883  
 (203) 226-4200  
 Owner: Dons Elliott  
 Studio Manager: Dean Elliott

•••• **EMMAUS SOUND STUDIO**  
 also **REMOTE RECORDING**  
 533 Oak Terrace, Point Pleasant, NJ 08742  
 (201) 899-5586  
 Owner: Joe Saint, Jim Scott  
 Studio Manager: June Santucci

•••• **THE ENTERTAINMENT GROUP, LTD.**  
 also **REMOTE RECORDING**  
 348 Willis Ave., Mineola, NY 11501  
 (516) 747-5100  
 Owner: Gregg Raffia  
 Studio Manager: Scott Raffia

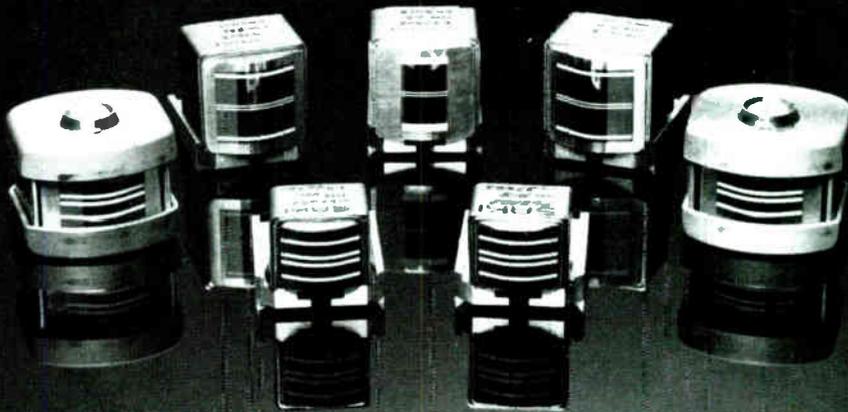
•••• **ERAS RECORDING**  
 226 E. 54th St., New York, NY 10022  
 (212) 832-8020  
 Owner: Bons Midney  
 Studio Manager: Cynthia Daniels

•••• **EVERGREEN RECORDING INC.**  
 215 W. 91st St., New York, NY 10024  
 (212) 362-7840  
 Owner: Joel Greenbaum  
 Studio Manager: Raf Hejduk

•••• **EVERGREEN RECORDING STUDIOS INC.**  
 also **REMOTE RECORDING**  
 1373 McLaughlin Run Rd., Pittsburgh, PA 15241  
 (412) 221-2737  
 Owner: Harry Coleman, Charlotte Coleman, Elgin Eissler as ERS Inc.  
 Engineers: H. Coleman, Michael J. Hurzon, Thomas Kikta.  
 Dimensions of Studios: 24 x 18 w/drum iso booth and no 90° angles, floating floor system, triple wall construction.  
 Dimensions of Control Rooms: 14 x 13 live end/dead end acoustics.  
 Tape Recorders: Ampex MM 1200 24-, 16-track, Otari MX5050 MKIII, 1/2-inch 8-track; (2) Scully 280B, 2 track; Revox-Studer PR99, 2-track; TEAC C3RX cassette, Otari MTR10 2-track w/center time code track.  
 Mixing Consoles: Amek TAC Matchless w/384 PTP Bay, 26 in x 24 out w/8 sub groups.  
 Monitor Amplifiers: Harman/Kardon Citation 16, SAE, Marantz, Symetrix headphone amp w/custom spec distribution boxes.  
 Monitor Speakers: Foxtex LS2s, RM780.  
 Echo, Reverb & Delay Systems: MICMIX XL-515, ART digital reverb, ADA stereo tapped delay, (2) ADA 1280 delays, Eventide 910 Harmonizer, Eventide flanger, Loft analog delay, Klark-Teknik DN780 digital reverb, ART DR1 digital reverb, (2) ADA 2.56i digital delay  
 —LISTING CONTINUED ON NEXT PAGE

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8650 HAYDEN PLACE, CULVER CITY, CALIFORNIA 90230 (213) 328-8800

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- Listings: Studios of the Southwest Recording Schools & Programs
- Special Report: Church Sound

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May 7th

**MATERIALS DUE:**

May 15th

**AUGUST**  
**Studio Design Issue**

- Listings: Studio Designers & Suppliers
- Building Techniques for Production Rooms
- Forum: Computerized Measurement & Analysis

**AD CLOSING:**

June 7th

**MATERIALS DUE:**

June 15th

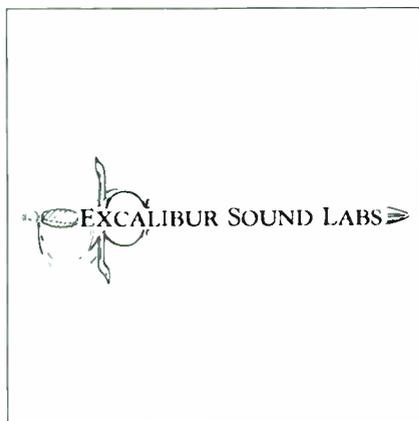
**For information and space reservations, call (415) 843-7901**

**Other Outboard Equipment:** EXR Exciter, Symetrix parametric EQ, (2) Klark-Teknik DN 27A 1/2-octave EQ, Rebis rack noise gates, compressor/limiters and parametric EQ, dbx stereo compressor/limiter, (2) Symetrix 522 compressor/limiters/expander/noise gates/duckers, (2) Symetrix CL 150 compressor/limiters, Omni Craft noise gates, Axe direct boxes, Brooke-Siren direct boxes, Stewart direct boxes, Pro Co. direct boxes.

**Microphones:** AKG "The Tube," C-414 EB/P48s, C451s, C535s, D-12Es, D-202Es, 330BTs, Beyer M-80s, M-260s, E-V RE 20s, Sennheiser MD 421Us, MD 441Us, Shure SM81s, 57s, Sony ECM-56Fs

**Instruments Available:** Kawai GS30 6'1" conservatory grand piano, Yamaha "Recording Series" drum kit w/ Zildjian and Paiste cymbals, Memory Moog Polyphonic synthesizer, Yamaha PF-10 electronic piano, E-mu drumulator, Washburn acoustic guitar, Ibanez electric guitar, Ibanez bass guitar, Rockman, E-mu Systems Emulator II.

**Rates:** 24-track \$75/hr



**EXCALIBUR SOUND LABS**  
New York, NY

•••• EXCALIBUR SOUND LABS  
750 8th Ave., New York, NY 10036  
(212) 302-9010

**Owner:** Art Polhemus  
**Studio Manager:** Annie Rose  
**Engineers:** Art Polhemus, Fuji Bright  
**Dimensions of Studios:** 25 x 35  
**Dimensions of Control Rooms:** 20 x 12  
**Tape Recorders:** Studer A-80, 16-, 24-track; Ampex 102, 1/2-inch 2-track, Ampex 440B, 1/4-inch 2-track; Studer PR99, 1/4 inch 2 track  
**Mixing Consoles:** Sound Workshop 40 28 x 32  
**Monitor Amplifiers:** BGW  
**Monitor Speakers:** CSI, Big Reds.  
**Echo, Reverb & Delay Systems:** Eventide 2016 BX10, REV7, MXR plus.  
**Other Outboard Equipment:** Pultec, Lang, UREI EQ, API EQ, Valley People EQ, gates, dbx 160s, Orban 622Bs, LA3A.  
**Microphones:** Sennheiser, AKG, Neumann, Shure, E-V.  
**Instruments Available:** Steinway B, Rhodes 88, JPG, CZ-101, Yamaha RX11, DX7  
**Video Equipment & Services:** Award-winning production service  
**Rates:** Upon request.

•••• ROBERT FAIR FILM SCORE PRODUCTIONS  
268 Elizabeth St. Ste. #4, New York, NY 10012  
(212) 966-2852  
**Owner:** Robert Fair  
**Studio Manager:** Curtis McKonly

•••• SAMMY FIELDS' PMR  
35 Wellwood Rd., Demarest, NJ 07627  
(201) PMR-8824, 279-8291  
**Owner:** Sammy Fields  
**Studio Manager:** Frank Liberti  
**Engineers:** Mark Arwady, Steve Brauner, Al Theur, Bob Biasell, Gary Kovac  
**Dimensions of Studios:** 45 x 25 x 13-18-foot ceilings with moveable live to dead walls.  
**Dimensions of Control Rooms:** 25 x 25 (w/producers 12 foot meditation pyramid).  
**Tape Recorders:** MCI JH-24, 24-track; MCI JH-110B, 2-track, Technics 1520, 2-track; digital recorders available.  
**Mixing Consoles:** Trident Series 80-B 56 x 24 x 2  
**Monitor Amplifiers:** Bryston, Crown, PAS  
**Monitor Speakers:** UREI 813B, Yamaha NS-10M, Auratone-5C, AR 18 B  
**Echo, Reverb & Delay Systems:** Lexicon 224XL, EMT 140ST, Ecoplate III, Yamaha REV7, etc.  
**Other Outboard Equipment:** Extensive selection including dbx, Valley People, Aphex, EXR, Yamaha, Orban, Dr Flick and Mini Doc etc

## NORTHEAST STUDIOS



## 24 TRACK



**SAMMY FIELDS' PMR**  
Demarest, NJ

**Microphones:** Neumann U87s, KM84s, AKG 414s, 451s, Sennheiser 421s, Beyer M500s, M160s, Shure SM81s, 57s, 58s, Sony C-37 Electro Voice RE-20s, RE-10s, additional mics available.

**Instruments Available:** Emulator II, Kawai grand piano, Linn 900G w/disk drive, Yamaha DX7, TX816 (DX7s in rack mount), KX88 (88 note weighted MIDI keyboard controller), Oberheim Matrix 12, Memory Moog plus, Casio CZ-101, many other instruments etc. Also, an extensive disc library of drum, orchestral music, and effects for the Emulator II and Linn 900G.

**Video Equipment & Services:** Wide range available.  
**Rates:** Call for free color brochure. Block rates available.  
**Extras:** 43-track (2 machine lock-up) and digital recording available. Our own private luxury van (raised roof, back lounge w/color TV), kitchen, all types of fine food available in immediate area.  
**Direction:** Most all the benefits of a New York studio w/out the hassle. A very efficient but low-key staff to serve you. Only 11 minutes from Manhattan (G.W. bridge) our own luxury van service. A private world-class studio, designed with large three dimensional rough hewn cedar patterns of pyramids (in control room), diamonds (in studio), and extensive multi-colored lights to enhance creativity. Beautiful treed setting, studio is solid concrete from roof to floor making it exceptionally soundproof.

•••• FISH BROOK MUSIC  
2 Lawrence Rd., Boxford, MA 01921  
(617) 887-9896

**Owner:** Ross Warner  
**Studio Manager:** Ross Warner  
**Engineers:** Ross Warner  
**Dimensions of Studios:** 30 x 12 x 16 high.  
**Dimensions of Control Rooms:** 12 x 18 LEDE  
**Tape Recorders:** Sony/MCI JH-24, 24-track, Studer A810, 2 track, Bevox PR99, 2-track; Tascam 25-2, 2 track, Tascam (2) 122B cassette  
**Mixing Consoles:** Sony/MCI JH-636-AF/VU 36 inputs, fully automated.  
**Monitor Amplifiers:** Yamaha 2002M, P2050, Peavey CS 800, (3) Eddor API 0 amps w/12 sends  
**Monitor Speakers:** UREI 811B, Yamaha NS 10M, JBL 4311, Auratone 5C.  
**Echo, Reverb & Delay Systems:** Lexicon 224XL w/LARC and PCM60 digital reverbs, Lexicon PCM42 and Prime Time DDLs, MXR ilanger/doubler.  
**Other Outboard Equipment:** dbx 166, 163 compressors, (2) Valley People stereo Dyna-Mites, Symetrix 501 compressor, (2) Ashley SC 50 compressors, Eventide H969 Pro-pitch Harmonizer, Aphex Aural Exciter, (4) Audioarts Engineering 410C parametric EQs, Mutron Bi-phase, Peterson strobe tuner  
**Microphones:** Neumann U87, AKG 414, (2) AKG 460B

(3) Shure SM-81, (5) SM-57, PE50SP, (3) Sennheiser MD421, E-V RE-20, (2) PL-5, Beyer M260, (2) Crown GP-30 PZM, (2) Audio-Technica ATM 31, Countryman and Whirlwind direct boxes.

**Instruments Available:** Howard 330C baby grand piano by Baldwin, Yamaha DX7 and Sequential Circuits Prophet 600 synths, Fender Rhodes, clavinet D6, Oberheim DX and E-mu Drumulator drum machines.  
**Rates:** Call for competitive rates.

•••• FOREST SOUND  
629 5th Ave., Pelham, NY 10803  
(914) 738-1007

**Owner:** EJM Records Partnership  
**Studio Manager:** Eric Zidovec, Mike Russell  
**Engineers:** Eric Zidovec, Mike Russell, Rebecca Smith.  
**Dimensions of Studios:** 26 x 26; 15-foot ceilings.  
**Dimensions of Control Rooms:** 12 x 12; 10-foot ceilings.  
**Tape Recorders:** MCI JH-114, 24-, 8-track; Otari MX-5050B, 2-track, Nikko ND 700II, 2-track (cassette); Technics RS-M228X, 2-track (cassette); TEAC Tascam-34, 4-track.  
**Mixing Consoles:** Yamaha 2408 24 x 24, Biamp 1221 12 x 4.  
**Monitor Amplifiers:** QSC 400 watt, QSC 200 watt, MacIntosh 225.  
**Monitor Speakers:** Cerwin-Vega, Yamaha NS-10s, Z-Technica 1000 reference monitors.  
**Echo, Reverb & Delay Systems:** Ecoplate III, Yamaha REV7, Roland SDE 1000s.  
**Other Outboard Equipment:** MXR and Bi-amp graphic EQs, Z-Technica gates, limiters and compressors, Z-Technica harmonizer.  
**Microphones:** AKG, E-V, Shure, Audio Technica, Neumann.  
**Instruments Available:** Yamaha studio series 5-piece drum kit w/Sabian cymbals, Roland TR-707 drum computer, Mesa-Boogie, Fender and Peavey amps.  
**Video Equipment & Services:** Publishing and production company in-house.  
**Rates:** \$40/hr., with engineer; call for block rates.

•••• FRESH TRACKS STUDIO  
411 W Cheltenham Ave., Philadelphia, PA 19126  
(215) 635-5500  
**Owner:** Larry Spivack, Kevin Joella

•••• FUNKY RECORDS RECORDING STUDIOS  
244 Lyell Ave., Rochester, NY 14608  
(716) 458-5610  
**Owner:** Boyd McCoy  
**Studio Manager:** Boyd McCoy

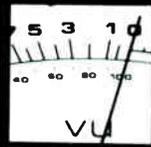
•••• THE GALLERY  
87 Church St., E. Hartford, CT 06108  
(716) 458-5610  
**Owner:** Boyd McCoy  
**Studio Manager:** Boyd McCoy

•••• VAN GELDER RECORDING STUDIO INC.  
445 Route 9W, Englewood Cliffs, NJ 07632  
(201) 567-4145  
**Owner:** Rudolph Van Gelder  
**Studio Manager:** Rudolph Van Gelder

•••• GLAMOUR  
25 Blossom Heath, Williamsville, NY 14221  
(716) 634-9317  
**Owner:** Eric D. Wobschall  
**Studio Manager:** Eric D. Wobschall

•••• GOLDEN APPLE MEDIA, INC  
also REMOTE RECORDING  
112 W. Boston Post Rd., Mamaroneck, NY 10543  
(914) 381-4141  
**Owner:** Lauren O'Neill  
**Studio Manager:** Peter Denenberg  
**Engineers:** Peter Denenberg, Rory Young, Andy Block.  
**Dimensions of Studios:** 23 x 25 (plus various iso booths throughout building).  
**Dimensions of Control Rooms:** 12 x 18 (plus machine room 7 x 9).  
**Tape Recorders:** Ampex MM-1000 2 inch (custom modified), 24 track; MCI JH-110c 1/2-inch 2-, 4 track; (2) MCI JH 110b 1/4-inch 2-track; Otari 5050, 2 track, Ampex 350, 2 track, TEAC 7300, 2 track; digital mastering system w/Sony BVH-800 and PCM701.  
**Mixing Consoles:** Allen & Heath Syncon 25 in x 24 out, additional 8 input effects return mixer.  
**Monitor Amplifiers:** Yamaha, BGW, Crown.  
**Monitor Speakers:** Custom designed by Al Fierstein of Acoustilogue pyramid 604E enclosures with subwoofer, Yamaha NS-10M, Auratones  
**Echo, Reverb & Delay Systems:** Lexicon 224 digital reverb, Applied Research and Technology digital reverb.  
—LISTING CONTINUED ON PAGE 182

# THE MIX BOOKSHELF



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Now it is simple and convenient to order these hard-to-find items from a single source by phone or through the mail. Send for our free catalog with hundreds of titles.

**1031) MODERN RECORDING TECHNIQUES**, Robert Runstein, David Huber The updated 1985 edition of this classic book contains state-of-the-art technical developments and practices in recording. Practicing engineers and students will find comprehensive coverage of equipment, acoustics, controls and techniques, as well as information on proper and creative production and sound measurement. 366 pp.(P) \$18.95

**1200) CRITICAL LISTENING COURSE**, F. Alton Everest This invaluable course specifically addresses the important nuances of the audio world. The 106-page training manual with ten pre-recorded lessons on cassette tapes lead you from basic to advanced listening techniques in increasing progression. Topics include estimating frequency, frequency band limitations, sound level changes, components of sound quality, frequency response irregularities, various types of distortion, reverberation effects on speech and music, signal vs. noise, and voice colorations. \$129.95

**1460) THE MICROPHONE HANDBOOK**, John Eargle This up-to-date volume covers the practical aspects of microphone use and design with concise information for solving specific mike problems. Detailed chapters explain microphone patterns, mike sensitivity, condenser mikes, proximity and distance effects, interference problems, techniques and systems for stereo, and much more. 256 pp.(H) \$31.95

**1490) DIGITAL AUDIO SIGNAL PROCESSING: AN ANTHOLOGY**, Edited by John Strawn Written both for the beginner and advanced practitioner of digital signal processing especially as it relates to computer music, this anthology presents a thorough introduction to the subject as well as covering digital filter design for the non-engineer, spiral synthesis, phase vocoder, and more. 283 pp.(H) \$34.95

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1,500 pages and 48 chapters with 50% new material make this the most up-to-date, one-volume reference library anywhere. Also includes lists of references and bibliographies as a guide to primary sources and definitive texts. 1500 pp.(H) \$69.95

**1800) MIDI FOR MUSICIANS**, Craig Anderton This brand new 1986 release is by far the best book we've seen on the subject. Clearly and thoroughly it discusses the evolution toward Musical Instrument Digital Interface, how MIDI solves musician's problems, the MIDI language and what it means in musical terms, how computers work in musical applications, MIDI applications both live and in studio, typical features of MIDI gear and their musical uses, set up and use of MIDI-based studios, MIDI accessories, musician-oriented software, and much more. 104 pp. (P) \$14.95

**2170) VIDEO EDITING & POSTPRODUCTION: A PROFESSIONAL GUIDE**, Gary H. Anderson A new "real world" guide to both technical and non-technical factors of videotape post-production by a four-time Emmy Award winner. Complete and detailed info on time codes, formats, offline and online editing, digital effects, future trends, and more. Includes glossary and selected directory of equipment manufacturers. 165 pp.(H) \$34.95

**2325) PRACTICAL AV/VIDEO BUDGETING**, Richard Van Deusen A complete guide to audio/visual budgeting for AV and video managers in corporations, institutions, commercial and government production houses. The book covers cost allocation systems, projecting and controlling income, production budgeting, chargeback systems, computerized budget management systems, and more. Includes over 30 useful forms for budgets, forecasts, and expense reports. 168 pp.(H) \$34.95

**3010) THIS BUSINESS OF MUSIC (REVISED AND ENLARGED)**, Shemel & Krasilovsky This highly comprehensive 1985 reference provides detailed explanations of legal, practical, and procedural problems of our industry. Part 1 — Recording companies and artists; Part 2 — Music publishers and writers; Part 3 — General music industry aspects. Includes over 200 pages of contracts, forms, and licenses. 646 pp.(H) \$19.95

**3600) MUSICAL APPLICATIONS OF MICROPROCESSORS, 2ND EDITION**, Hal Chamberlain The new expanded and revised edition of this superb volume covers new analog and digital synthesis techniques, nonlinear waveshaping, digital audio conversion, and background and historical material detailing the most current micro technology with thorough discussion of musical input devices, keyboard design concepts and sound generation circuits as well as an entirely new section which examines the practical applications of synthesis theory in professional synthesis products and studio equipment. 802 pp. (H) \$39.95

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—LISTING CONTINUED FROM PAGE 180

Lexicon PCM41 DDL, Eventide Harmonizer MXR DDL, Roland DDL, Loft analog delay Yamaha REV7 reverb, Lexicon PCM70 reverb  
**Other Outboard Equipment:** dbx noise reduction (28 channels), Dolby (4 channels), dbx 900 rack w/ 3 compressors, 2 gates de esser (6) Dyna-Mites by Valley People, 360 Systems programmable EQ UREI 1176 limiter, Aphex Aural Exciter, EXR exciter, Orban parametric EQ (stereo), White equalizers (on studio monitors) BTX Shadow synchronizer system w/ full time code complement  
**Microphones:** Neumann U87, KM84, AKG 414 (2) D 224E Crown PZM (2) Calrec, Sennheiser Electro Voice Shure, Beyer.  
**Instruments Available:** Steinway grand piano, Yamaha DX7, DMX drum machine, Oberheim Xpander (MIDI), Ludwig/Tama/Slingerland drums incl Octobans and Roto Toms, Steinberger bass and guitar, Marshall Fender guitar amps, and more—too numerous to mention.  
**Video Equipment & Services:** Broadcast quality one-inch post production editing suite. Complete production facilities available. Golden Apple won a bronze medal in the International Film & Television Festival of New York for the rock video "It's Only Love"  
**Rates:** Call for information, block rates available

•••• **GOLDEN HORN RECORDING STUDIOS**  
 97 W 2nd St., Freeport, NY 11520  
 (516) 623-1672  
 Owner: Sami Uckan  
 Studio Manager: Hope Uckan

•••• **GRACE RECORDING STUDIO, INC**  
 159 Pelham Ave., Hamden, CT 06518  
 (203) 288-9771  
 Owner: Fred E. Rossomando, Lee Walkup  
 Studio Manager: Fred E. Rossomando

•••• **GRAMAVISION STUDIO**  
 260 W. Broadway, New York, NY 10013  
 (212) 226-7057  
 Owner: Jonathan Ross

•••• **GRAND SLAM**  
 14 Northfield Ave., West Orange, NJ 07052  
 (201) 736-3087  
 Owner: J. Powers  
 Studio Manager: Lynn Reine Huss



**GREAT IMMEDIATELY RECORDING**  
 New York, NY

•••• **GREAT IMMEDIATELY RECORDING**  
 New York, NY 10011  
 (212) 206-8561  
 Owner: Bob Christianson  
 Studio Manager: Bob Christianson  
 Engineers: Bob Christianson  
**Tape Recorders:** Ampex MM1200 24 track, Ampex ATR 102, 2 track, Otari 5050B 2 track, Nakamichi cassette  
**Mixing Consoles:** Harrison Raven 32 x 24  
**Monitor Amplifiers:** UREI and BGW  
**Monitor Speakers:** Electro Voice Sentry 100s, Yamaha NS 10Ms, Auratones  
**Echo, Reverb & Delay Systems:** Lexicon 200, Lexicon 60 and Yamaha REV7 reverb, Eventide 949 Harmonizer, Korg SDD 3000, SDD2000 delay, Lexicon PCM41 delay  
**Other Outboard Equipment:** dbx 100 compressors, UREI 1176 compressor, Orban Rane parametric EQ, Orban de esser, UREI metronome  
**Microphones:** Neumann U87, AKG 414, Shure SM41, SM81, Crown PZMs

**NORTHEAST STUDIOS**



**24 TRACK**

**Instruments Available:** 1939 Steinway M grand, Roland Super Jupiter, Emulator II, Yamaha DX7, DX5, TX416, Minimoog, Korg CX 3, Linn 9000, Dr. Clock.  
**Video Equipment & Services:** JVC 3/4 inch deck and Toshiba monitor.  
**Rates:** Available upon request  
**Direction:** For in house production only. Not available for rent to the public



**GREENE STREET RECORDING**  
 New York, NY

•••• **GREENE STREET RECORDING**  
 112 Green St., New York, NY 10012  
 (212) 226-4278  
 Owner: Steve Loeb  
 Studio Manager: David Harrington

•••• **GRENADIER**  
 also **REMOTE RECORDING**  
 10 Parkwood Ave., Rochester, NY 14620  
 (716) 442-6209  
 Owner: T. Greene  
 Studio Manager: P. Greene

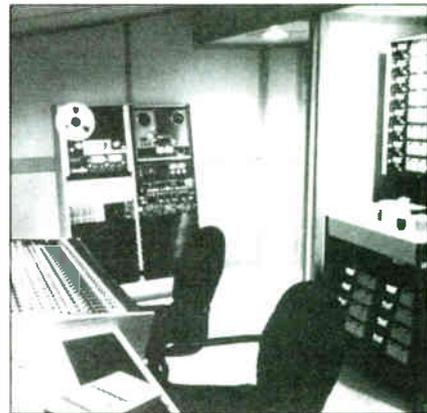
•••• **GRENADIER AUDIO**  
 also **REMOTE RECORDING**  
 3 Lille Ln., Cheektowaga, NY 14227  
 (716) 668-1133  
 Owner: T. Greene  
 Studio Manager: J. Greene

•••• **GROG KILL STUDIO**  
 Willow, NY 12495  
 (914) 688-5373  
 Owner: Michael Mantler, Carla Bley  
 Studio Manager: M. Mantler

•••• **H.C. & F. RECORDING INC.**  
 6 Brooklyn Ave., Freeport, NY 11520  
 (516) 867-0900  
 Owner: Philip Smart, Wilfred Williams, Michael McDonald, Peter and Philip Chin  
 Studio Manager: Philip Smart

•••• **HELFRICH RECORDING LABS**  
 also **REMOTE RECORDING**  
 4444 E. Texas Rd., Allentown, PA 18103  
 (215) 395-5511  
 Owner: Pete Helffrich  
 Studio Manager: Jim McGee

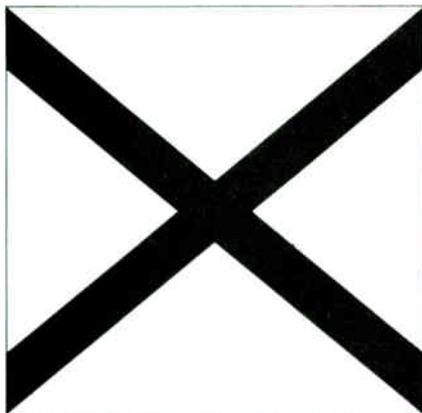
Engineers: Pete Helffrich, Jim McGee  
**Dimensions of Studios:** 54 x 27 x 12 high, drum booth, (2) isolation rooms  
**Dimensions of Control Rooms:** 18 x 22  
**Tape Recorders:** MCI JH 24 w/vari speed 24 track  
**Mixing Consoles:** MCI 36 in x 24 out  
**Monitor Amplifiers:** McIntosh  
**Monitor Speakers:** Aitec Auratones Dynaco  
**Echo, Reverb & Delay Systems:** EMT plate, MICMIX, echo chamber  
**Other Outboard Equipment:** (2) Gain Brain II, (4) Kepex, (4) Gain Brain, Lexicon I, Efectron II, Cooper Time Cube, Phasers (2) Pitch transposers, auto flangers, (2) 670 tube limiters, Dolby dbx (3) de essers, tape echo, (4) cue systems, Neumann disk mastering lathe, (40) cassette machines (real time duplication)  
**Microphones:** (2) AKG C 12, (9) 414 (2) 451, 224, (3) Neumann U47 tube (3) U87 (3) U67 (2) KM84, (6) Crown PZM (8) Sony C 22P (8) ECM 50 (3) ECM 33P, C 500, Shure SM 58, ATM 2, others  
**Instruments Available:** Lester 9 foot concert grand piano, Hammond C 3 w/ 147 Leslie, clavinet, Rhodes, Mellotron, harpsichord, Rogers drums, drum computers, Korg DW-8000  
**Video Equipment & Services:** VHS Hi 8, Beta, color correction, cameras, copiers  
**Rates:** \$50/hr. 24 track (call for special deals)



**HILLSIDE SOUND STUDIO**  
 Englewood, NJ

•••• **HILLSIDE SOUND STUDIO**  
 102 Hillside Ave., Englewood, NJ 07631  
 (201) 568-3268  
 Owner: R.P.M. Music Productions  
 Studio Manager: Dave Kowalski, Dae Bennett  
 Engineers: Dave Kowalski, Dae Bennett, Paul Mulson  
**Dimensions of Studios:** 35 x 20  
**Dimensions of Control Rooms:** 15 x 15  
**Tape Recorders:** Studer A 80MKIV 24 track, Studer A 80, 2 track, Studer A 810 2 track  
**Mixing Consoles:** Tronix Engineering & Design 305 A, 24 x 48  
**Monitor Amplifiers:** (2) Crown DC 300 A, Crown D-60  
**Monitor Speakers:** UREI 1813B, Yamaha NS 10M, Auratone 5C  
**Echo, Reverb & Delay Systems:** Lexicon 224 XL, (2) Lexicon Prime Time, Lexicon PCM70  
**Other Outboard Equipment:** (8) Valley People Kepex II, (2) Valley People Gain Brain, Eventide H949 Harmonizer, FL201 flanger, Aphex II, Orban 536 A de esser, UREI 1176 LN limiters, UREI 59 room EQs, Garfield Masterbeat, Apple IIe computer, Leader 522 oscilloscope  
**Microphones:** 4) Neumann U87 (4) Electro Voice RE 20, Neumann U47 FET (2) Neumann KM84 (2) AKG 414, AKG D 12 (6) Electro Voice RE 10, (3) AKG D1000E, (3) Shure SM5b (2) Shure SM57  
**Instruments Available:** 7'4" Bosendorfer piano, Yamaha DX7 w/Pro software, LinnDrum, Simmons SDS 9, (4) E drums, Slingerland drum kit, Fibes drum kit, Roto toms, Simmons EPB sampler, Latin Percussion congas, Rickenbacker bass, Fender Stratocaster, Gibson J 2000 acoustic, Oberheim expander modules, ARP 2600  
**Video Equipment & Services:** Film/video synchronization services available upon request  
**Rates:** \$50/hr. includes all equipment and instruments listed

•••• **HIT AND RUN STUDIOS**  
 18704 Muncaster Rd., Rockville, MD 20855  
 (301) 948-6715  
 Owner: Steve Carr  
 Studio Manager: Diane Castellanos  
 Engineers: Steve Carr  
**Dimensions of Studios:** Main room 27 x 18, Drum room 14 x 13  
**Dimensions of Control Rooms:** 17 x 13  
**Tape Recorders:** Soundcraft 760 Mark III 24 16-track



**HIT AND RUN STUDIOS**  
Rockville, MD

Otan MKIII, 8 track Technics 1500US, 2 track, TEAC 3440, 4 track, (4) Technics cassettes, Otari MTR-12, 2-track. **Mixing Consoles:** Soundcraft 1600 producer, 24 x 8 x 24  
**Monitor Amplifiers:** Haller 250 Bryston 100  
**Monitor Speakers:** UREI B11 A Yamaha NS 10 Auratone 5-C, home stereo speakers Tannoy DTM 8 inch  
**Echo, Reverb & Delay Systems:** DeltaLab DL 5 harmonizer Lexicon PCM 41 (2) Korg 3000 programmable digital delays, (2) Lexicon PCM60 digital reverbs, Orban III B stereo reverb, Yamaha REV7, Lexicon PCM70  
**Other Outboard Equipment:** (2) ATS vocal exciters, (2) UREI 1176LN comp/limiters, (2) dbx 163 comp/limiters, dbx 165 comp/limiters, (2) Ashly 66 dual parametric EQ, Orban dual parametric EQ, (2) Ashly 50 dual noise gates, dual 10 band graphic EQ, punching bag, EXR IV Exciter, (2) Brooke Siren comp., Drawmer gate Orban 424 compressor, Aphex Compellor  
**Microphones:** Neumann U87 AKG 414 451 Crown P3M, Sennheiser 441, Shure SM57 AKG tube  
**Instruments Available:** 5-piece drum set LinnDrum, Yamaha DX7 synth Prophet 2000 w/Macintosh computer, Marshall 50 412 guitar amp.  
**Rates:** Call

•••• **THE HIT FACTORY**  
237 W. 54th St., New York, NY 10019  
(212) 664-1000  
Owner: Edward Germano  
Studio Manager: Troy Germano

•••• **H-3 RECORDING STUDIO**  
115-01 196th St., St. Albans, NY 11412  
(718) 525-1372  
Owner: J.C. Hall III, A.M. Hamilton  
Studio Manager: J.C. Hall III

•••• **ICE ASSOCIATES, INC.**  
also **REMOTE RECORDING**  
Ste. LL-40, One Bala Plaza, Bala Cynwyd, PA 19004  
(215) 668-0714  
Owner: Jerry Mainard  
Studio Manager: Michael Mainard

•••• **"IF WALLS COULD TALK" STUDIOS**  
40 Temple Place, Passaic, NJ 07055  
(201) 773-6866  
Owner: Glenn M. Taylor  
Studio Manager: Pauline Taylor  
Engineers: Glenn M. Taylor  
**Dimensions of Studios:** 22 x 24, vocal booth: 8 x 5, drum booth: 11 x 9.  
**Dimensions of Control Rooms:** 17 x 4.  
**Tape Recorders:** 3M M 79, 24-, 16-, 8 track, Otari MKIII, 8 4 track, TEAC 3440, 4 track; (2) Otari MX 5050B, 2 track, Studer MKIV A-80VU 1/2, 1/4 inch, 2-track, Pioneer 1020L 1/4 track, (8) Tascam 122 cassette  
**Mixing Consoles:** Speck 800-C 34 in x 24 out, Harrison Raven 32 x 32 by summer '85 in new studio.  
**Monitor Amplifiers:** BGW 250 "D", Yamaha 2000, Pioneer Int Amp  
**Monitor Speakers:** JBL 4311s, Yamaha NS 10Ms, Auratones Yamaha "walkman" phones  
**Echo, Reverb & Delay Systems:** Lexicon 224 XL digital w/LARC and new version 8.20 software, Lexicon 224 digital, EMT 140 stereo plate w/custom N.Y. Technical Support electronics, Master Room XL 305 spring reverb, DDLs Lexicon Prime Time, PCM 41, Korg SD3000, DeltaLab ADM 2048, MXR ddi (4 cards), Echoplex tape unit, Yamaha REV7, Lexicon PCM70, Yamaha D 1500 delay  
**Other Outboard Equipment:** 28 channel Dolby A dbx N R, Eventide H949 Harmonizer, A&D Panscan, Aphex

Exciter EXR Exciter, (5) Kepex, (2) Gain Brain, (2) Maxi Q EQs, (2) MXR flangers, 8 channels of OmniCraft noise gates, Symetrix N.R., limiters (2) dbx 161, (2) dbx 165, (2) Trident Ashly parametric EQ stereo, biamp graphic EQ stereo, White Room EQs (3) Orban de essers, (2) Valley People Dyna Mites  
**Microphones:** Neumann (2) U87s U89 U47, AKG (2) 414s D 12 (2) 451 Es (2) C 60 tube The Tube; Shure (2) SM81s, (2) 58s (6) 57s, 54, Sennheiser (6) 421s, 441.  
**Instruments Available:** E mu II very large disk library, Prophet 5, Roland Super Jupiter, Minimoog, Oberheim X Pander, Korg 800 Poly 6, ARP Elka strings, Roland Vocoder Yamaha DX7 Yamaha TX expander, LinnDrum, all keyboards MIDI'd Simmons Rhodes, Hammond/Leslie Wuritzer and Baldwin pianos Casio, Fender, Gibson, Martin guitars Fender Marshall and Acoustic amps, full 7-piece Slingerland/Rogers/Zildjian drum kit, percussion  
**Video Equipment & Services:** Video post, IVC 3/4 inch deck, Time-Line Lynx generator synchronizers, Panasonic monitor, Panasonic VHS Services full custom music production for industrial or commercial broadcast, Panasonic monitor  
**Rates:** Reasonable rates available on request! Call anytime!

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Berkeley, CA 94710.

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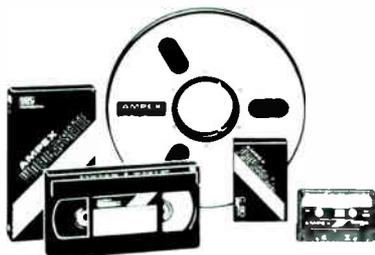
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## NORTHEAST STUDIOS



## 24 TRACK

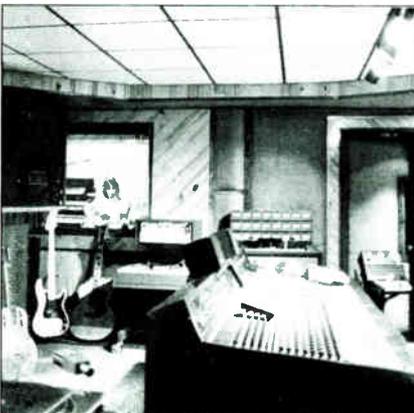


IMAGE RECORDING STUDIO (OF W.N.Y.)  
Olcott Beach, NY

•••• IMAGE RECORDING STUDIO (OF W.N.Y.)  
Box 290, Olcott Beach, NY 14126  
(716) 778-5683

Owner: Mitch Metzler  
Studio Manager: Mitch Metzler  
Engineers: Mitch Metzler, John (J.P.) Pratt, Wayne Sharp  
Dimensions of Studios: Five floating rooms surround the control room for 100% isolation. 11 x 12 x 14, 12 x 14 x 8, 15 x 8 x 9.5, 10 x 8 x 14, 7 x 7 x 9  
Dimensions of Control Rooms: 14 x 16  
Tape Recorders: Sony/MCI JH24, 24 track, Ampex AG 440 C, 8 track, MCI JH 110-B, 2 track, Otari MX 5050 B, 2 track; Nakamichi MR 1, 2-track  
Mixing Consoles: Anek Angela 36 x 24 (72 returns)  
Monitor Amplifiers: UREI 6500, BGW 300  
Monitor Speakers: UREI 813-Bs, Auratones  
Echo, Reverb & Delay Systems: AKG BX20E, MICMIX, Super (C) Master Room 3 x 4 tanks, Super Time Line Advanced Audio Designs, Lexicon 224 XL  
Other Outboard Equipment: UREI 1176 LNs, Spectra Sonex 610, Symetrix CL 100B, MXR Pitch Transposer, Roland SBF 32.5 stereo flanger, 8 channels Gate noise gates, Burwin 1201 A, AAD digital delay, DeltaLab ADM 2048 White 27 band EQs, Gold Line 27 band analyzer, White 150 2202 stereo 10 bands  
Microphones: AKG C-414EBs, P 48s, C 452, D 12E, 200 Elf, 140Es, Neumann U67s, U87s, Sennheiser 421s, Beyer X1N, Crown P2Ms, Shure 57s, 58s, E V RE 15, RE 20, Audix-Technica 8410A  
Instruments Available: Steinway (vintage 1901 Rosewood), Hohner string performer, Yamaha DX7, Mirage, Minimoog, Crumar Toccata, ARP Odyssey, Roland TR 707, Precision (birds-eye) Gibson E 330 (1965), Guild F 5 12 strnrg, Ludwig, etc.  
Rates: Brand new equipment and lowest rates in Western New York  
Direction: A creative atmosphere needs no clock or added pressures, but it does need good equipment to make it efficient to capture your magic when it happens. The atmosphere, attitude and approach inside this studio is our finest quality

•••• INDEPENDENT AUDIO SERVICES  
only REMOTE RECORDING  
235 W. 76th St., New York, NY 10023  
(212) 580-9825  
Owner: S Fitzstephens  
Studio Manager: S Fitzstephens

•••• I N S RECORDING, INC.  
19 Murray St., New York, NY 10007  
(212) 608-1499  
Owner: Ian and Debbie North

Studio Manager: Ian North  
Engineers: Craig Bevan, John Poppo, Robert Kasper, Kevin Reynolds, Robbie Watson, Steve Linsley.  
Dimensions of Studios: 12 x 13  
Dimensions of Control Rooms: 12 x 17  
Tape Recorders: Otari MTR-90, 24-track; Sony/MCI 110C, 1/2-inch 2-track; Tascam 80-8, 8 track; Tascam 32-2 1/4-inch, 2-track; Tascam 122B, cassette, TEAC V-SRX, cassette.  
Mixing Consoles: Sony/MCI 636 32 in 24 out.  
Monitor Amplifiers: Hafler, UREI.  
Monitor Speakers: Electro-Voice Sentry 500s, Yamaha NS-10, Auratones.  
Echo, Reverb & Delay Systems: Lexicon 224XL and 200, Yamaha REV7, A.M.S. dmx 15-80s, Lexicon PCM 41 and 42, (2) Korg SDD2000 sampling delays, (2) DeltaLab Effectron II, DeltaLab CompuEffectron.  
Other Outboard Equipment: Drawmer dual noise gate, (4) Valley People Kepex II, (2) Valley People Max1 Q parametric EQ, Valley People Gain Brain, (2) dbx 160X comp./limiter, dbx 165A comp./limiter, Dyna-Mite dual gates comp./limiter, Eventide 910 Harmonizer.  
Microphones: Neumann Tube U47, Neumann U87, AKG 414, Sennheiser 441, Electro Voice RE-20, AKG 535s, Shure 57s, 58s, Beyer.  
Instruments Available: Emulator II w/library, Linn 9000 w/disk drive and sampling, Yamaha DX7, Roland Super Jupiter, LinnDrum, Oberheim DMX, Roland TR 808, Sequential Circuits Prophet 5, Simmons & Rogers drum kits, Roland Vocoder, Casio CZ-101, Fender Jazz Bass and Stratocaster, Marshall and Fender amplifiers.  
Rates: \$50/hr. or \$45/hr. block rate for 10 or more hours. Prices include use of all equipment.  
Extras: Apple IIe w/DX Pro software, Commodore 64 w/Dr. T MIDI sequencer and Casio CZ software.  
Direction: We take pride in being able to offer to our clients the latest technologies and first rate quality at the most competitive price in New York City.



INTERGALACTIC MUSIC INCORPORATED (IMI)  
New York, NY

•••• INTERGALACTIC MUSIC INCORPORATED  
353 W. 48th St. 2nd Fl., New York, NY 10036  
(212) 333-3306  
Studio Manager: Goran Andersson  
Engineers: Goran Andersson, Joe Blaney, Jorge Esteban, Jeff Jones  
Dimensions of Studios: A 30 x 32, B 17 x 10  
Dimensions of Control Rooms: A 22 x 16, B 15 x 20  
Tape Recorders: A: Studer A80, 24-track; Studer A80, 1/2-inch 2 track; Technics 1500 1/4-inch 2-track; JVC KDV6, cassette, B: Soundcraft 760 series MK-3, 24-track w/Saki magnetic rec and playback heads, totally transformerless ± 25 dBs (w/24k gas sealed gold relays), Soundcraft Audio Kin 99 pos auto locator, Otari MTR-12, 1/2-inch; (2) Otari 5050 Mark-3 1/4-inch; (2) NAK dragons cass, (2) Denon DRM 44 cassette  
Mixing consoles: A: Neve (custom made for George Martin) 32 input, 24 bus, 24 monitor, 4 band EQ, B: APSI 36 x 32 totally automated console (completely transformerless, internal noise gates all channels, all dbx VCAs)  
Monitor Amplifiers: A: (2) Bryston 4B, Bryston 2B, QSC 450 RMS, BGW 250, B: (2) UREI 6500, UREI 6300, (2) Crown DC300-MK2  
Monitor Speakers: A: Westlakes, 2 pr. Yamaha NS 10M, Auratones, E V Century 100, B: UREI 813B monitor, David 6000 monitors, (2) UREI spare 813C crossover networks w/JBL spks, 2 pr. Yamaha NS 10M, Auratones.  
Echo, Reverb & Delay Systems: A: Yamaha REV1 digital reverb, Quantec room simulator, EMT-140S stereo digital, Roland SRV-2000 MIDI digital reverb, MXR 01 digital reverb, Lexicon PCM 41 digital delay, Korg SDD-2000 sampling digital delay, Roland SVC 350 Vocoder, B: (3) Lexicon 224XL-LARC, (2) Super Prime Time -97, 2.97 MEO, (2) Super Prime Time 2 7.68 MEO, (4) PCM 42s, 4.8 sec. MEO, DeltaLab DL2 acoustic computer 1 5 sec. MEO, Yamaha REV7.

**Other Outboard Equipment:** A: (2) dbx 160X compressor, UREI 1176 LN Peak Limiter, Electrodyne compressor, (2) Drawmer dual gate DS 201, Dyna Mite dual, (8) Valley People Kepex 2 gates, UREI 545 Parametric EQ, Pultec Parametric EQ, (7) Neve comp/lm., Symetrix phase filter, (2) Dyna-Mite Valley People gates stereo (4 gates), B: (8) Drawmers DS-201 gates w/lensen trans., (4) dbx 165As, Aphex 2 S Aural Exciter, Aphex Rack: 10 CX1 gates, Aphex Rack, 4 EQ F2, Aphex PS 3, (3) Aphex Compellers mono, Aphex Compeller stereo, (4) UREI LA 4, CBS 450 exciter, Klark-Teknik DN 60 spectrum analyzer w/mic B&K, (8) Countryman Dis. (13 pr) AKG K240, Sony BVU 5850 3/4-inch U matic

**Microphones:** A E V RE20, (2) Beyer Pencil, Senn. 441, (2) Sennheiser 421, AKG C 12 tube, AKG 414, AKG 452, (2) AKG 451, Neumann U67 tube, Neumann U87, Neumann KML, (3) SM57, (2) RCA ribbon, B: (2) RE 20, (6) Sennheiser 441 Y, (4) Sennheiser 421 Y, (4) AKG 414 P48, (3) AKG 451 EB, (3) 451 CK1, (2) SM81, (2) Neumann U89, Neumann U87, (6) Shure SM57, (2) Audio Technics ATM 91 condenser (w/dual 9V batts) (13) AKG K240 headsets, (6) Countryman direct boxes, (6) Audiotechniques little red cue boxes, AKG 451 EB (DN 60 real time analyzer w/CK1 capsule spare)

**Instruments Available:** A LaPlana grand piano, Hammond B-3 organ w/Leslie, DMX updated w/MIDI, DX w/MIDI, Roland 808 B Emulator (2) (D.S. D.D. drives w/2.3 software), Yamaha DX7, (2) Octave Plateau 1986 Voyetra 8 synth and Voyetra BRK 5 poly keyboard, Linn Drum mach, DMX Oberheim drum mach, SDS7 Simmons, SP 12 turbo 15 secs MEO, Prophet 2000 sampler, Rockman X100, Fender Pre CBS Twin w/JBLs, Pre-CBS super twin w/JBLs, Roland JC 120, Marshall MK2 100w, High watt spks., REEM Callitone tube amp, PV Mark 3 series IV w/JBL bass spks., Sequencers: A Macintosh 512K with SEQ and DX patch editing, MSQ 700 Roland B Yamaha CX 5M computer, Yamaha SFG01 comp onboard, Yamaha YK10 CX5 keyboard, Pan RQ 331 tape load for computer w/power supply, SBX 80 Roland, (4) MIDI thru 60X Roland MM4, (20) MIDI cables, (2) Voyetra XLR fem-male, (2) Voyetra XLR 5 plu MIDI, (2) Voyetra XLR fem-MIDI cables, (3) JL Cooper channel boxes channel filters.

**Rates:** Telephone for rates, engineer availability, block booking and project rates.

**Direction:** The combination of our two studios enables us to service both music and commercial clients with technical expertise and state of the art equipment. Recent clients include The Ramones, The System, Full Force, Sonny Okosun, Paul Pesco (Madonna), Mars Williams (Psychadelic Furs), Fred Zarr (Beatstreet), Seiko and Sony

•••• JEREE STUDIO  
1469 3rd Ave., New Brighton, PA 15066  
(412) 847-0111  
Owner: Don Garvin, Jerry Reed

•••• JTM RECORDING STUDIO  
also REMOTE RECORDING  
Box 686, Knox, PA 16232  
(814) 797-5883  
Owner: Frank T. Battista  
Studio Manager: F. Thomas Battista



KAJEM STUDIOS LTD. USA  
Gladwyne, PA

•••• KAJEM STUDIOS LTD. USA  
1400 Millcreek Rd., Gladwyne, PA 19035  
(215) 649-3277  
Owner: Joe Alexander, Sam Moses, Kurt Schre, Moishe Goldfarb  
Engineers: Mitch Goldfarb, Joe Alexander, Terry Hoffman, Jim Campbell, Brian Dorn, Joe Hauserman.  
Dimensions of Studios: Hexagonal 35 x 30, plus an adjacent 2,000 sq. ft. ambient w/25-foot ceilings.

**Dimensions of Control Rooms:** 22 x 20.  
**Tape Recorders:** Studer A-80, 24-track; Otari MTR-90, 24-track; Studer A-80 1/2-inch, 2-track; Studer B-67 1/4-inch, 2-track.  
**Mixing Consoles:** Solid State Logic w/primary and Total Recall computers 4000 E 48 x 32.  
**Monitor Amplifiers:** Crown, Haller.  
**Monitor Speakers:** UREI, Yamaha, Auratone  
**Echo, Reverb & Delay Systems:** EMT, AMS, Sony, Lexicon, Yamaha, Ursa Major.  
**Other Outboard Equipment:** AMS Eventide, Lexicon, UREI, Teletronix, Valley People, Audio Design & Research, Scamp, API, BBE, MXR, dbx, EXR, DeltaLab, Acoustilog, Pultec, OmniCraft, Hush II.  
**Microphones:** Neumann, AKG, Sony, RCA, Electro-Voice, Crown, Countryman, Sennheiser.  
**Instruments Available:** Emulator II w/Total Music, Macintosh software, Mirage, Yamaha DX7, Juno 106  
**Rates:** Call for info, block booking and package rates available. Also, housing can be provided

•••• KEN-DEL STUDIOS  
also REMOTE RECORDING  
111 Valley Rd., Wilmington, DE 19804  
(302) 655-7488  
Owner: Ken-Del Productions, Inc  
Studio Manager: William ("Liam") J Burgess III

•••• JIMMY KRONDES ENTERPRISES  
2 Musket Ln., Darien, CT 06820  
(203) 655-3660  
Owner: Jimmy Krondes  
Studio Manager: Florence Manning

•••• RICHARD LAVSKY'S MUSIC HOUSE INC.  
16 E. 42nd St., New York, NY 10017  
(212) 697-9800  
Owner: Richard Lavsky  
Studio Manager: Roy Kamen  
Engineers: Roy Kamen, Jun Mizumachi, Martha Dodge, Carl Mandelbaum.  
Dimensions of Studios: A: 1,024 sq. ft. w/9-foot ceilings, floating floors, walls and ceiling B: 96 sq. ft. w/9-foot ceilings, floating floors, walls and ceilings  
Dimensions of Control Rooms: A: 350 sq. ft. w/11-foot ceilings, B: 336 sq. ft. w/9-foot ceilings.  
—LISTING CONTINUED ON NEXT PAGE

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**Tape Recorders:** Otari MTR-9011, 24 track, Ampex MM-1200, 24 track; Otari MX 7800, 8 track; Otari MTR-12 w/center channel SMPTE, 2 track; Scully 280B mono 2-, 4-track, Tascam and IVC audio cassette decks.

**Mixing Consoles:** Trident w/automation Series 80 56 x 24, Audio Designs custom 18 x 8

**Monitor Amplifiers:** Phase Linear 400, Audio Designs ADM PS10 Adcom GFA-1A

**Monitor Speakers:** JBL 4343, ISE Infinite Slope, B&O small monitors

**Echo, Reverb & Delay Systems:** Lexicon PCM70 digital effects processor, Lexicon 200 digital reverb, Ursa Major SST 282 space station, MXR digital delay, Orban/Parasound dual reverb 111B

**Other Outboard Equipment:** Valley People Kepex II system, dbx 160X and dbx 165 compressor/limiters, Eventide Harmonizer H949, Aphex Aural Exciter type B, Orban Dynamic Sibilance controller 536A, Burwen Dynamic noise filter DNF 1,000 Orban Parasound stereo synth 245E SAE 5000 impulse noise reduction system, UREI 962 digital metronome Dr Click, Nakamichi DMP 100 w/video recorder VHS, Technics turntables, Yamaha CD player

**Microphones:** AKG 414 and C 12, Neumann U87, Sony 377, RCA 44 and 77, Crown PZM, Shure 57 and 53.

**Instruments Available:** Synclavier, Yamaha DX7 and CS-80, Korg DW 8000, LinnDrums, live drums, Mason & Hamlin grand piano, Rhodes 88, clavinet, Musser vibes and xylophone, acoustic and electric guitars w/amps, assorted sound effect and percussive toys, w/full MIDI and SMPTE

**Video Equipment & Services:** JVC 6650U 1/4 inch, JVC 8250 U 1/4 inch, Cannon 1/2-inch VHS portable, Sony 19-inch monitors and IVC 26 inch monitors Lync Time Line synchronizers

**Rates:** \$265/hr from 9am-7pm \$175/hr 7pm-9am Price includes engineer, does not include Synclavier.

•••• **LE MANS SOUND**

331 Triangle Rd., Somerville, NJ 08876

(201) 359-5520

Owner: Bernard Goydich

Studio Manager: Sam DeSalvo

•••• **LE STUDIO INC**

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715 Boylston St., Boston, MA 02116

(617) 267-2825

Owner: Samuel Boroda



**LION AND FOX RECORDING, INC.**  
Washington, D.C.

•••• **LION AND FOX RECORDING, INC.**

also **REMOTE RECORDING**

1905 Fairview Ave. N.E., Washington, D.C. 20002

(202) 832-7883

Owner: Hal Lion Jim Fox

Studio Manager: Rick Starkweather

Engineers: Jim Fox, Rob Burhman Leigh Stevens, Jamie Mereness, Alex McCullough, Bentley Westfield

**Dimensions of Studios:** Four studios A 35 x 20 high sloping ceiling, isolation booth and drum section B 20 x 8

C: 8 x 10 narration booth D: 10 x 12

**Dimensions of Studios:** A 20 x 20, B 9 x 20, C 10 x 20, D: 12 x 12

**Tape Recorders:** MCI, Studers, Ampexes, Nagras, Otari

**Mixing Consoles:** 32 channel automated mixing

**Monitor Amplifiers:** BGW 500, BGW 250, OP AMP LABS.

**Monitor Speakers:** UREI 813 B Time Aligned speakers, JBL 4313, Auratones

**Echo, Reverb & Delay Systems:** Lexicon 224XL, Lexicon 200

Lexicon Prime Time, (3) Effectrons, Echotron, Super Time Lane, Marshall Time Modulator, RCI and Clover reverb, EMT plate

**NORTHEAST STUDIOS**



**24 TRACK**

**Other Outboard Equipment:** dbx noise reduction, (6) dbx 160 compressors, stereo LT sound compressor and noise gate, (2) Valley People Dyna Mites, (2) Gain Brains, (4) Kepexes, MXR pitch transposer, Lexicon Vanspeech, MXR phasers and flangers, Orban dynamic sibilance controllers, UREI parametric EQs, Burwen dynamic noise filters, real time analyzer phase monitoring.

**Microphones:** Neumann, Sennheiser, AKG, Electro-Voice, Shure, Sony

**Instruments Available:** LinnDrum, Ludwig drum set, Zildjian cymbals, Minimoog, Hammond B 3 w/Leslies, Wuritzer electric piano, acoustic piano. Available for rent: Emulator II, Synergy, Jupiter-6, Prophet 5, Korg DW-6000.

**Video Equipment & Services:** BTX Softouch for video interlock with 24-track MCI 1/4 inch JVC video recorder and Studer A 810 2 track master recorder, Panasonic video monitor. Motion picture sound (5) 16mm Magnasync dubbers, Magnasync interlock, Bell & Howell projector. Rates: \$70/hr for 24-track time

**Extras:** Services: Complete 24 track production of music and drama 24 track automated video sweetening jingle and production narration recording original scoring for film and video SMPTE and Piloton synchronization formats audio visual production for all programming formats, use of sound effects library and four major music libraries, location recording for music, broadcast, film, video and seminars: Voice casting, booking, and payment arrangements

Direction: Move forward

•••• **LIVING MUSIC STUDIOS**

also **REMOTE RECORDING**

Walnut Tree Hill, Sandy Hook, CT 06740

(203) 567-8796

Owner: Living Music Productions

Studio Manager: Kathy Cowles

Engineers: Chris Brown

**Dimensions of Studios:** 30 x 30 x 20 plus two booths

**Dimensions of Control Rooms:** 24 x 13

**Tape Recorders:** MCI JH 24, 16 24 track MCI JH110, JH110B, 2 track, also Studer/Revox, Harman Kardon, and Sony

**Mixing Consoles:** Sony/MCI JH 600 30 in x 24 out

**Monitor Amplifiers:** McIntosh Yamaha BGW

**Monitor Speakers:** Big Red Time Sync JBL 4430, Yamaha NS 10, Auratones

**Echo, Reverb & Delay Systems:** Ecoplate II, AKG BX-10, live chamber, Lexicon PCM42, Korg SDE 3000, Roland SDD 3000.

**Other Outboard Equipment:** Limiters UREI 1176, dbx 160X, Trident and Eventide Harmonizer, Orban Parametric EQ

**Microphones:** AKG C414, C451 452 D12 Neumann U87, Sennheiser MD 421 and MD 441 Electro Voice RE20, Crown PZM, Shure SM57 58

**Instruments Available:** Yamaha C 7 grand piano, Fender fretted and fretless Precision Basses, Yamaha 30B bass amp

**Video Equipment & Services:** Please call for details.

Rates: Upon request.

•••• **THE LIVING ROOM**

59 Franklin St., New York, NY 10013

(212) 226-8161

Owner: Dan Chitin

Studio Manager: Veronica Stevens

•••• **IAN LONDON STUDIO**

229 Sherry St., East Islip, NY 11730

(516) 277-6273

Owner: Ken Wallace

Studio Manager: Ken Wallace

Engineers: Ken Wallace, freelance engineers

**Dimensions of Studios:** 22 x 18

**Dimensions of Control Rooms:** 16 x 18

**Tape Recorders:** Studer 24-track, Otari 2-track

**Mixing Consoles:** Neve 10 in x 10 out, Tangent 30 in x 24 out, automated Amek Angela

**Monitor Amplifiers:** Crown

**Monitor Speakers:** UREI 815s.

**Echo, Reverb & Delay Systems:** (2) Lexicon digital reverb, (2) Lexicon Prime Time, Eventide Harmonizer 349, Ecoplate II, MXR digital delay, Loft digital delay, Quantec room reverb, Eventide 2016, (2) REV7, (2) D-1500 delays. (4) Yamaha delays.

**Other Outboard Equipment:** UREI compressors, Neve EQ, API EQ, dbx compressor/limiters

**Microphones:** Neumann 87s, 47s; AKG 414; Sennheiser 421

**Instruments Available:** OBX-A, Yamaha 7'4" grand, Fender Rhodes, clavinet, Emulator, Prophet-5, LinnDrum, Simmons drum, Yamaha DX7, Linn 9000, Emulator 2, Macintosh computer, SP-12 drum machine, 8-16 keyboards, Matrix 12, Roland keyboard, Yamaha K88

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

Rates: 24-track: \$40/hr



**LONG VIEW FARM**  
North Brookfield, MA

•••• **LONG VIEW FARM**

also **REMOTE RECORDING**

Stoddard Rd., North Brookfield, MA 01535

(617) 867-7662, (800) 225-9055

Owner: Gil Markle

Studio Manager: Andrea Marchand

Engineers: Jesse Henderson, Bill Ryan, Mike Mullarey, Geoff Myers.

**Dimensions of Studios:** A 25 x 30 x 16; B: 26 x 32 x 23; soundstage: 38 x 28 x 18.

**Dimensions of Control Rooms:** A 16 x 27 x 9; B: 14 x 21 x 12; video suite: 12 x 12 x 8.

**Tape Recorders:** Twin Otari MTR 90, 24-track; MCI JH, 24 track; 3M M79, 16-track; Sluder A-80VUII 1/2-inch, 2-track; Studer A-80RC 1/4-inch, 2 track; Tascam 122s, Sony TC V7, and Nakamichi 1000 cassette.

**Mixing Consoles:** Sound Workshop Series 34, 32 x 24 x 32 w/ARMS, MCI 528, 28 x 28

**Monitor Amplifiers:** Bryston 4Bs, Crown 300s, McIntosh, BGW cue amps.

**Monitor Speakers:** UREI 813A and 813B, Yamaha NS-10M, JBL 4411/4311/L-100s, Electro-Voice Sentry 100A, Auratone

**Echo, Reverb & Delay Systems:** Lexicon 224XL digital reverb, Lexicon Super Prime Time, Ursa Major; Stargate 626 digital reverb, Publison DHM 89 acoustic computer, live acoustic chamber, EMT 140 stereo plate, Lexicon PCM42, Eventide 1745 digital delay, Harmonizer, Delta-Lab DL2 and DL4 delay lines, AKG BX-10 and BX-20 spring reverbs.

**Other Outboard Equipment:** ADR Vocal Stressors, Aphex, Ashly, Kepex and Roger Mayer noise gates, Pultec tube, API 550, 560 and Aengus EQ, Aphex parametrics and Aural Exciter, dbx 160, 160X, UREI 1176 and LA-3A limiters

**Microphones:** Neumann, AKG, Sennheiser, Shure, Sony, E, V, Crown PZM, rare Schoeps and vintage RCA ribbons. Countryman and JBA direct boxes.

**Instruments Available:** Linn 9000 drum machine, Roland Jupiter 6, JX8-P, and Prophet-5, with Roland MPS MIDI package, Steinway and Baldwin grand pianos, Hammond and organ w/Leslie, Fender Rhodes studio drums and percussion kit

**Video Equipment & Services:** 1/4-inch to 1/4-inch computer assisted A/B roll editing with switcher and digital effects, specializing in 48-track audio for video. Convergence 195 editor, Crosspoint Latch 6112 effects switcher, JVC portacam and Ikegami cameras, Sony BVU-800s, JVC 4700 VCRs, BTX synchronizers.

Rates: Competitive, negotiable, call for details.

**Extras:** User friendly computers: to access music and video industry professionals, via telecommunication networks and electronic mail. In-house cable and satellite TV, movie library, game room, sauna, Jacuzzi, well-equipped exercise room, horseback riding, Secretarial services, in-house IATA travel agency and private air charter. Entire

facility linked via audio/video tie lines throughout.  
**Direction:** Located on 145 acres of picturesque countryside. Long View offers privacy, sumptuous accommodations and fine food by a friendly and highly experienced support staff. Credits include: 'til Tuesday, J. Geils band, The Rolling Stones, Face to Face, Pat Metheny, Arlo Guthrie, Graham Nash, Dan Fogelberg and many more.

•••• **M&I RECORDING**  
 630 9th Ave., New York, NY 10036  
 (212) 582-0210  
**Owner:** Mitch Yuspeh, Ira Yuspeh, Phil Kapp  
**Studio Manager:** Steve Hasday

•••• **MARION SOUND PRODUCTION**  
 159 Easton Rd., Hermitage, PA 16148  
 (412) 347-4726  
**Owner:** John Knzancic  
**Studio Manager:** John Knzancic

•••• **MARK STUDIOS**  
 also **REMOTE RECORDING**  
 10815 Bodine Rd., Clarence, NY 14031  
 (716) 759-2600  
**Owner:** Vincent S. Morette  
**Studio Manager:** Fred Betschen

•••• **MARVEL PRODUCTIONS**  
 /**DENNIBERG ADVERTISING**  
 10220 River Rd., Potomac, MD 20854  
 (301) 299-3903  
**Owner:** Elliot Denniberg  
**Studio Manager:** Elliot Denniberg

•••• **MASON HALL STUDIOS**  
 also **REMOTE RECORDING**  
 Mason Hall, S.U.C. Fredonia, NY 14063  
 (716) 673-3154  
**Owner:** State University of New York, College at Fredonia  
**Studio Manager:** Bryan Leskowitz



**MASTER SOUND ASTORIA**  
**recording studios**

**MASTER SOUND ASTORIA**  
 Astoria, NY

•••• **MASTER SOUND ASTORIA**  
 34-12 36th St., Astoria, NY 11106  
 (718) 786-3400  
**Owner:** Ben Rizzi, Maxine Chrein  
**Studio Manager:** Maxine Chrein, Kathy Boyle

•••• **MASTERMIND RECORDING STUDIOS**  
 1650 Broadway, New York, NY 10019  
 (212) 765-7400  
**Owner:** Anne Wood, Keith Walsh  
**Studio Manager:** Leslie Ballard  
**Engineers:** Keith Walsh, Jim Regan, Larry Collen, Neal Ceppos, Brent Kerr.  
**Dimensions of Studios:** A: 12 x 50 x 25. C: 12 x 45 x 20.  
**Dimensions of Control Rooms:** A: 15 x 25 x 12. C: 15 x 20 x 12.  
**Tape Recorders:** MCI JH24 transformerless, 24-track; MCI JH16 transformerless, 24-track; Otari MTR10, 2-track; Otari MTR12, 4-track; MCI JH-110B, 2-track/mono track; Magna-Tech 35mm/full coat and stripe 1-4-track.  
**Mixing Consoles:** A: MCI JH36 automated/transformerless, 36 x 24. C: MCI JH528 D automated/transformerless, 28 x 24.  
**Monitor Amplifiers:** Carver PM 1.5s and Crown D: 75 for cue  
**Monitor Speakers:** UREI 813Bs, Westlakes, Yamahas.  
 —LISTING CONTINUED ON NEXT PAGE

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**Echo, Reverb & Delay Systems:** (4) EMT "Tube" chambers, Lexicon 200 reverbs, Harmonizer, Orban stereo and Prime Time.

**Other Outboard Equipment:** Valley Kepex II, dbx 160X limiters, Lexicon PCM41, instant flanger/phase Kepex, White EQs, UREI LA-3 comp/limiters, 1176 comp/limiters, Little Dipper filter, Dyna-Mites.

**Microphones:** Neumann U87s, U47s; AKG 451 EBs, Shure SM-57; E-V RE20s, Beyer 160s, custom P2Ms; RCA 44s; AKG 414s; KM-84s; RE-16s.

**Instruments Available:** (2) Steinway B grand pianos, Rhodes 87, RMI electric piano, Celeste, honky-tonk piano, Slingerland drum set, Tama drum set

**Video Equipment & Services:** JVC CR-6650 video recorder w/remote Sony video playback systems.

**Rates:** Competitive rates (please call us or write for our rate sheet).

◆◆◆ MEDIA SOUND INC.

311 W. 57th St., New York, NY 10019  
(212) 765-4700

Owner: Michael D. Hektoen, Domino Media Inc  
Studio Manager: Elizabeth Rogers

Engineers: Michael Barbiero, Douglas Epstein, Tim Hatfield, Lincoln Clapp

Dimensions of Studios: A: 30 x 50 (former church); B: 20 x 20; C: 10 x 15; lounge, 15 x 15.

Dimensions of Control Rooms: A: 15 x 10; B: 14 x 14; C: 10 x 14; lounge 10 x 14

Tape Recorders: Studer A800s, Studer B67s; Studer A80s, 1/2-inch and 2 track stereo capability in all rooms.

Mixing Consoles: (2) Neve 8068 modified, 42 x 16; Harrison 4032, 32 x 32; Harrison Raven, 32 x 12.

Monitor Amplifiers: McIntosh 2500s, Altec 9440s, H&H V800, H&H 4900.

Monitor Speakers: UREI 813As.

Echo, Reverb & Delay Systems: EMT 140, AKG, Eventide DDL, Lexicon Prime Time, Lexicon 224, AMS reverb, Quantec reverb.

Other Outboard Equipment: Pultec EQ, UREI limiters, Neve limiters, Eventide phasers and flangers, MXR phasers and flangers, Kepex I and II, Gain Brain, Eventide Harmonizers, dbx limiters, Marshall Time Modulators, Tident limiters; too much to list, please call for additional info. Full MIDI system.

Microphones: Neumann, AKG, Shure, Sennheiser, E.V. Beyer, Pressure Zone, old tube Neumann microphones

Instruments Available: Vibes, xylophone, celeste, Hammond organ, Fender Rhodes, tympani, LinnDrum, Yamaha grand pianos, more.

Video Equipment & Services: VCR and monitor

Rates: Upon request.

◆◆◆ MERCURY DIME STUDIO

100 Riverside Dr., New York, NY 10024  
(212) 362-8906

Owner: James H. Vela

◆◆◆ METRO RECORDING STUDIO LTD

1422 Crain Hwy S.W., Glen Burnie, MD 21061  
(301) 761-6159

Owner: Joe Jacobs

Studio Manager: Joe Jacobs

◆◆◆ MILLBROOK SOUND STUDIOS

P.O. Box 317, Millbrook, NY 12545  
(914) 677-3733, 677-3744

Owner: Michael Danielle

Studio Manager: George Cowan

Engineers: George Cowan

Dimensions of Studios: 34 x 23 x 12, with iso booths for drums and vocals

Dimensions of Control Rooms: 24 x 14

Tape Recorders: Ampex MM 1200, 24-track, Otari MTR 12, 1/2 inch 2-track, Otari MTR 10 1/4 inch 2-track; Technics M85 MKII cassette; Yamaha CS400, cassette.

Mixing Consoles: NEOTEK Series IIIC, 36 in x 24 out

Monitor Amplifiers: Yamaha Crown

Monitor Speakers: UREI, JBL, Yamaha, Tannoy, FSM, Aura tone, Altec.

Echo, Reverb & Delay Systems: Ursa Major 8 x 32 digital reverb, ART digital reverb, "live" chamber room, (2) Korg SDD 3000 digital delays, ADA stereo tapped delay, Eventide Harmonizer 910, (2) Lexicon PCM60s.

Other Outboard Equipment: (10) Valley People Kepex IIs, (10) Valley People Gain Brain IIs, (2) dbx compressors/limiters, UREI 1178 dual peak limiter, (2) Aphex Aural Exciters types B, (2) Orban Dynamic Sibilance Controllers 516EC, (4) Orban stereo parametric EQs, (4) White Series 4000 1/2 octave rotary graphic equalizers, Aphex ComPELLor.

Microphones: (4) AKG 414s, (6) Sennheiser 421s, (2) Sennheiser 441s, (2) E-V RE20s, (2) Neumann U87s, (2) Tascam PE 250s, (3) Crown P2Ms, (4) Countryman Isomax IIs, (8) Shure SM57s, (8) Shure SM58s

Instruments Available: Yamaha DX7, Oberheim DX drum computer, Korg Poly-61, Yamaha PF 10 piano, 5 piece set of Sonor drums, Conn strobe tuner, Korg tuner, Emulator II, Roland JX PB, Techstein grand piano

Rates: Call for further information

# NORTHEAST STUDIOS



# 24 TRACK

◆◆◆ MINOT SOUND STUDIOS INC.

19 S. Broadway, White Plains, NY 10610  
(914) 428-8080

Owner: Thomas Cimilio

Studio Manager: Thomas Cimilio



MISSION CONTROL  
Boston, MA

◆◆◆ MISSION CONTROL

545 Boylston St., Boston, MA 02116  
(617) 262-2070

Owner: Michael Jonzun

Studio Manager: Bill Sebastian

Engineers: Frank Heller, Sidney Burton

Tape Recorders: Otari MTR 90 MKII, (2) 24-track, Studer A-80 MKII, 2 track.

Mixing Consoles: Solid Stage Logic SL 4048, 48.

Monitor Amplifiers: Yamaha PC2002

Monitor Speakers: UREI 813, Yamaha NS-10

Echo, Reverb & Delay Systems: Reverb Lexicon 224XL, AKG BX 10, ART DR2; Roland SRV 2000; MXR 01A; Lexicon PCM 60, (2) Yamaha REV 7, Delay (2) Roland SDE 3000, (2) Lexicon PCM42, Korg SDD 3000; DeltaLab DL-2

Other Outboard Equipment: Digital processing AMS DMX 15805; Eventide H949; MXR pitch transposer; Boss CE 300, Ibanez HD1500, Ibanez HD1000, 1500 Equalization (2) UREI 546, Ashly SC 66, Klark Teknik DN360; Orban 672A, Klark Teknik DN332, Ibanez GE1502, Inter sound IVP. Special processing: Orban 536A de esser, dbx 263X de esser, (2) Panscan, Aphex Type B, Roland Vocoder, Compression and gates; (2) Dyna Mite, (6) Kepex II, (2) dbx 165; (2) Ashly SC33, (2) dbx 160, (3) Ashly SC-50. Microphones: Neumann, AKG, Sennheiser, Crown, Electro Voice, Beyer, Shure

Instruments Available: Emulator II w/ Macintosh; (3) Yamaha DX7 and TX816 rack, Jupiter 8, Roland MKS 20, Linn 9000; (2) Roland 707, (2) Roland MSQ-700; Oberheim DMX; large selection vintage guitars, acoustic instruments, and other electronics

Video Equipment & Services: Sony Beta cam editing system; 54 channel RGB mixing console, optical and electric special effects.

Extras: The studio is exquisitely crafted and located in premium office space in the heart of Boston's Back Bay. Boston has the full range of supporting services and talent one would find in New York without the high pressures and high prices one also finds in New York.

Direction: We persuaded one of the country's top engineers to leave New York and to join some of New England's best artists and technicians in establishing a world class production facility in Boston. The result is a beautiful, comfortable, and highly professional studio oriented towards providing the best in high tech music production.

◆◆◆ THE MIX PLACE, INC.

663 5th Ave., New York, NY 10022  
(212) 759-8311

Studio Manager: Maureen Quinn

◆◆◆ MOBILE RECORDERS LTD

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(203) 264-2659

Studio Manager: G. Rother

◆◆◆ MODE MUSIC PRODUCTIONS

130 S. Bessall St., Philadelphia, PA 19103  
(215) 557-0389

Owner: World Wide Terror Music

Studio Manager: John Young

◆◆◆ MUSIC DESIGNERS INC

241 White Pond Rd., Hudson, MA 01749  
(617) 890-8787

Owner: Jeff Gilman

Engineers: Jeff Gilman, Fred Mueller

Dimensions of Studios: 26 x 36 x 17, iso room 13 x 17

Dimensions of Control Rooms: 17 x 25

Tape Recorders: 3M Mincom M79, 24 track, 3M Mincom M79, 16 track; MCI JH-110, 4 track; MCI JH 110, 2 track; Otari, Revox.

Mixing Consoles: Harrison w/ Allison 64K Automation 3232B 32 x 32.

Monitor Amplifiers: Bryston, APT, Phillips.

Monitor Speakers: UREI 813s, JBL 4311, custom (near field), Yamaha NS 10.

Echo, Reverb & Delay Systems: EMT stereo, AKG BX20, custom plate, Lexicon, Eventide, DeltaLab, Klark Teknik DN780, Yamaha REV7.

Other Outboard Equipment: Multi track and Audioarts parametric EQ, Teletronix tube LA 2, UREI 1176 and LA 4 comp/limiters, Spectra Sonics comp/limiter, Allison Kepex & Gain Brains, frequency shifter, phasers, dbx noise reduction (32 channels), Macintosh MIDI system and music writer... if we don't have it, we can get it!

Microphones: All the standards plus an excellent assortment of tube condensers by Telefunken, Sony and Altec. Instruments Available: Bluthner 7 ft grand piano, Hammond B 3, harpsichord, Sonor drums, Roland, Fender and Acoustic guitar amps, Yamaha DX7, Casio CZ 101, Korg EX 800, Roland and Oberheim drum machines.

Video Equipment & Services: Full time staff arranger (Bob Celloci), video services upon request

Rates: Call for information on rates and accommodations

◆◆◆ MUSIC FACTORY

150 6th Ave., Troy, NY 12180  
(518) 447-5733

Owner: Ed Delaney

Studio Manager: Linda Klein

◆◆◆ NATIONAL RECORDING STUDIO

also REMOTE RECORDING  
3016 Greenmount Ave., Baltimore, MD 21218  
(301) 467-7900

Owner: Eugene and Terra Mauro

Studio Manager: Terra Mauro

◆◆◆ NATIONAL RECORDING STUDIOS

also REMOTE RECORDING  
460 W. 42nd St., New York, NY 10036  
(212) 279-2000

Owner: Harold Lustig, Irving Kaulman

Studio Manager: Jeff Pastilove



N.E.P. PRODUCTIONS, INC.  
New York, NY

•••• N.E.P. PRODUCTIONS, INC.  
also **REMOTE RECORDING**

56 W 45th St., New York, NY 10036  
(212) 382-1100

Owner: N.E.P. Inc.

Studio Manager: John Martin

Engineers: Barbara Flyntz, John Martin, Rich Rachbach,  
John Steinmetz

Dimensions of Studios: B: 7 x 7, A: 11.6 x 6

Dimensions of Control Rooms: B: 20 x 24, A: 16 x 13

Tape Recorders: Otari MTR-90 MKII, 24 track, Ampex  
MM1200, 16-track; Ampex ATR104/2, 4, 2-track; Otari  
MTR10, 4, 2-track, Otari 5050, 2 track.

Mixing Consoles: Sound Workshop Series 40, 28 x 24,  
ADM 1600, 16 x 4

Monitor Amplifiers: Crown PS400, Yamaha P2050,  
Crown 300, BGW

Monitor Speakers: JBL 4411, JBL 4312, Yamaha NS 10Ms,  
Auratones.

Echo, Reverb & Delay Systems: Eventide SP2016 stereo  
reverb, signal processing Lexicon PCM60, Lexicon Super  
Prime Time.

Other Outboard Equipment: Aphex II Studio Aural Ex-  
citer, Aphex Compellor, UREI 1178 stereo limiter, (2) dbx  
160X compressors, (4) Kepex IIs, Ursa Major MSP126  
stereo simulator/DDL, (4) Dolby "A" 361 channels, 24-  
channel Dolby "XP" rack (in studio B), Eventide 949 Har-  
monizer, Dynamax audio cart machines (stereo), 16-chan-  
nel dbx noise reduction (studio A)

Microphones: Neumann U89, AKG 414, Shure SM57,  
Sennheiser 421, RCA 77 (ribbon)

Instruments Available: Call.

Video Equipment & Services: Complete video services:  
1 inch broadcast, 1/4-inch, Betacam and 1/2 inch formats.  
Cypher Softouch synchronizer/editor with four machine  
lock up (studio B), EECO MQS-100 synchronizer (studio  
A), video editing and duplication available

Rates: Call for rates

Extras: Studio B is an acoustically isolated fully floated  
control room and studio. Designed for video/film audio  
post-production as well as music mixing and production,  
the control room is equipped with a Mitsubishi 40 inch  
rear screen projection TV monitor. The room was designed  
for comfort as well as ease-of-operation and there is a  
kitchen located next to the control room

Direction: With the recent completion of our new audio  
room, studio B, we are producing high quality sound with  
a minimum of time spent. Working with both video and film  
productions, we strive to tailor the process to individual  
needs. Our spacious control room and 40 inch monitor  
make working to picture a pleasure, whether it's mixing a  
documentary or recording synthesizer tracks for a televi-  
sion commercial. Stereo mixing and state-of-the-art audio  
for video are not new concepts here at N.E.P.

•••• NEW ENGLAND MOBILE RECORDING

also **REMOTE RECORDING**

81 Circuit Dr., Stow, MA 01775

(617) 897-7554

Owner: Alan W Goodrich

Studio Manager: Jay W Goodrich

•••• NEW YORK PRO DIGITAL STUDIOS

203 W 90th St Ste. 5D, New York, NY 10024

(212) 713-5331

Owner: Jonathan Rosch, John Mahoney

Studio Manager: Jonathan Rosch

•••• NEW YORK SOUND

37 W 57th St., New York, NY 10019

(212) 688-3167

Owner: Matt Kaplowitz

Studio Manager: Michael Fericola

•••• NEWBURY SOUND, INC.

1260 Boylston St Ste. 202, Boston, MA 02215

(617) 267-4095

Owner: Ken Kanavos

Studio Manager: Ken Kanavos, Lisa Breslin

Engineers: Paul Arnold, Michael Szakmeister, Bob Rear-  
don, Dave Van Slyke

Dimensions of Studios: 44 x 32 w/3 large iso. booths,  
plus lounge, reception, office areas

Dimensions of Control Rooms: 22 x 20 LEDE

Tape Recorders: Otari MTR-90II, 24-track; Studer A820  
(1/2-inch), 2-track, Otari MX5050B, 2-track, TEAC 32-2B,  
2-track TEAC 3340S, 4 track; (4) NAD 6040A cassette  
decks

Mixing Consoles: Harrison automated MR 4, 28 x 24,  
Soundcraft Series 200, 8 x 4

Monitor Amplifiers: (2) Crown MT1000, (2) Crown DC300,  
(2) Crown D150

Monitor Speakers: UREI 813B, Altec 604 8K, JBL 4311B,  
JBL 4312, Yamaha NS-10, Auratones.

Echo, Reverb & Delay Systems: (3) Lexicon PCM70.

-LISTING CONTINUED ON NEXT PAGE

## SHOW ROOM.



AMEK/TAC • ADAMS-SMITH •  
ASC/TUBES • SCS • AKG •  
ART/MXR • AVL • APHEX •  
BEYER • DYNAMIX • MRL •  
CROWN/PCM • HAFLER •  
COUNTRYMAN • MILAB •  
EMULATOR • ORBAN •  
EV/SENTRY • LOFTEC •  
KLARK-TEKNIK • SCS •  
• PERREAUX • RANCO • SAMSON • SCS • SHURE • SCOTCH/3M • MCI/SONY •  
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- Lexicon 224XL-200-PCM60's-PCM42's
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- Publison Infernal Machine
- Emulator I & II
- Linn 9000
- TX 816's-DX-7's-DX21
- Yamaha Grand Piano

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COMPUTERIZED MIX

LARGE  
"LIVE"  
ROOM  
WITH  
ISOLATION  
BOOTH

Circle #141 on Reader Service Card

**Echo, Reverb & Delay Systems:** Lexicon digital reverb, EMT 140 tube plate stereo reverb, Lexicon Prime Time II and Prime Time, Eventide Harmonizers, (6) Neve 2254E limiters, UREI LA-3A limiters, UREI 1176 limiters, BEL sampler

**Other Outboard Equipment:** Noise gates, outboard EQs  
**Microphones:** Neumann tube 47, 87s, 86s, 84s; AKG 414s; Sennheiser 421s, 441s; Sony C55s, C500s, C37P; Shure 57s, 58s.

**Instruments Available:** Yamaha grand piano, Fender Rhodes, any and all types of keyboards, Mesa Boogie amp, Fender Twin amp, Roland Jazz Chorus amp.

**Video Equipment & Services:** 3/4-inch computerized editing w/EDL and time code; JVC 3 tube color camera w/image enhancement; JVC CR4700U 3/4-inch portable VCR w/confidence heads; JVC KM2000 switcher w/chroma key; Sony VPH722Q high resolution video projector w/quad sound.

**Rates:** \$100/hr. Special packages on request.

•••• **NEWFOUND SOUND RECORDING STUDIO**  
 10 Kershner Pl., Fairlawn, NJ 07410  
 (201) 796-9175

**Owner:** Larry Gates

**Studio Manager:** Bob Montero

**Extras:** In a relaxed suburban environment just ten miles from the GW Bridge, Newfound Sound offers state-of-the-art 24-track recording with digital mixdown ideal for album production as well as all aspects of TV and film pre- and post production. Newfound's own in-house production company uses the facility to record numerous national jingles for clients such as Kodak, Kool-Aid, Nestle, Valvoline, Chewels, and Gulf to name a few. Our proximity to NYC has offered artists such as Herbie Hancock, Steve Gadd, and Bob James, a delightful alternative to the high priced and hectic NY studio scene.

•••• **NICKEL RECORDING**

also **REMOTE RECORDING**  
 168 Buckingham St., Hartford, CT 06106  
 (203) 524-5656

**Owner:** Jack Slang

**Studio Manager:** Rich Horan

•••• **THE NINETEEN RECORDING STUDIO**  
 also **REMOTE RECORDING**

19 Water St., South Glastonbury, CT 06073  
 (203) 633-8634

**Owner:** Nineteen Recording Inc.

**Studio Manager:** John The Buick

•••• **NORMANDY SOUND, INC.**

25 Market St., Warren, RI 02885  
 (401) 247-0218

**Owner:** Phil Green, Ogden Fell

**Studio Manager:** Sandi Reeves



**NORTHEASTERN DIGITAL RECORDING, INC.**  
 Boston, MA

•••• **NORTHEASTERN DIGITAL RECORDING, INC.**  
 only **REMOTE RECORDING**

1108 Boylston St. Ste. 303, Boston, MA 02215  
 (617) 353-0963, 753-1192

**Owner:** Toby Mountain

**Studio Manager:** Brigitte Gross

**Engineers:** Toby Mountain

**Tape Recorders:** Sony PCM-3324, 24-track (on request), Sony PCM-1610, 2-track; Sony PCM-701 (modified), 2-track; Sony PCM-F1, 2-track; Sony DAE-1100 digital editor, 2-track

**Mixing Consoles:** Troist custom 200SA, 12 x 4 x 2, Ramson WR 8118, 18 x 4 x 2

# NORTHEAST STUDIOS

# 24 TRACK

**Monitor Amplifiers:** Perreux 1150B.

**Monitor Speakers:** Snell Type C.

**Echo, Reverb & Delay Systems:** Lexicon PCM70.

**Microphones:** Schoeps omnis and cardioids, AKG 414s, B&K omnis, Sennheiser 421s.

**Video Equipment & Services:** (2) Sony BVU-800, (2) Sony SL-2000 Beta VHS, Beta Hi-Fi and 8mm also available

**Rates:** Call for rates

**Extras:** We are the only professional digital audio facility in New England capable of fulfilling all of your digital needs: 2-track to 24-track digital rentals, digital editing, LP and Compact Disc mastering and pressing, real time cassette duplication.

**Direction:** Credits Arlo Guthrie, soundtrack to 'Diva' (CD), Swimming Pool Qs, Rounder Records, Rykodisc, Second Hearing Records, Newport Classic, Blue Jay Studios, Long View Farm, Chris Hollyday Quartet, A&M Records.

•••• **NORTHLAKE SOUND**

3 Lakeview Dr., No. White Plains, NY 10603  
 (914) 682-0842

**Owner:** Chip Taylor

**Studio Manager:** Tony Mercadante

**Engineers:** Ed Solan, Chris Cassone, Tony Mercadante

**Dimensions of Studios:** 30 x 22

**Dimensions of Control Rooms:** 22 x 22

**Tape Recorders:** Studer A80-24 MKIV, 24-track, MCI JH110 1/2-inch, 2-track; MCI JH110 1/4-inch, 2-track; Revox (2) B-77 1/2, 1/4-inch, 2-track; TEAC 2300 1/4-inch, 2-track; Nakamichi (2) cassette, 2-track.

**Mixing Consoles:** MCI 636 VU automated 32 x 32.

**Monitor Amplifiers:** Crown (5).

**Monitor Speakers:** JBL Big Reds w/time sync, Yamaha Auratone.

**Echo, Reverb & Delay Systems:** (2) Lexicon 224, (2) Yamaha REV7, Ecoplate 18', AKG BX 20, DeltaLab.

**Other Outboard Equipment:** Delays, gates, compressors, EQ, Pullecs, etc.

**Microphones:** Neumann U47 tube, 87, 84; AKG, Sony, Sennheiser, RCA, Shure, E-V, etc.

**Instruments Available:** Kawai 7'4" grand, Hammond, ARP, clavinet, many Fender, Ampeg, Marshall, Yamaha amps, almost anything available on request.

**Rates:** Less than \$100 including live-in accommodations

•••• **TROD NOSSEL RECORDING**

also **REMOTE RECORDING**  
 10 George St., Wallingford, CT 06492  
 (203) 269-4465

**Owner:** TNA Records & Studios

**Studio Manager:** Richard P. Rubinson

•••• **NOVA SOUND STUDIO**

540 E. Jim Leeds Rd., Abseson, NJ 08201  
 (609) 652-3142

**Owner:** Tony Picciotti, Kent Longer, Nick Holt

**Studio Manager:** Tony Picciotti

•••• **NRS RECORDING STUDIO**

Hurley Mountain Rd., Hurley, NY 12443  
 (914) 331-3060

**Owner:** Nibor Music Enterprises, Inc.

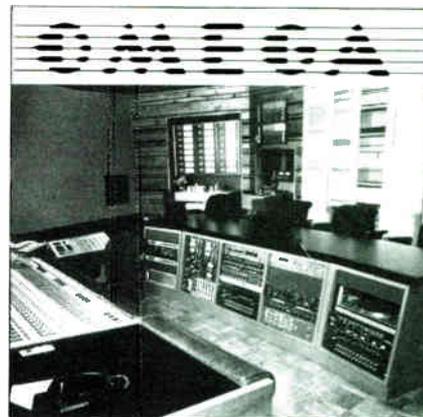
•••• **OMEGA RECORDING STUDIOS**

also **REMOTE RECORDING**  
 5609 Fishers Lane, Rockville, MD 20852  
 (301) 946-4686

**Owner:** Bob Yesbek

**Studio Manager:** Bill Brady

**Engineers:** Bob Yesbek, Bill Brady, Sharon Shapiro, Jack Knepley, Tom McCarthy, Brian Smith, Mark Atura, and Scully



**OMEGA RECORDING STUDIOS**  
 Rockville, MD

**Dimensions of Studios:** A 50 x 40 x 18, B 26 x 25 x 12, C 22 x 20 x 9

**Dimensions of Control Rooms:** A 24 x 27, B 23 x 19, C 20 x 15.

**Tape Recorders:** (2) Studer A 80 MKIVs, 24-track; (2) Studer A 80s, 1/2 inch 2-track; (6) Studer B-67s, 2-track; (2) Studer A 810s 2-track, MCI JH 110B, 1/2 inch 4-track, Ampex A-800 1/2 inch; 4-track, MCI JH 24, 16, 24 track

**Mixing Consoles:** API 2488, 32 x 32, MCI JH 636, 28 x 24; Audiotronics 110-B, 8 x 4.

**Monitor Amplifiers:** Bryston, AB Systems, Crown

**Monitor Speakers:** Westlake TM 1, UREI 813, UREI 811, Ed Long MDM 4, Yamaha YS 10, David 9000, Auratones

**Echo, Reverb & Delay Systems:** EMT-251, EMT 140ST, EMT 240, (2) Lexicon PCM70s, (2) Yamaha REV7s, (4) Lexicon Prime Times, (3) Eventide Harmonizer, DeltaLab DL1, DeltaLab Accustocomputer, (4) DeltaLab Effectron IIs, Lexicon 224, (2) AKG BX 20E.

**Other Outboard Equipment:** (15) UREI limiter/compressors, Sontec parametrics and compressors, Neve EQs and compressor/limiters, (8) Allison Kepeks, (8) Allison Gain Brains, Audioarts parametric, Panscan, Pultec EQs, Orban EQs and De essers, 48-tracks of Dolby A, 24-tracks of dbx 216, Eventide phaser/flangers, outboard API 550 As, dbx 160s, dbx 162, Alembic preamps, various cassette machines, turntables, etc., UREI digital metronome (2)

**Microphones:** (18) Neumann U87s, (4) Neumann FET47s, (8) Sennheiser 421s, (2) AKG 451s, Neumann KM 85s, 84s, 83s, (4) KM 86s Neumann U47 tube Neumann U67 tube, (11) RE 20s, (4) Crown P2Ms, Sony ECM 55ps, various Shure and E V mics, (4) AKG 414s

**Instruments Available:** Emulator II, DX7, MIDI bass, computer link to Emulator, Steinway B grand piano, Hammond B-3 w/Leslie, Fender Rhodes piano, clavinet, (2) sets Yamaha drums, (2) sets congas (LP and GonBop), Marshall, Fender and Music Man guitar amps, Yamaha marching drums (full set), Yamaha guitar amp Fender Bandmaster amp., various andundry percussion goodies, noisemakers, and stuff.

**Video Equipment & Services:** Q Lock synchronizer, Time Line Lynx Synchronizer, Sony 5850 1/4-inch video recorders, color monitors built in to control rooms, video links between all studios and control rooms.

**Rates:** A \$120/hr B \$105/hr, C \$75/hr Package rates available, video interlock in A or B \$140/hr

**Extras:** Each control room and each studio separately air cond. and heated Electrostatic air cleaners in all rooms, 48-line building wide tie line system for audio and video, various music and SFX records and tapes available in music library, 2 lounges including a video game lounge, cassette and reel to reel duplication (one-to one), no charge for extras (synthesizers, extra machines, etc.) if booked in advance (except SMPTE, based on availability) Producer's office w/phone in control room A

**Direction:** After 15 years of serving the Washington, D.C. area from a 3,000 sq ft facility, Omega is now fully moved to the new 12,000 sq ft Studio Complex in Rockville, MD. Studio A has hosted up to 75 musicians, and specializes in large bands, orchestras, and big productions like the Stevie Wonder Martin Luther King Tribute on NBC national Bob Hope TV specials, and other album, jingle, and TV productions Studio Bis modeled after Omega's "Room 10" (closed last year), with a newly designed control room. Omega is drawing a large clientele from New York City, Richmond, Baltimore, and most of the northeast with a physical plant equalling or exceeding most, high technical standards, and very reasonable rates

**Video Equipment & Services:** Q Lock synchronizer, Time Line Lynx Synchronizer, Sony 5850 1/4-inch video recorders, color monitors built in to control rooms, video links between all studios and control rooms.

**Rates:** A \$120/hr B \$105/hr, C \$75/hr Package rates available, video interlock in A or B \$140/hr

**Extras:** Each control room and each studio separately air cond. and heated Electrostatic air cleaners in all rooms, 48-line building wide tie line system for audio and video, various music and SFX records and tapes available in music library, 2 lounges including a video game lounge, cassette and reel to reel duplication (one-to one), no charge for extras (synthesizers, extra machines, etc.) if booked in advance (except SMPTE, based on availability) Producer's office w/phone in control room A

**Direction:** After 15 years of serving the Washington, D.C. area from a 3,000 sq ft facility, Omega is now fully moved to the new 12,000 sq ft Studio Complex in Rockville, MD. Studio A has hosted up to 75 musicians, and specializes in large bands, orchestras, and big productions like the Stevie Wonder Martin Luther King Tribute on NBC national Bob Hope TV specials, and other album, jingle, and TV productions Studio Bis modeled after Omega's "Room 10" (closed last year), with a newly designed control room. Omega is drawing a large clientele from New York City, Richmond, Baltimore, and most of the northeast with a physical plant equalling or exceeding most, high technical standards, and very reasonable rates

**Video Equipment & Services:** Q Lock synchronizer, Time Line Lynx Synchronizer, Sony 5850 1/4-inch video recorders, color monitors built in to control rooms, video links between all studios and control rooms.

**Rates:** A \$120/hr B \$105/hr, C \$75/hr Package rates available, video interlock in A or B \$140/hr

**Extras:** Each control room and each studio separately air cond. and heated Electrostatic air cleaners in all rooms, 48-line building wide tie line system for audio and video, various music and SFX records and tapes available in music library, 2 lounges including a video game lounge, cassette and reel to reel duplication (one-to one), no charge for extras (synthesizers, extra machines, etc.) if booked in advance (except SMPTE, based on availability) Producer's office w/phone in control room A

**Direction:** After 15 years of serving the Washington, D.C. area from a 3,000 sq ft facility, Omega is now fully moved to the new 12,000 sq ft Studio Complex in Rockville, MD. Studio A has hosted up to 75 musicians, and specializes in large bands, orchestras, and big productions like the Stevie Wonder Martin Luther King Tribute on NBC national Bob Hope TV specials, and other album, jingle, and TV productions Studio Bis modeled after Omega's "Room 10" (closed last year), with a newly designed control room. Omega is drawing a large clientele from New York City, Richmond, Baltimore, and most of the northeast with a physical plant equalling or exceeding most, high technical standards, and very reasonable rates

**Video Equipment & Services:** Q Lock synchronizer, Time Line Lynx Synchronizer, Sony 5850 1/4-inch video recorders, color monitors built in to control rooms, video links between all studios and control rooms.

**Rates:** A \$120/hr B \$105/hr, C \$75/hr Package rates available, video interlock in A or B \$140/hr

**Extras:** Each control room and each studio separately air cond. and heated Electrostatic air cleaners in all rooms, 48-line building wide tie line system for audio and video, various music and SFX records and tapes available in music library, 2 lounges including a video game lounge, cassette and reel to reel duplication (one-to one), no charge for extras (synthesizers, extra machines, etc.) if booked in advance (except SMPTE, based on availability) Producer's office w/phone in control room A

**Direction:** After 15 years of serving the Washington, D.C. area from a 3,000 sq ft facility, Omega is now fully moved to the new 12,000 sq ft Studio Complex in Rockville, MD. Studio A has hosted up to 75 musicians, and specializes in large bands, orchestras, and big productions like the Stevie Wonder Martin Luther King Tribute on NBC national Bob Hope TV specials, and other album, jingle, and TV productions Studio Bis modeled after Omega's "Room 10" (closed last year), with a newly designed control room. Omega is drawing a large clientele from New York City, Richmond, Baltimore, and most of the northeast with a physical plant equalling or exceeding most, high technical standards, and very reasonable rates

**Video Equipment & Services:** Q Lock synchronizer, Time Line Lynx Synchronizer, Sony 5850 1/4-inch video recorders, color monitors built in to control rooms, video links between all studios and control rooms.

**Rates:** A \$120/hr B \$105/hr, C \$75/hr Package rates available, video interlock in A or B \$140/hr

**Extras:** Each control room and each studio separately air cond. and heated Electrostatic air cleaners in all rooms, 48-line building wide tie line system for audio and video, various music and SFX records and tapes available in music library, 2 lounges including a video game lounge, cassette and reel to reel duplication (one-to one), no charge for extras (synthesizers, extra machines, etc.) if booked in advance (except SMPTE, based on availability) Producer's office w/phone in control room A

**Direction:** After 15 years of serving the Washington, D.C. area from a 3,000 sq ft facility, Omega is now fully moved to the new 12,000 sq ft Studio Complex in Rockville, MD. Studio A has hosted up to 75 musicians, and specializes in large bands, orchestras, and big productions like the Stevie Wonder Martin Luther King Tribute on NBC national Bob Hope TV specials, and other album, jingle, and TV productions Studio Bis modeled after Omega's "Room 10" (closed last year), with a newly designed control room. Omega is drawing a large clientele from New York City, Richmond, Baltimore, and most of the northeast with a physical plant equalling or exceeding most, high technical standards, and very reasonable rates

•••• P&P STUDIOS, INC.  
 also REMOTE RECORDING  
 17 Viaduct Rd., Stamford, CT 06907  
 (203) 327-9204

Owner: John Fishback  
 Studio Manager: Aldena Leonard, Edgar Bernstein  
 Engineers: Dan Pickering, John Fishback, Dan Buckle,  
 Dimensions of Studios: A: 1,000 sq. ft., B: 100 sq. ft.  
 Dimensions of Control Rooms: A: 350 sq. ft., B: 100 sq. ft.  
 Tape Recorders: MCI JH24, 24-track; MCI JH110, 4-track;  
 Ampex 440C, 4-track; Ampex 440B, 4-track; MCI JH-  
 110TC3, 2-track w/SMPTe, MCI JH110, 2-track; Ampex  
 440C, 2-track; Ampex 440B, 2 track, Tandberg 6000 1/4-  
 track; TEAC 2340, 4-track, Nakamichi 480 cassette, Tas-  
 cam 122 cassette, MCI 1 inch layback.  
 Mixing Consoles: A: Syncon, 28 x 24, B: Allen & Heath, 8  
 x 4.

Monitor Amplifiers: PSE, McIntosh, HH, Dyna.  
 Monitor Speakers: Big Reds, Auratones, DAC 710s.  
 Echo, Reverb & Delay Systems: MICMIX CSREQ-23  
 and M-R III, Loft delay, ART DRI digital delay.  
 Other Outboard Equipment: dbx 160s, LA-3As, Orban  
 parametric, multi-track parametric, Tapco graphic, SAE  
 graphic, Eventide Omnipressor, Eventide Harmonizer, Val-  
 ley People Dyna-Mite, Aphex Aural Exciter, Dynaflex, Sony  
 Syncmaster SMPTe system.  
 Microphones: Neumann; AKG; Sennheiser; Beyer; Shure;  
 E-V; Sony; PZM; etc.

Instruments Available: Yamaha grand, Rhodes 88,  
 Gretsch kit w/ various small percussion, Oberheim drum  
 machine, Roland Juno 60 synth, clavinet, Fender Twin  
 Reverb and Bassman amps (tube) Yamaha DX7, Mirage.  
 Video Equipment & Services: Video/audio lockup via  
 SMPTe for sweetening and layback. Shooting stage on  
 premises. All formats available 1/2", 3/4", one-inch, 3/4-inch  
 off line video editing w/CMX compatible list w/Sony BVU  
 800s.

Rates: 2: 8-, 4-, 2-, 1-track from \$60-\$200/hr. Call for  
 specifics.

Extras: Music videos, video editing, sweetening, cassette  
 duplication, multi-image programming w/AVL, film-video  
 stage, jingles and scoring for video, film, slide shows. P&P  
 Music library.

Direction: P&P has evolved from an audio-only operation  
 into a full-service media production company. We have  
 the equipment to work in a variety of media. But, more  
 importantly, we have the people who are not only com-  
 petent and experienced, but take pride in doing the job  
 right—the first time.

•••• PARIS RECORDING  
 also REMOTE RECORDING  
 466 Hawkins Ave., Ronk, NY 11779  
 (516) 467-5143

Owner: Brian Unger  
 Studio Manager: Brian Unger

•••• PEABODY RECORDING STUDIOS  
 also REMOTE RECORDING  
 1 East Mt. Vernon Pl., Baltimore, MD 21202  
 (301) 659-8136

Owner: Peabody Institute of the John Hopkins University  
 Studio Manager: Alan P. Kelauger  
 Dimensions of Studios: A: 20 x 32, B: 450 seat hall.  
 Dimensions of Control Rooms: A: 12 x 20, B: 15 x 20.  
 Tape Recorders: Ampex MM 1200, 24-track, Ampex ATR-  
 104, 4-track, (2) Ampex ATR 102, 2 track, (2) Ampex ATR-  
 802, 2-track; Sony PCM 701 es/VO 5850, 2 track digital;  
 Tascam 122 cassette.

Mixing Consoles: A: Sound Workshop 1600 w/VCA; B:  
 Sound Workshop Series 30 w/VCA.

Monitor Amplifiers: UREI, JBL and SAE.

Monitor Speakers: JBL 4430; UREI 811, Tannoy Gold 10.  
 Echo, Reverb & Delay Systems: Lexicon 224, Lexicon  
 200; DeltaLab DL-2, AKG BX 10E.

Other Outboard Equipment: UREI LA4 compressors (4);  
 UREI 1178 limiters (2); UREI 546 equalizer; UREI 565T  
 filters; MICMIX Dynaflex; Lang PEQ-2A EQs, dbx noise  
 reduction (36 channels), UREI EQs, Eventide Harmonizer,  
 dbx EQs and compressors, Drawmer noise gates.

Microphones: Neumann KM 84s, KM 83s, KM-86s, U87s,  
 KM88s, U67s (tube), SM-69s, AKG 414EB-48s, 422s; Milab  
 DC-63s; Sony C-37Ps; Beyer M 500s, M-160s, M-260s,  
 M-101s, M-201s, M-69s, Electro Voice dynamics; Shure  
 dynamics; AKG dynamics, UREI direct boxes; PZMs and  
 much more.

Instruments Available: Steinway 9 foot concert grand,  
 Steinway 7-foot concert grand, other instruments and de-  
 vices on request.

Rates: Call for rates.

Extras: Studio A is tied to a 750 seat concert hall with a  
 stage suitable for a 100 piece orchestra, and is available  
 for a nominal charge. A full duplicating facility is also on  
 premises.

Direction: The Peabody Recording Studios is a classically  
 oriented full-service studio serving the needs of The Pea-

body Conservatory of Music and the surrounding com-  
 munity.

•••• PENNY LANE  
 1350 Avenue of the Americas, New York, NY 10019  
 (212) 687-4800

Owner: Harley Flaum  
 Studio Manager: Alan Varner

Engineers: Alan Varner  
 Dimensions of Studios: A: 25 x 36; B: 10 x 12  
 Dimensions of Control Rooms: Both 18 x 20.

Tape Recorders: Otari MTR-90, 24-track; 3M 79, 24-track.  
 Mixing Consoles: Trident TSM, 32 in x 24 out; Trident  
 Series 80B 32 in x 24 out.

Monitor Amplifiers: McIntosh, Carver.

Monitor Speakers: Big Reds, E.M. Long, Visonik, JBL,  
 Auratone, Yamaha.

Echo, Reverb & Delay Systems: EMT 140, BX20, Even-  
 tide SP2016, Lexicon Prime Time and Super Prime Time.

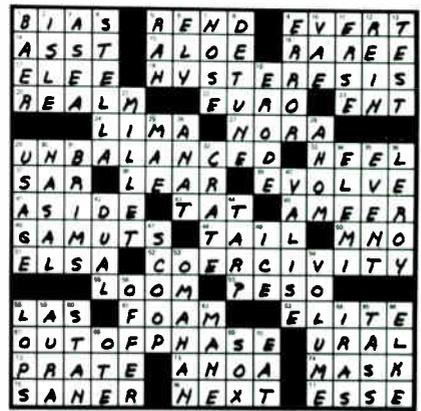
Other Outboard Equipment: UREI, Allison, Trident, Even-  
 tide, Pultec, etc.

Microphones: Full range of professional mics.

Instruments Available: Drums, Rhodes, Steinway B, syn-  
 thesizers.

Video Equipment & Services: Full audio-for-video post-  
 production with Q.Lock 3.10; JVC 6650 and JVC 6600  
 interlocked to 24-track and 2-track machines.

## APRIL PUZZLE SOLUTION



Mix Words will be back next month.

IN  
 SOHO

# Greene Street Recording, inc.

112 GREENE STREET • NEW YORK, NEW YORK 10012 • (212) 226-4278

STEVE LOEB, President

Circle #142 on Reader Service Card



**PLANET AUDIO/VISUAL RECORDING STUDIOS**  
New York, NY

•••• **PLANET AUDIO/VISUAL RECORDING STUDIOS**

251 W. 30th St., New York, NY 10001  
(212) 594-7554

Owner: Planet Sound Inc., Zuzker Corp.  
Studio Manager: John Grossbard, Mike Theodore  
Engineers: Rick Kerr, Mike Theodore, Andy Heermans, Julian McBrowne, George Bishop, and independents.

Dimensions of Studios: A 24 x 45 + isolation and vocal booth; B 25 x 45 flexible iso and vocal areas, 30-foot ceiling

Dimensions of Control Rooms: A 18 x 23; B: 18 x 23  
Both rooms similar acoustic design.

Tape Recorders: Studer A80, 24 track, A80 1/2-inch + 1/4-inch 2-track; MCI 24-track, Otari 1/4 inch, Mitsubishi digital mix, Otari MTR-90

Mixing Consoles: Trident Series 80, 40 input (64 mix) with automation; SSL 4000 w/total recall.

Monitor Amplifiers: Hafler and Crown.

Echo, Reverb & Delay Systems: EMT stereo plates, (2) Lexicon 224X digital reverb w/LARC, AKG BX20, (5) Lexicon PCM42s, AMS dmx digital delay, Lexicon Super Prime Time, PCM70, (2) Yamaha REV7, Window and Bel digital sampler.

Other Outboard Equipment: (2) Panscans, (2) Marshall Time Modulators, Eventide 949 and 910 Harmonizers, limiters include dbx 160s and 165s, UREI LA2As, LA3As, and 1146s, Pultec, Orban, Neve, Drawmer, and API equalizers Chorus, flanging, phasing and doubling units, Valley People Dyna-Mites, dbx and Kepex II noise gates

Microphones: Neumann 87s, 89s, U47s, KM84s; PZMs; AKG 414s, 451s and C12; Sennheiser 421s and 441s; Shure 57s and 58s, Electro-Voice RE20s; other special and vintage selections available upon request.

Instruments Available: Custom oversize Milestone drum kit, Yamaha C7 grand piano, Yamaha CP70 and CP30 electric grands, Rhodes electric, (2) Yamaha DX7 synthesizers Oberheim OBX synth and Xpander module, LinnDrums, DMX drums, Simmons drums, Emulator 2 Full MIDI.

Video Equipment & Services: JVC 6650 deck, AI and Beta 2000, 25-inch color monitor, full SMPTE lockup available.

Rates: Please call or write for specific project (block) rates  
Extras: Unusual live drum environment - wooden floors, angled walls, high ceilings providing live ambience w/gated room and reverb effects.

Direction: Recent projects include Chaka Khan "I Feel For You" Warner Bros. album, TS Monk and Eric Mercury Manhattan/Capitol-EMI album, Steps Ahead, Jane Fonda Prime Time, Ramones, Colt 45, Nabisco, Subaru, Chrysler Corp. Our goal is to provide up to date technology, modern engineering, realistic prices

•••• **PLATINUM FACTORY INC.**  
1368 Fulton St., Brooklyn, NY 11216  
(718) 636-1401

Owner: Derek P McDowell  
Studio Manager: Derek McDowell  
Engineers: Jon Evans, David Roberts English, Kevin Griffith, Derek Davis, Tony Austin, Andre Morton, Kevin Richards

Dimensions of Studios: 35 x 25 x 15

Dimensions of Control Rooms: 18 x 14

Tape Recorders: Studer A80, 24 track, Studer A80, 2 track; Ampex ATR102, 2-track; Aiva (2) F700, cassette.

Mixing Consoles: MCI JH636 automated 36 x 24.

Monitor Amplifiers: Perreux 5000B, Crown DC300A (2), Crown D150, Crown D75 (2).

Monitor Speakers: UREI 813 Yamaha NS 10, JBL 4312s, Auratones.

Echo, Reverb & Delay Systems: Eventide 2016, ART 01 A (2), Lexicon PCM70, Lexicon Prime Time II, Prime Time I, DeltaLab Effectron ADM 1024 DeltaLab Echotron, Eventide 910 Harmonizer

**NORTHEAST STUDIOS**



**24 TRACK**



• **Platinum Factory Inc.** ◀  
Recording Studio

(212) 636-1401

**PLATINUM FACTORY, INC.**  
Brooklyn, NY

Other Outboard Equipment: dbx 160 compressor/limiters (4), Trident stereo comp/lim, Orban parametric EQ, Lang tube parametrics (2) MXR graphic EQ, Kepex noise gates.

Microphones: AKG 451s, 414EBs, D222, RE20s, 635A, U47s, U87s, MD 421s, SM58.

Instruments Available: Yamaha drum set, DSXs, LinnDrum, MIDI Doc, Fender Rhodes piano, Yamaha grand piano.

Rates: \$85/hr



**PLATINUM ISLAND RECORDING STUDIOS**  
New York, NY

•••• **PLATINUM ISLAND RECORDING STUDIOS**  
676 Broadway, New York, NY 10012  
(212) 473-9497

Owner: Richie Kessler  
Studio Manager: Richie Kessler, Jerry Gottus  
Engineers: Jerry Gottus, Jim Klein, Arley Seeger, independents

Dimensions of Studios: "Platinum East" 30 x 20 x 11.5 w/4 x 6 iso. "Platinum West" 11 5 x 16 w/4 x 7 iso.

Dimensions of Control Rooms: "Platinum East" 21 x 20, "Platinum West" 21 x 18.

Tape Recorders: Studer A 80 MKIII wide body, 24 track; A-80 MKIII narrow body, 24 track, A 80 MKIV 1/2, 1/4 inch, 2-track, A 80 MKIII 1/2, 1/4 inch, 2 track, (2) B 7 1/4 inch, 2-track, Sony PCM 501 ES EJAC digital, 2 track

Mixing Consoles: Solid State Logic w/priinary computer 4000E 40 (80 in mix), API custom (Hit Factory NYC), 28 (52 in mix)

Monitor Amplifiers: Bryston 4B, McIntosh, Crown.  
Monitor Speakers: UREI 813B, Yamaha NS-10M, Auratones; ROC cubes.

Echo, Reverb & Delay Systems: Lexicon 224XL, AMS digital reverb, Yamaha REV7, MXR01A, Lexicon PCM60, Lexicon Super Prime Time, Prime Time II, PCM42, PCM41, DeltaLab 1024, Korg sampler-delay.

Other Outboard Equipment: Dyna-Mite and Kepex II noise gates; Pultec EQP 1, 1A, EPH-2, MEQ-5 tube EQs; UREI and Yamaha graphic EQs; LA-2, LA-4, UREI 1176, Aphex Compellor, dbx 160X limiters; Orban parametric and paragrahic EQs; Eventide Harmonizer; Neve input modules; SBX-80 SMPTE reader/generator.

Microphones: U-47, AKG C-12, AKG "The Tube" tube mics; U-87, U-47, AKG 414, AKG 460, Shure SM81 condenser mics; RE-20, RE-16, Shure 57, Shure 58 dynamic mics.

Instruments Available: Yamaha Conservatory Series 7'4" grand, 5'6" grand; DX7 Juno 106, OB-8, Mirage sampling, synths; LinnDrum and Roland TR-707 drum machines. Tama drum kit, bass and guitar amps, Rockman X-100 pre-amp.

Video Equipment & Services: Call.  
Rates: Call.

•••• **PLUM STUDIO, LTD.**  
also **REMOTE RECORDING**  
2 Washington St., Haverhill, MA 01830  
(617) 372-4236  
Owner: Richard Tiegen  
Studio Manager: Richard Tiegen

•••• **POWER PLAY RECORDS**  
also **REMOTE RECORDING**

198 Bloomfield Ave., Newark, NJ 07104  
(201) 481-0972, 484-9404

Owner: Power Play Records, Inc.  
Studio Manager: Greg Furgason  
Engineers: Greg Furgason, Lou Nosti, Tony McDannels, Tom Terren, Kevin Furgason, John Terren, Chuck Russo.  
Dimensions of Studios: A 390 ft<sup>2</sup>; B 840 ft<sup>2</sup> + 2 iso booths.

Dimensions of Control Rooms: A 252 ft<sup>2</sup>; B 200 ft<sup>2</sup>  
Tape Recorders: Sony PCM 3324, 24-track digital; Ampex MM-1200, 24-track; Tascam 85-16B, 16-track; Otari MX-5050-8SD, 8-track; (2) Otari MX-5050 III-2, 2-track; (2) Tascam 122B cassette decks, 2-track; Otari DP-4050 cassette, duplicator (5 slaves); (2) Nakamichi DMP-100, 2-track; Sony SL-2000, Beta VCR, (2) Sony VO-5850, 3/4-inch VCR; Pioneer RT-707, 1/4-track.

Mixing Consoles: Soundcraft 2400 40 x 24 x 2, NEOTEK Series IE 20 x 8 x 2, NEOTEK Series IE 12 x 4 x 2, Yamaha PM-700 12 x 12 x 2; (2) Shure M-67 4 x 1.

Monitor Amplifiers: (2) Hafler DH-200, (2) Hafler P-500, Dynaco ST-150, (2) Dynaco ST-120, (2) Crown D-75.

Monitor Speakers: Big Reds, E-V Sentry 100A, Auratone SC T6, Bose 800.

Echo, Reverb & Delay Systems: Ursal Major 232 Star-gate, (2) Yamaha REV7, Klark-Teknik DN-780, (2) Lexicon PCM-41, DeltaLab Time Line, Ursal Major Space Station.

Other Outboard Equipment: (2) Eventide Omnipressors, (3) Orban 516EC sibilance filters, (4) Valley People Dyna-Mites, dbx 166 (2) dbx 163, dbx 165A, (2) Audioarts 4200, parametric EQs, Eventide flanger, (2) Ashly SC-66, (26 channel) dbx Type I, (4 channel) dbx type II, BTX synchronizer.

Microphones: Neumann U47s, U87s, U89s, Sennheiser MD441s, MD-421, MKE 2, Electro-Voice RE-20s, RE-15s, RE-11s, 664, 666s, 1777, Sony ECM-50PS, Shure SM-81s, SM58s, SM57s, SM60s, Countryman direct boxes.

Instruments Available: Knabe 1928 upright grand piano, Kimball grand piano, Yamaha DX7, Korg Poly-6, Roland Juno 106, LinnDrum LM-1, Simmons SDS-7, Ludwig 5-piece drum kit, Oberheim OBX-A, Music Man HD-130, Marshall 50, 100, Fender Vibroverb, Peavey Deuce, Yamaha 112.

Video Equipment & Services: One inch, Betacam and 1/2-inch production and post-production (4) Ampex VPR-2B, Sony BVU-800, Paltest Esprit, Sony RM-440, RM-580, Grass Valley L-Switcher, 3MD-5000, Tektronix 528 Waveform monitors, Tektronix 1420 Vectoscope

Rates: Upon request, block rates available, call for rate card.

•••• **POWER PLAY STUDIOS INC.**  
38-12 30th St., Queens, NY 11101  
(718) 729-1780, 729-9609

Owner: Tony Arli  
Studio Manager: Gary Salzman  
Engineers: Julian Herzfeld, Patrick Adams, Rick Gratz, Elai Tubo, Frank D'Amato, Matthew Buccheri, Joe Mautone.

Dimensions of Studios: 25 x 30, 15 x 15.

Dimensions of Control Rooms: 16 x 20, 12 x 16.

Tape Recorders: Studer A-80, 24 track; MCI JH-24, 2-track; (4) MCI 110-Bs, 2 track, MCI 110 C, 2-track; Tascam 80 B, 8-track; (7) JVC KDV 6, cassette

Mixing Consoles: Solid State Logic 4000E 36 x 32 (total recall), MCI 636 32 x 24 w/automation

# power play studios inc.

## POWER PLAY STUDIOS INC. Queens, NY

Monitor Amplifiers: Halfer P500, P225, Phase Linear 400, Crown DC 300A, Yamaha P2050, Crown DG-60, SAE 50.

Monitor Speakers: (2 pr.) UREI 813Bs, (2 pr.) Yamaha NS-10Ms, JBL 4430s, Big Reds, JBL 4311s, (2 pr.) Auratones. Echo, Reverb & Delay Systems: Publison Infernal Machine 90, Yamaha REV1, Lexicon 224XL, Lexicon 200, Yamaha REV7, (2) Lexicon PCM60s, MXR 1500, (5) PCM42, (2) PCM 41s, (2) Eventide Harmonizers, (2) MXR O1s, Ursa Major Space Station.

Other Outboard Equipment: AMS DMX 1580 MXR flanger doubler, Tube Tech EQ, Orban parametric EQ, Klark-Teknik EQs, Panscan, (2) dbx 166s, (2) dbx 165As, (4) dbx 160Xs, (12) Dyna-Mites, MSQ-700, SBX-80.

Microphones: AKG gold tube, 414s, 451s, 452s, 535; Neumann U47, U87, KM85s, KM84s; Sony C37P; E-V RE20s; Crown PZM, Sennheiser MD421s, Shure SM57s, 58s.

Instruments Available: E-mu II, E-mu I, PPG Wave, (2) DX7s, DX21, TX816 rack (8) DX7s, Juno 60 w/MIDI, Juno 106, Casio CZ-101, Publison Infernal Machine 90, Akai digital sampler w/disk drive, Yamaha grand piano, Linn 9000, LinnDrum, DMX, RX-11, Simmons, Roland DDR-30 (drum module), MX-1 trigger, Mini Doc.

Video Equipment & Services: Available upon request.

Rates: Available upon request.

Extras: Doctor Winkie taste filter.

Direction: Both our studios were acoustically designed by Vin Gizzi, assuring our clientele the most accurate monitoring environment available. In 1985, we at Power Play had 24 *Billboard* charted hits, including two #1s.

## POWER STATION

441 W 53rd St., New York, 10019  
(212) 246-2900

Owner: Bob Walters, Tony Bongiovi  
Studio Manager: Barry Bongiovi, Ban Kaye

## PREMIER RECORDING, INC.

2121 Wisconsin Ave. N.W. Ste. 250  
Washington, DC 20007  
(202) 333-5588

Owner: Demo Chrissos

Studio Manager: Chen Looney

Engineers: Demo Chrissos and various independent freelancers.

Dimensions of Studios: 14 x 11.

Dimensions of Control Rooms: 26 x 17

Tape Recorders: Otari MTR-90, 24-track; (2) Otari MTR-10, 2-track; Otari MX-5050MKIII-2, 2-track; Nakamichi BX 1, cassette; Nakamichi BX-100, cassette.

Mixing Consoles: NEOTEK Elite, 36 x 26

Monitor Amplifiers: UREI-6500, Crown D-75, Crown D 150A Series II (headphone amplifier).

Monitor Speakers: UREI 813-B, ROR E3 reference monitors

Echo, Reverb & Delay Systems: Lexicon 200, Lexicon PCM70, Eventide H-910.

Other Outboard Equipment: Drawmer DS 210 stereo noise gate, Aphex 300 stereo Compellor, Aphex Type-C Aural Exciter, (2) UREI LA-4 compressors, Symetrix TI-101 telephone interface, Technics SL P2 Compact Disc Player, Music Man 210 HD amplifier, Dolby XP-24 noise reduction, 24-track.

Microphones: Neumann U87s, AKG C-414EB/P48s.

Instruments Available: Kurzweil 250 w/advanced sampling, Yamaha DX7, Roland JX-3P, Oberheim DMX drum machine, Roland SBX 80 MIDI/SMPTE sync box.

Rates: Upon request.

Extras: More than 30 hours of sound effects on Compact Disc

Direction: Premier Recording embraces the trend toward a larger control room and smaller dedicated overdub stu-

dio. Most production originates from synthesizers and samplers wired directly into the patch bay. Our control room has a separate client seating area which is ideally suited for our advertising clients. The studio's primary direction is production of jingles, radio spots and television/film soundtracks.

## PRESENCE STUDIOS

also REMOTE RECORDING  
461R Main St., East Haven, CT 06512  
(203) 467-9038

Owner: Jon Russell

Studio Manager: Sheila Fulton

## PROFESSIONAL SOUND, FILM & VIDEO, INC.

also REMOTE RECORDING  
136 Arlington St., Boston, MA 02116  
(617) 423-0007

Owner: Vincent R. Parla

Studio Manager: John P. Parla, Vincent E. Parla

## PYRAMID SOUND, INC.

also REMOTE RECORDING  
105 E. Clinton St., Ithaca, NY 14850  
(607) 273-3931

Owner: John Perialas, Alexander Perialas  
Studio Manager: Lorri Burhans

## QUAD RECORDING STUDIOS

723 7th Ave., New York, NY 10019  
(212) 730-1035

Owner: Lou Gonzalez

Studio Manager: Laurie Gonzalez

Engineers: Lots of great engineers on request like Dave Ogrin, Matt Kasha, Steve Kahn, Alan Meyerson, Bob Musso, Andy Wallace, Joe Barbaria, Steve Stanley, Carl Beatty, Dennis Thompson, Brian Max, Bruce Miller.

Tape Recorders: 2-inch, 1/2-inch, 1/4-inch and 1/8-inch 2-track.

Mixing Consoles: (2) SSL 48-track w/total recall.

Monitor Amplifiers: Crown PSA-2, Yamaha, McIntosh.

Monitor Speakers: UREI 813, 813B, Yamaha, JBL.

Echo, Reverb & Delay Systems: (2) AMS 6.4 w/harmonizer, (2) AMS reverb, Lexicon 224, Lexicon 224XL, Yamaha REV7, Yamaha R1000 and (5) EMT 140 plates, several PCM41, PCM42, DLL1, DL4, Eventide, and more.

Other Outboard Equipment: Kepexes, flangers, phasers, API EQ, Pultec EQ, Dyna-Mites, Teletronix, dbx 160s, dbx 160Xs, UA1176s, Orban, Roland.

Microphones: Neumann 67, 87, M49B, KM84, KM86; AKG; E-V; 414; RCA; Sennheiser; Shure.

—LISTING CONTINUED ON NEXT PAGE

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Rockville, Maryland at 5609 Fishers Lane  
(301) 946-4686

Circle #143 on Reader Service Card

**Instruments Available:** Prophet 5, DX7, Moog, Linn, Dr. Click, Roland, Steinway L, Steinway B, Fender Rhodes, Tama and Pearl drums.

**Video Equipment & Services:** 1/2-inch and 1/4-inch playback and 3/4-inch lockup  
**Rates:** On request. (48-track lockup available.)

◆◆◆◆ **THE RANCH RECORDING STUDIO**  
 37 W. 20th St. Ste. 1107, New York, NY 10011  
 (212) 741-0784

**Owner:** Andy Parks Productions  
**Studio Manager:** Cathy Parks  
**Engineers:** Dave Ruffo, Robbie Norris, Steve Casper  
**Dimensions of Studios:** Main room 16 x 26; drum room 15 x 13; vocal booth: 9 x 7  
**Dimensions of Control Rooms:** 16 x 14.5 x 10 ceiling  
**Tape Recorders:** Ampex ATR 102 (w/1/4-inch + 1/2-inch heads), 2-track; Nakamichi BX-1, cassette, Otari MTR-90, 24-track; (2) dbx 160, (2) dbx 166, ATR 104 Ampex w/1/4-inch heads + 1/2-inch, 4-track.  
**Mixing Consoles:** Amek MM2500 (fully automated), 36 in x 24 out.

**Monitor Amplifiers:** McIntosh, Crown  
**Monitor Speakers:** Altec 6048H, JBL 4311, Auratones, Yamaha NS-10M.

**Echo, Reverb & Delay Systems:** (2) Audicon full-size plates, Lexicon 224XL, Lexicon Super Prime Time, Lexicon Delta-T fully loaded; Eventide II, Eventide 11910 Harmonizer, Yamaha D1500 DDL w/MIDI

**Other Outboard Equipment:** Teletronix LA2A, LA3, (2) 1176, (2) LA4, (2) Symetrix CL-100, dbx 160, (2) Kepelex Is, (4) Kepelex II, Eventide flanger, Pultec, Lang and Ashly EQs, EXR Exciter; 24-track Dolby A, 2-track Dolby A, Roland SBX-80 (sync box) w/SMPTE

**Microphones:** Neumann (2) tube U47, FET U47, (3) U87, KM84, (2) AKG 414EB, (2) 251, D224, D12, D202, Sennheiser 441, (3) 421, Shure (4) SM57, SM56, Sony ECM 22 stereo mic.

**Instruments Available:** Ludwig Octopus drum kit, Steinway B grand piano, Fender Rhodes piano, Fender and Marshall amps; Yamaha CS80, DX7, LinnDrum machine, Roland Super Jupiter-MPG80 and MKS 80, Kurzweil 250; Ampeg B-15 bass amp.  
**Rates:** On request

◆◆◆◆ **MICKEY RAT RESEARCH CENTER**  
 Cheezbox 1332, Silver Springs, MD 20902  
 (301) 649-MRRC

**Owner:** Mickey Rat/Fat Rat Productions  
**Studio Manager:** Hyman Mandell



**RATZVILLE USA**  
 Ratzville, MD

◆◆◆◆ **RATZVILLE RECORDING STUDIOS**  
 Go-Go Box 1501 USA, Ratzville, MD 20850  
 (301) 649-MRRC  
**Owner:** Fat Rat Productions  
**Studio Manager:** Mickey Rat

◆◆◆◆ **RAWLSTON RECORDING**  
 1271 Fulton St., Brooklyn, NY 11216  
 (718) 622-0010, 622-0216, 622-0375

**Owner:** Rawlston Charles  
**Studio Manager:** Rawlston Charles  
**Engineers:** Philip Robinson, Akili Walker, Tom Weber, Charlie Rawlston, Franklin Grant  
**Dimensions of Studios:** 35 x 16  
**Dimensions of Control Rooms:** 27 x 14  
**Tape Recorders:** Studer A-80 MKIII, 24-track, Studer A-80, 1/2-, 1/4-inch 2-track; Studer A810, 1/4-inch 2-track; Technics 1506 stereo 1/4-track, (2) Tascam 122 cassette  
**Mixing Consoles:** Neve 8068, 64 in x 32 out  
**Monitor Amplifiers:** Crown PSA-2s, Crown DC-150As

**NORTHEAST STUDIOS**



**24 TRACK**



**RAWLSTON RECORDING**  
 Brooklyn, NY

**Monitor Speakers:** UREI 813B, Yamaha NS 10, JBL 4311, Auratones

**Echo, Reverb & Delay Systems:** Lexicon 224XL, EMT 140 stereo plate, 2 live chambers, Eventide 2016 digital processor, Lexicon Prime Time II, Eventide 949 Harmonizer, AMS phaser, (2) Roland SDE 3000 delay

**Other Outboard Equipment:** (2) API 550-A EQ, (2) Orban 622B parametric EQs, UREI stereo graphic 532 EQ, Pultec tube EQ, (4) Neve compressors, A + DR Easy Rider compressor, Dolby 361 noise reduction, 2-track Dynalex noise reduction, (2) UREI 1176 limiters, (4) Kepelex II, (4) Valley People Dyna-Mites, (2) dbx 160X limiters, AMS digital sample, Panscan, Tape Eliminator

**Microphones:** Neumann tube U47, M49, U87s; Shure 57s; Sennheiser 421s, 441s; AKG 414s, D12s, 451s; Electro-Voice RE20s, RE55s, PZMs, Countryman direct boxes

**Instruments Available:** Yamaha C7 grand piano, Yamaha PF15 electric piano, Yamaha DX7, Oberheim OB8 and OB1, Yamaha recording drums, Linn and DMX drum machines, SVT bass amp, Roland Jazz Chorus, Roland MSQ 700 Emulator II, Yamaha TX 816

◆◆◆◆ **RBY RECORDING AND VIDEO**  
 also REMOTE RECORDING

920 Main St. N., Southbury, CT 06488  
 (203) 264-3666  
**Owner:** Jack Jones  
**Studio Manager:** Marjorie Jones

◆◆◆◆ **RCA RECORDING STUDIOS**  
 also REMOTE RECORDING

1133 Avenue of the Americas, New York, NY 10036  
 (212) 930-4062

**Owner:** RCA  
**Studio Manager:** Larry Schnapi, Gene Cattani, Len Lawson

**Engineers:** Dick Baxter, Ed Begley, Tom Brown, Jim Crotty, Al Fait, Dennis Ferrante, Mike Getlin, Paul Goodman, Ray Hall, Joe Lopes, Pat Martin, Mike Moran, Tony Salvatore, Bob Simpson, Mastering: Jack Adelman, Jay Koopman, George Drebot, Rick Rowe

**Dimensions of Studios:** A: 60 x 100 x 30, B: 50 x 75 x 28, C: 50 x 75 x 25; D: 30 x 40 x 15; E: 15 x 25 x 10; F: 15 x 25 x 10

**Dimensions of Control Rooms:** A, B, C: 30 x 40 x 25. Nine mastering rooms: six lacquer mastering cutting channels

**Tape Recorders:** MCI, Studer, Ampex, 24-track MCI Ampex; 16- and 8-track 3M, MCI, Ampex, 2-track: Ampex, 3M, MCI, digital systems Soundstream 2, 4-, and 8-track recording and editing, JVC 2-track recording and editing, Sony 2-track and 24-track recording and editing.

**Mixing Consoles:** (5) Neve consoles; (2) APIs; MCI, 64 in x 24 out

**Monitor Amplifiers:** McIntosh 2100.

**Monitor Speakers:** 604s, Utahs, Mastering Lab cross-overs.

**Echo, Reverb & Delay Systems:** (36) plates, (6) AKGs, (6) live rooms; (4) Lexicon 224 digital delays.

**Other Outboard Equipment:** All brands, full complement.

**Microphones:** Complete line, 600 microphones.

**Instruments Available:** (6) Steinway grands, three over 100 years old. (8) organs. Extensive. What we don't have we'll rent.

**Extras:** Mobile van.

**Rates:** On request. Call Len Lawson.

**Direction:** Donny Hathaway, Roberta Flack, Kansas, Elvis Presley, George Benson, Waylon Jennings, Jefferson Starship, Lou Reed, David Bowie, Marshall Tucker Band, The Band, Hot Tuna, Frank Zappa, Oscar Peterson, Ella Fitzgerald, Buddy Rich, Lionel Hampton, ABC-TV, AT&T, Avco Embassy, BBC, Capitol Records, Dick Clark Prod., Met Opera, MGM Films, Motown Records, Frank Sinatra, Cher, Peaches & Herb, Judy Collins, Michelle Le Grande, Zoot Sims, Joe Pass. Film scoring for "Reds," "Lovesick."

◆◆◆◆ **RCA STUDIOS**

also REMOTE RECORDING  
 110 W. 44th St., New York, NY 10036  
 (212) 930-4000

**Owner:** RCA/Anola International  
**Studio Manager:** Eugene Cattani



**RECORD PLANT STUDIOS**  
 New York, NY

◆◆◆◆ **RECORD PLANT STUDIOS**  
 also REMOTE RECORDING

321 W. 44th St., New York, NY 10036  
 (212) 581-6505

**Owner:** Roy Cicala

**Studio Manager:** Mitch Plotkin, Patti Joblon

**Engineers:** Jay Messina, Kooster McAllister, Sam Ginsberg, David Thoener, Thom Panuzio, Rod O'Brien, Steve Marcantonio, Gray Russell, William Wittman, Tim Bomba.

**Dimensions of Studios:** A: 39.5 x 24.5 x 11; B: 35 x 26 x 11; C: 19.5 x 29.5 x 9.5; mix room: 16.5 x 10 x 8.

**Dimensions of Control Rooms:** 16 x 19 x 9; B: 14 x 17 x 8; C: 17 x 16 x 8; mix room: 21.5 x 20.5 x 9.

**Tape Recorders:** Ampex MM-1200, 24-track; Ampex ATR-104, 4-track; Ampex ATR-102, 2-track.

**Mixing Consoles:** A: Spectrasonics custom 30 x 16 x 24; B: API custom 40 x 16 x 24; C: API custom 32 x 16 x 24; mix room: Trident custom TSM 56 in x 24 out, Massenburg automation (48-track capability).

**Monitor Amplifiers:** Bryston amps, Crown amps, Massenburg computer system.

**Monitor Speakers:** Westlake monitors, JBL 4311s, Yamaha NS-10Ms, RORs E-3, Auratones, Burhoes.

**Echo, Reverb & Delay Systems:** (8) EMT echo plates, Space Stations, Publisons, Eventide DDLs, Audio Development delay, harmonizers.

**Other Outboard Equipment:** Extensive outboard inventory including vintage and newer equipment. Most requested limiters, equalizers, effects, and noise reduction.

**Microphones:** Large selection of Beyer, Shure, AKG, Neumann, Electro-Voice, PML, Sennheiser, RCA, Sony, various models.

**Instruments Available:** Steinway grand pianos in Studios A, B and C, Hammond organs, percussion kit, large selection of guitar amplifiers including Marshall, Fender and Gibson and Ampeg bass amplifiers.

**Video Equipment & Services:** 3/4-inch video playback only; JVC CR 6600, RM 70U controller.

**Rates:** Available upon request

◆◆◆◆ REEL HITS-RECORDING STUDIOS

15 Bridge Rd., Weston, CT 06883  
 67 Park Ave., New York, NY 10016  
 (203) 226-4200, (212) 679-5670  
 Owner: Dean and Donane Elliott  
 Studio Manager: David Head, Doriane Elliott  
 Engineers: Dean Elliott, David Hart, Doug McKean.  
 Dimensions of Studios: 28 x 20; iso booth: 20 x 12, drum room 16 x 8.  
 Dimensions of Control Rooms: 18 x 20 x 10.  
 Tape Recorders: MCI JH-24, 24-track; MCI JH-110B, 8-track; MCI JH-10A, 4-track; MCI JH-110B, 2-track; Scully 280-S, mono; Scully 280-S, 2-track.  
 Mixing Consoles: Allen & Heath Brenell Syncon A 28 x 24.  
 Monitor Amplifiers: Hafler P-500, BGW 300, McIntosh-275.  
 Monitor Speakers: Altec Lansing Big Reds, Yamaha NS-10M, Auratone.  
 Echo, Reverb & Delay Systems: Yamaha REV7, Lexicon PCM60, EMT-140s, Master-Room, Alesis XT digital reverb, Lexicon Prime Time and digital delays, Roland SDE3000, Eventide Harmonizers (2).  
 Other Outboard Equipment: (2) dbx 166 comp./limiters, (5) dbx 904s, (3) dbx 905s parametric EQ, (2) dbx 903 comp./limiters, (2) Orban 22B parametric EQ, Marshall time modulator, Eventide Omnipressor, Eventide instant flanger, (5) UREI LA-3A limiters, UREI digital metronome 964, Roland PH-830 stereo phaser, MXR digital delay, Lexicon PCM42 digital delay.  
 Microphones: Neumann, AKG, Schoeps, Sennheiser, Sony, Shure, Electro-Voice, RCA, Teledyne.  
 Instruments Available: Baldwin 7-foot grand, Hammond B-3 w/Leslie tone cabinet, (2) Fender Rhodes, Yamaha DX7, Minimoog w/MIDI, Roland JX3-P, Yamaha YC-30, Oberheim DX drum machine w/MIDI, Pearl 13-piece drum set, (8) roto toms, Zildjian cymbals, Roland MSQ-700, Deagan vibes and marimbas, various percussion instruments etc.  
 Video Equipment & Services: Panasonic AG 6300 1/2-inch deck, Panasonic NV 9300 3/4-inch deck, Sony Beta-max, Sony Trinitron monitor, BTX shadow system 4300, 4100 SMPTE.  
 Rates: Available upon request.



REEL PLATINUM STUDIOS INC.  
 Lodi, NJ

◆◆◆◆ REEL PLATINUM STUDIOS INC.

259 Paterson Ave., Lodi, NJ 07644  
 (201) 471-3464  
 Owner: Bob Allecca  
 Studio Manager: Bob Allecca, Julian Hernandez  
 Engineers: Bob Allecca, Julian Hernandez  
 Tape Recorders: MCI JH 24 w/ Autolocator III, 24-track w/16-track head stack; TEAC 80-8, 8-track w/ DX8 N.R.; TEAC A3440, 4-track w/RX9 N.R.; Technics 1500, 2-track; (2) TEAC 122 cassettes, Sony PCM F1, 2-track digital.  
 Mixing Consoles: Trident Series 80 (automated) 32 x 24 x 24  
 Monitor Amplifiers: Yamaha 2200s, 2050s.  
 Monitor Speakers: JBL 4411s, JBL 4312s, Yamaha NS-10Ms, Auratones.  
 Echo, Reverb & Delay Systems: Ecoplate III, Orban III B, (2) Lexicon Prime Time w/MEO, Lexicon PCM42/MEO, Eventide Harmonizer H949, Eventide Instant Flanger, Yamaha DI500 (2), Yamaha REV7 (2), Lexicon Model 200, Lexicon PCM70  
 Other Outboard Equipment: 26 channels dbx noise reduction, Kepex IIs, dbx 900 signal processing rack, gates, compressors de essers, (2) dbx 160 compressor/limiter, Orban 622B parametric EQ, TEAC GE-20 graphic EQ, Symetrix noise gates, White 1/3 room EQ.  
 Microphones: Neumann U87; AKG 414s; Sennheiser

—LISTING CONTINUED ON NEXT PAGE

# studio consultants, inc.

321 West 44th Street, New York, NY 10036 (212) 586-7376

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# BRYSTON

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Circle #145 on Reader Service Card

441s, MD 421s, E-V RE-20, RE-15s, 635As, Beyer 201N, Shure SM57

**Instruments Available:** Yamaha acoustic piano, Fender Rhodes, Korg Poly-6, Yamaha DX7, Pro one, Yamaha JX50B amp, full set of Tama drums, percussion, congas, wood blocks, cowbells, etc. Commodore 64, MIDI interface, Roland SBX 80, DMX digital drum machine, Yamaha RX11 digital drum machine, Roland MSQ 700, Apple IIe, DX Pro (voice library), Akai S-612 sampler, Akai MD280 disk drive, Passport MIDI 8 Plus, music data, Korg super percussion, Mini Doc

**Rates:** Call (block rates available)

**Extras:** We offer in house production, arranging, lead sheets, full keyboard and drum machine programming



**REGENT SOUND STUDIOS, INC.**  
New York, NY

•••• **REGENT SOUND STUDIOS, INC**  
1619 Broadway, New York, NY 10019  
(212) 245-2630

Owner: Robert Lufkin

Studio Manager: Sandi Moroff, Scott Schumer

Engineers: Jeffrey Peterson, Bob Lufkin, John Alberts, David Browning, Jimmy Liten, Richard Fairbanks, Ralph Kelsey, Mark Partis, Danny Lawrence, Karen Robben, Michael Ruschak, Gary Solomon, Michele Wasserman, Chris Folberg, Maintenance Lew Whittier, Peter Fine, Kevin Kadel, Larry Gilbert

**Dimensions of Studios:** A: 50 x 24; B: 28 x 30; C: 23 x 14, D: 17 x 19

**Dimensions of Control Rooms:** A: 21 x 19; B: 19 x 16; C: 20 x 21; D: 13 x 15

**Tape Recorders:** Sony 3324 digital 24 track, (2) Ampex ATR 124, ATR 116, (5) MM1200 w/PURC and rehearse functions, (3) ATR 104, (6) ATR 102, (4) ATR 700, 440 modified Mono Nagra TEAC 40 4, Magna Tech 16/35mm mag dubber, Aiwa cassette decks, Nakamichi 500 cassette deck, (3) Nakamichi MR1

**Echo, Reverb & Delay Systems:** Audicon Plate, (2) Lexicon 224, AKG BX 20, MICMIX Master Room, Klark Teknik DN780

**Other Outboard Equipment:** Lexicon DDLs, Prime Time, Teletonix LA-2A, Pultec EQH2, 360 programmable EQ, UREI LA4, Aenque EQ, Kepex 2, Eventide Harmonizer, Audio Designs selective limiter, Orban parametric, UREI LA3A limiter, UREI Little Dipper, programmable Autolad, etc.

**Microphones:** Neumann U87s, U89s, M49s, KM84s, ATM21, RCA 77DXs, Sennheiser 421s, 441s, Shure SM7s, SM57s, D 12, AKG 414s, KM86; E V RE15s, RE16s, RE20, RE55s, CS15s; AKG 451, Sony ECM50s, etc.

**Instruments Available:** Fender Rhodes, Steinway and Yamaha grand pianos, Hammond B 3, drums (2 sets), tympani xylophone, vibes, celeste, congas bongos, orchestra bells, misc. percussion.

**Video Equipment & Services:** (3) EECO MQS 103A w/UART Convergence 104, (3) BTX Shadow (2) Ampex VPR 2 w/Dolby, VPR-80, (4) JVC B250, (2) 8200, (2) Sony BVU 800 DB (2) 2860, Sony Digital PCM1610, PCM10, F1 EECO time code generator, time code reader, data metrics and ESSE character generators, Contrac and Sony video monitors, (2) Ampex Synclock, (2) Ampex VPR 6, (2) Sony BVW800 HB, (2) Tektronix waveform monitors and Vector scopes, (2) Time Line Lynx CompuSonic DSP 2000

**Rates:** A/V computer controlled recording, mixing and sweetening \$225/hr, 8, 16, 24 track recording \$200/hr, 8, 16, 24 track mixing \$180/hr, 16/35mm mag \$65/hr, sound effects preparation and copy room \$50 ADR looping \$150/hr. Call for other rates

•••• **REMOTE MEN VISUAL MUSIC ENT**  
also **REMOTE RECORDING**  
P.O. Box 791, Flushing, NY 11355  
(718) 886-6500

Owner: Steven Remote

Studio Manager: Steven Remote

## NORTHEAST STUDIOS



## 24 TRACK

•••• **REMOTE RECORDING SERVICES, INC**

only **REMOTE RECORDING**

20 Kennedy Parkway, Monsey, NY 10952

(914) 425-8569

Owner: David Hewitt

Studio Manager: Phil Gitomer

Engineers: David Hewitt and friends

**Dimensions of Studios:** Black truck 36 x 8 x 13

**Dimensions of Control Rooms:** 24 x 8 x 9

**Tape Recorders:** (2) Ampex 1200, 24-track, (2) Sony (extra cost option) 3324 digital, 24 track; Sony (extra cost option) 1610 PCM, 2 track, (2) Sony (extra cost option) BVU 800, 2-track; Sony (extra cost option) PCM701, 2-track

**Mixing Consoles:** API custom from factory 44 x 44, API (extra cost option) 1604 16 x 4.

**Monitor Amplifiers:** Bryston 4Bs

**Monitor Speakers:** Custom Westlakes, Auratones, NS-10Ms, MDM 4s, others available

**Echo, Reverb & Delay Systems:** Ursa 8 x 32, Lexicon PCM60, others available

**Other Outboard Equipment:** 560EQ on all channels, (4) UREI 1176 limiters, (4) UREI LA-3A limiters (modified for API), (2) API 525 limiters, (2) Dynafex, others available

**Microphones:** Neumann, U87s, AKG D-12 414, 452, systems (CK-5s, VR-1s etc.), Sennheiser 421, 441, 416 404, PZMS and lavs, Shure 57, 58, 78, 81, 85, Beyer 88, 160, 500, E V RE20, RE15

**Video Equipment & Services:** Video interface patchbays, humbuck coils, U drive shapers, time code readers and distribution system, audio DAs for video, Tektronics, scope monitoring sync, color camera for stage CCTV, (2) 19 inch monitors

**Rates:** \$3,000/day, \$1/mile base rates

•••• **RIGHT TRACK RECORDING**

168 W 48th St., New York, NY 10036

(212) 944-5770

Owner: Simon Andrews

Studio Manager: Mark Harvey

•••• **ROADWAY RECORDERS INC**

also **REMOTE RECORDING**

104 N. Ashby Ave., Livingston, NJ 07039

(201) 533-9074

Owner: Richard Dior

Studio Manager: Richard Dior

•••• **ROCKIN' REEL RECORDING STUDIOS**

636 Larkfield Rd., East Northport, NY 11731

(516) 368-5689

Owner: David Greenberg

Studio Manager: Devera Lynn

Engineers: David Greenberg, Bob Lessick, Sal Ciampini, Tom Schizzano

**Dimensions of Studios:** 25 x 30 w/enclosed drum booth, 3 additional iso booths

**Dimensions of Control Rooms:** 22 x 19

**Tape Recorders:** Otari MTR 90, 24 track, Ampex ATR 102 (1/2, 3/4-inch), 2-track, Mitsubishi digital 2 track available, Tascam 122B, cassettes

**Mixing Consoles:** AneK/TAC matchless (large frame), 36 I/Os w/subgrouping 24 outputs

**Monitor Amplifiers:** UREI 6500s w/compensation net work, BGW 750, BGW 600, BGW 50A

**Monitor Speakers:** UREI 813B Time Aligned, Yamaha NS-10M, Auratones JBL 4312s, JBL 4311s Pyramids

**Echo, Reverb & Delay Systems:** Lexicon 224, Lexicon PCM70, Yamaha REV7, Ecoplate plate reverb, Lexicon Prime Time, Lexicon PCM41s, Lexicon PCM42s, DeltaLab 1024s

**Other Outboard Equipment:** Allison Kepex and Gain Brains, B&B audio CX1 compressor/noise-gates, dbx 900 series compressor/limiters/de-essers/parametric EQs, UREI 1176 peak limiters, UREI 1176LN peak limiters, Eventide Harmonizer, UREI 537 32 band graphic EQs, dbx noise reduction (24 track), Ashly parametric notch filter, UREI parametric notch filters

**Microphones:** Neumann U89s, U87s, U4/FETs; KM84s, KM88s, AKG 414s, 451s D 12, Sennheiser 421s, 441s, E V

FE2Cs, RE15s, E V RE55s, RE10s, Beyer M160, Shure SM57s, SM58s, Sony C37, RCA 77DX.

**Instruments Available:** (2) Steinway grand pianos, Hammond B3, Korg PL53200, DX7 Synergy, Emulator II, Synclavier, drums: Rogers, Ludwig, LinnDrum; guitar amps: Mesa Boogie, Roland Jazz Chorus, Gallien-Krueger, Fender pre-CBX, Acoustic guitar and bass amps.

**Video Equipment & Services:** Video available

**Rates:** Rates available upon request, open 24 hours

•••• **RPM SOUND STUDIOS INC.**

12 E. 12th St. 11th Fl., New York, NY 10003

(212) 242-2100

Owner: Robert Paul Mason

Studio Manager: Debra Sue Rebhun



**SABELLA STUDIOS**  
Roslyn Heights, NY

•••• **SABELLA STUDIOS**

49 Oakdale Rd., Roslyn Hts. LI, NY 11577

(516) 484-0862

Owner: James Sabella

Studio Manager: James Sabella

Engineers: Jim Sabella, Jon Kirg, Robert Stancott, Bob Bellis

**Dimensions of Studios:** 17 x 22, design by Frank Comentale

**Dimensions of Control Rooms:** 14 x 16, design by Frank Comentale

**Tape Recorders:** MCI JH114, 24 track, Ampex AG 350, 2, 4 track, Technics M65 cassette, 2 track, MCI JH110B, 1/2 inch track mixdown 30 ips

**Mixing Consoles:** Tangent 3215 42 in x 24 out, with modified EQ and solo.

**Monitor Amplifiers:** David Hafler 500, Crest power amps.

**Monitor Speakers:** Big Reds w/special construction, design and Master Lab crossovers; Auratone 5C; KEF

**Echo, Reverb & Delay Systems:** Lexicon 200 w/new programs, Bel Delay, EMT 140 modified by G. Hanks, DeltaLab DDL 1, Prime Time model M93, Da/Dad stereo taped delay, Deitalab, EMT gold 1240, Lexicon PCM70, REV7, Neumann limiters, (6) Drawner gates.

**Other Outboard Equipment:** Universal Audio 1176s, Universal Audio 175Bs, tube limiting amplifiers, Pultec EQP1Rs, Pultec EQH2s, dbx 155s, dbx 160s, Roger Mayer noise gates, Eventide DANGER Systems Design vocal pitch changer, LXR Exciter.

**Microphones:** Neumann U67 tube, U87s, U47 tube, KM84s, KM86, Beyer M88s, M150s, Beyer Sound Star, AKG D12, 452s, 414s; Sony C37As tube; Sennheiser 421s, Shure SM57s, 58s, E V RE20s, U67s, M49s, KM86s.

**Instruments Available:** Drums, keyboards, OB Xa, guitar amps, Fender, Hiwatt, Marshall, Fender Strat, Gibson Les Paul, Fender bass, Rickenbacker guitar, DX7, OB 8, programming for all keyboards, LinnDrum, DX drums.

**Video Equipment & Services:** JVC 1/2 inch

•••• **HOWARD SCHWARTZ RECORDING**

also **REMOTE RECORDING**

420 Lexington Ave Ste 1934, New York, NY 10170

(212) 687-4180

Owner: Howard M Schwartz

Studio Manager: Michael D Laskow

Engineers: Howard Schwartz, Roy Latham, Richie Becker, Joe Jagnoni, Michael Laskow, Larry Frank, Michael Ungar

**Dimensions of Studios:** Too numerous to mention

**Dimensions of Control Rooms:** Too numerous to mention

**Tape Recorders:** Sony digital 3324 24 track (6) MCI JH 24 24-track, (15) MCI JH110, 4 2-track, mono; (3) Scully J2, 4 2 track, mono, (2) Studer 820, 2-track, time code

**Mixing Consoles:** Solid State Logic SL 6000E 48 x 24, MCI 556 56 x 24, MCI 428 28 x 24

**Monitor Amplifiers:** Crown Delta Omega, Crown PSA 2, Crown DC-300, Crown D150A, Haller M500; McIntosh 2300, Sound 80.

**Monitor Speakers:** UREI 813, Altec 604E, JBL 4311, Visonik 803, Auratone.

**Echo, Reverb & Delay Systems:** EMT 140s, EMT-250, EMT-240, Lexicon 224, Lexicon PCM70, Lexicon PCM60, Lexicon PCM42, Lexicon Prime Time, Lexicon Delta T, AKG BX20, Marshall time modulator.

**Other Outboard Equipment:** Pultec EQ, Orban EQ, Trident EQ, Valley People EQ and gates, dbx 160x, dbx 165, Teletronix LA2A, Eventide Harmonizer, Eventide flanger, EXR Exciter, UREI 1176, Valley People Dyna-Mites.

**Microphones:** Neumann U87, U47, KM86, KM84, AKG-C414, AKG D-12, Sennheiser 441, Sennheiser 421, Shure SM81, Shure SM57, RCA 77, RCA 44.

**Instruments Available:** Steinway grand piano, Fender Rhodes, Yamaha drum kit, Roland, Fender amps.

**Video Equipment & Services:** One-inch video, 3/4-inch video interlock w/NEC/T8000 one-inch machines, Sony BVU870 3/4-inch, JVC 8250, Adams-Smith, EECO synchronizers, Videotek monitors, EECO and Sony time code generators, extensive custom interface capabilities with all formats of time code, video and sync. Magna-Tech film dubbers, Nagra IVS TC.

•••• SECRET SOUND STUDIO

also REMOTE RECORDING  
147 W. 24th St., New York, NY 10011  
(212) 691-7674

Owner: David Wilkes, Danny Weiss, Bob Saldenberg, Claude Demers.  
Studio Manager: David Wilkes

•••• SELECT SOUND RECORDING STUDIO

also REMOTE RECORDING  
2315 Elmwood Ave., Kenmore, NY 14217  
(716) 873-2717

Owner: William A. Kothen, Peggy K. Kothen  
Studio Manager: Churck Mandrell, Richard G. Bauerle

•••• SERVISOUND

35 W. 45th St., New York, NY 10036  
(212) 921-0555

Owner: Michael Shapiro, Christopher Nelson, Diane Ehrlichman.

Studio Manager: David Teig

Engineers: Stewart Small, Chuck McDaniel, Ralph Jones, Kim Stanley, Rob Hunter, Rick Elliter, maint.

**Tape Recorders:** Otari MTR-90, 24-, 16-track; (2) Otari 7800, 8-track; Otari MX 5050, 4-track; Otari MX 5050, 8-track.

**Mixing Consoles:** MCI 618, 18 in x 8 out; Syncon, 28 in x 28 out; Audiotronics, 24 in x 8 out.

**Monitor Amplifiers:** Crown, McIntosh.

**Monitor Speakers:** JBL 4311s, JBL 4401s

**Echo, Reverb & Delay Systems:** Ursal Major Star Gates/Space Station, Eventide Harmonizer.

**Other Outboard Equipment:** dbx compressors 160/160X Orban de-essers, dbx noise reduction, KepeX, Sony PCM 501ES, Dolby A, Gentner phone patch system.

**Microphones:** Neumann U47s, U67s, AKG 414s, 140Es, C451s; Sennheiser 441s, 421s.

**Instruments Available:** Yamaha DX7, Roland JP3/Jupiter 8, CMI Fairlight, LinnDrum, Emulator Drum, Steinway grand piano, Korg Poly-600, Kurzweil 250.

**Video Equipment & Services:** (4) BTX video interlocks, (4) JVC CR-8250U machines, JVC/Sony monitors, (4) video sweetening rooms and voice-to-picture, 8-, 16-, 24 track-to-video, layback to Studer one-inch video layback.

**Direction:** ServiSound is a one-stop post-production recording facility featuring video-sync scoring and mixing, original composition, including a fully equipped digital composition studio with Fairlight CMI and Yamaha DX7 synthesizers, performance and dubbing to picture, with a full complement of 24-, 16-, and 8-track mixing studios for the production of slide, multimedia, A/V, film and video soundtracks. ServiSound also has the latest and one of the most complete music and sound effects libraries available, as well as the award-winning talents of film and video score composer Michael J. Shapiro. ServiSound handles all post-production sound requirements, from narration and editing, to scoring, mixing and duplication in the final medium, also the addition of a one-inch audio mixing studio "F" to meet demand.

•••• SHAKEDOWN SOUND

222 W. 37th St., New York, NY 10018  
(212) 947-9170

Owner: Arthur Baker

Studio Manager: Jefferson Chitouras

Engineers: Jay Burnett, Alan Meyerson, Dave Ogrin, Andy Wallace.

**Tape Recorders:** (2) Otari MTR-90, 24 track, MCI 24 track; (2) Ampex ATR 1/2 inch, 2 track; MCI JH 110A 1/2-inch 2-track

**Mixing Consoles:** SSL 4000E 56, Trident Series 80 32

**Monitor Amplifiers:** Bryston, Crown

**Monitor Speakers:** UREI 813Bs, Electro-Voice Sentry 100s, Yamaha NS-10s.

**Echo, Reverb & Delay Systems:** Lexicon 224XL, Sony DRE 2000, EMT 240 plate; (2) Yamaha REV7, MXR digital reverb, Eventide Harmonizer, AMS MXR, Lexicon and Bel digital delays (15 delays).

**Other Outboard Equipment:** (8) channels Neve EQ, (12) KepeX, Gain Brain and Dyna-Mites, (2) Pultec EQs, (2) LA-2As, (4) dbx 160X; Drawmer compressors and gates, Aphex Compellor, MXR, White and Orban EQs, Panscan Dimension D

**Microphones:** Neumann, AKG, Shure.

**Instruments Available:** Yamaha 6-5-foot grand piano, Emulator II, DX7, TX816, Prophet T 8, Juno 60, Oberheim OB-8, Prophet Pro-1, Casio CZ 101, Memory Moog, Oberheim DMX, DSX sequencer Roland TR 808, Dr. Click, Yamaha QX 1 sequencer.

Rates: Beyond reasonable

•••• SHEFFIELD AUDIO VIDEO PRODUCTIONS

also REMOTE RECORDING  
13816 Sunnybrook Rd., Phoenix, MD 21131  
(301) 628-7260

Owner: John Anosa Jr

Studio Manager: Richard Van Horn

•••• SHELTON LEIGH PALMER & CO.

360 E. 57th St., New York, NY 10022  
(212) 980-3445

Owner: Shelton Leigh Palmer

Studio Manager: Eric Hurtig

•••• SIGMA SOUND STUDIOS

also REMOTE RECORDING  
212 N. 12th St., Philadelphia, PA 19107  
(215) 561-3660

Owner: Joseph D. Tarsia

Studio Manager: Margie Dixon

**Direction:** Up to 46 track audio recording for music, ad vertising, corporate and industrial clients. Audio post-production for video with up to 24 track recording. 24 track remote recording.

•••• SIGMA SOUND STUDIOS OF NEW YORK

1697 Broadway, New York, NY 10019  
(212) 582-5055

Owner: Joe Tarsia

Studio Manager: Hank Meyer

Engineers: Jim Dougherty, John Convertino, Glenn Rosenstein.

**Dimensions of Studios:** 5 35 x 25, 7 40 x 25, 6 (edit) 15 x 15, 8 15 x 15

**Dimensions of Control Rooms:** 5 20 x 25, 7 20 x 25, 6 (edit) 15 x 15, 8 20 x 25

**Tape Recorders:** (4) Studer A800 MKIII, 24-track, (4) Studer A820, 2 track, (6) Ampex ATR 100, 2, 4 track, (2) Otari MTR 90 II, 24 track, (4) 3M M64 2-, 4-track, Magna-Tech Type 43, Mag Dubber.

**Mixing Consoles:** Solid State Logic 6000E 40 x 40, Solid State Logic 6000E 64 x 48, Neve 8078 52 x 52

**Monitor Amplifiers:** Crown PSA 2

**Monitor Speakers:** Big Reds, Foxtex IS 3Ds, Yamaha NS 10s, E V 100s, RORs, Auratones, JBL 4311s, MDM 4s, Visonik, etc.

**Echo, Reverb & Delay Systems:** EMT 140s, EMT 240s, EMT 250, AMS DMXs, AMS RMXs, Lexicon 224 XLs, Lexicon 224s, Lexicon 200s, Lexicon PCM70s, Lexicon PCM 42s, Yamaha REV7s, Lexicon Prime Time IIs, Harmonizer 949s and much more.

**Other Outboard Equipment:** Timeline Lynx, BTX 4500, Audio Kinetics Q Lock, Roland SBX-80, Dr. Click Panscan, Drawmer gates, LA-2As, LA 4s, dbx 160s, KepeX IIs Pultec, Gain Brains 1176s and many more.

**Microphones:** All models of Neumann, AKG, Shure, PZM, RCA, Beyer, B&K, Altec and Telefunken microphones.

**Instruments Available:** Yamaha, Tama Ludwig Pearl and Hayman drum kits, Yamaha and Steinway grand pianos, Marshall, Fender, Ampeg, Music Man and Mesa Boogie amplifiers, Fender Rhodes, Wuritzer and Hohner Clavinet keyboards, a full collection of percussion and Linn and Roland drum machines.

**Video Equipment & Services:** Full sound to picture service including SMP/E interlock (Lynx, BTX and Q Lock), 60 Hz sync lock and full mag dubbing. Video-playback on JVC 8200 and 8250 1/2 inch with Sony video monitors.

Rates: Available upon request

Left Out?

Every month, Mix publishes listings of vital services and facilities for the recording industry. To be included in a Mix Directory, write or call: Lauri Newman, Mix Listings, 2608 Ninth Street, Berkeley, CA 94710, (415) 843-7901.

LOGICAL AUDIO

ANDREW B. SURFER

330 W. 56th ST. #118

NYC, NY. 10019

212-957-3242

New York's Two Fisted Approach  
To Studio Design And Maintenance

SURFER /ser-fer/ 1.president, LOGICAL AUDIO  
2.former chief engineer THE HIT FACTORY,  
ELECTRIC LADY, COUNTERPOINT STUDIOS  
3.senior technician MARTIN AUDIO  
4.a strange animal that is commonly found  
under or behind some piece of audio gear  
5.housebroken and sometimes friendly

MAGUIRE/mag-wire/1.pres., TMI ENGINEERING  
2.maintenance & management RPM SOUND  
3.chief engineer COUNTERPOINT STUDIOS  
4.a large friendly animal found working  
under huge mountains of test equipment  
5.very rare, a true collectors item

TMI ENGINEERING

THOMAS L. MAGUIRE

415 W. 55th ST.

NYC, NY. 10019

212-969-9494

Circle #146 on Reader Service Card



**SKYELABS, INC.**  
Dover, DE

•••• SKYELABS, INC., "The Mobile Recording Unit" only REMOTE RECORDING  
58 W. Tidbury Dr., Dover, DE 19001  
(302) 697-6226  
Owner: Skyelabs, Inc.  
Studio Manager: Bob Skye  
Engineers: Bob Skye, independents of your choice.  
Dimensions of Studios: 18 x 8 plus lounge housed in GM PED 4106 diesel coach  
Tape Recorders: (2) Otari MTR 9011, 24 track, (2) Otari MKIII 2, 2 track; Technics RS-1500, 2 track, (2) Tascam 122 B cassette decks  
Mixing Consoles: Sound Workshop Series 30 32 in x 24 out; Sound Workshop 1280 B 12 in x 8 out  
Monitor Amplifiers: Phase Linear, Crown  
Monitor Speakers: UREI 811A, Auratone  
Echo, Reverb & Delay Systems: Lexicon PCM 60 digital reverb, MICMIX XL 305 reverb, DeltaLab DL 4 delay  
Other Outboard Equipment: LA 3s, Gain Brain IIs, Dyna-Mites, Delta graph EQ, UREI EQ, Advent tuner for "off air" monitoring, headphone amp in lounge for overdubs.  
Microphones: Sennheiser, AKG, Sony, Shure, E.V., Countryman  
Interface Equipment: 500 feet of 40 x 4 audio snake with (2) Jensen Transformer isolated splits, 400-foot of main power cable RTS communications system. AC requirements 50A single phase 220V. The Mobile Recording Unit is equipped with high grade power regulation, filters, suppression, and isolation equipment to insure that the faults of the outside world never become part of your project.  
Video Equipment & Services: Color monitor and camera for CCTV or video-feed interface  
Rates: Please call or write for details on rates.  
Extras: Skyelabs is a certified LEDE control room. It features a room EQ response that surpasses most in-house studios. Please call or write for more information on room specs. We're glad to share them with you  
Direction: The key philosophy in The Mobile Recording Unit's design was to create a mobile acoustical environment that was easily understood by its users. Not only do we feel that you will no longer have to ask yourself the old question, "What am I listening to?," we believe you will be very comfortable with the accuracy and versatility in recording and mixing with Skyelabs

•••• SKYLINE STUDIOS, INC.  
36 W. 37th St., New York, NY 10018  
(212) 594-7484  
Owner: Paul Wickliffe III, Lloyd P. Donnelly  
Studio Manager: Jimmy English  
Engineers: Paul Wickliffe III, Roger Moutenot, Scott Ansell, Knut Bohn, Francis Manzella, Mark Genfan, Barbara De Mauro, Tom Durack  
Dimensions of Studios: 30 x 30 x 13 plus 2 iso booths.  
Dimensions of Control Rooms: 25 x 20 x 10.  
Tape Recorders: Studer A80 MKIII, 24-track; Studer A80 MKIII 1/4-, 1/2 inch, 2 track; Studer B 67, 2 and full-track mono, Ampex ATR 102 1/4 inch, 2 track, Ampex 440-B 1/2 inch 4-track, Technics 1500 1/4 inch, 2 track, (4) TEAC CC 3RX cassette recorders  
Mixing Consoles: Solid State Logic SL4000E 56 ch. main frame w/48 ch. total recall  
Monitor Amplifiers: (2) Yamaha 2200, McIntosh 2100.  
Monitor Speakers: UREI 813 (custom enclosures), Yamaha NS 10s, Celestion 100s, E.V. Sentry 100s, AR 18s, Aura tones, HOR cubes.  
Echo, Reverb & Delay Systems: (2) EMT 140 plates, Lexicon 224x digital reverb; Delays Lexicon Prime Time II, Lexicon PCM41, Marshall time modulator, Marshall Tape Eliminator, Ellectron II Cooper time cube, Roland RE-501, (2) Eventide 949 Harmonizers, Eventide instant flanger Compu Ellectron Reverbs EMT 240 Gold Foil, Yamaha REV7 AMS HMX ib Quantec QRS Delays AMS DMX 15 80S, PCM42.

## NORTHEAST STUDIOS

# 24 TRACK

Other Outboard Equipment: 28 channels Dolby A, (5) Neve 3-band EQ, (2) Pultec EQ-Pis, Pultec MEQ-5, Lang PEQ-2, (2) API 550As, (4) API 560s, UREI 546 4-band 2 ch. parametric, (2) Neve compressors/limiters, LA-2, (2) UREI 1176s, (2) dbx 160Xs 2 ch. A&D Gemini Easy-Rider, (4) Kepex IIs, (2) Drawer noise gates, (2) Valley People Trans-amps, UREI digital metronome.

Microphones: Neumann: (2) U67s, (2) U47 tubes, (2) U47 FETs, M49, (2) KM84s, (4) U87s; AKG: (4) 451s, (4) 414s, (2) D12s, (2) 202s; Sennheiser (4) 421s, 441, 815 shotgun, Shure: SM81, (3) SM57s, (3) SM58s, SM545; Sony: ECM 22P, ECM 33, C37P, 37A tube; E.V.: RE-20, RE-15, (2) 666s; Beyers: (2) M88s, (2) M160s; RCA: (2) 77 DXs, 44; Altec 688B, (2) "salt-shakers."

Instruments Available: Steinway B grand piano C. 1896 (rebuilt), Fender Rhodes suitcase 73, Hammond C-3 w/Leslie speaker, Oberheim OB-8; Yamaha recording series drum kit w/3 snares and (5) toms plus K Zildjian cymbals, LinnDrum; Fender, Marshall and Ampex guitar and bass amps, Roland JC-120 amp, Synclavier II, Emulator II.

Video Equipment & Services: JVC 1/4-inch VTR w/26 inch monitor.

Rates: Available upon request

Extras: Our 5,000 sq. ft. facility includes a large comfortable lounge and producer's office. Digital recording and Synclavier pre-production are readily available to our clients.

Direction: Our clients include: Nile Rodgers, Thompson Twins, Sheena Easton, Philip Bailey, Laurie Anderson, Rick Derminger, Mason Ruffner, Ahmad Jamal, Lou Reed, Grand master Flash, Bonnie Tyler, Michael Franks, The Spinners, Shannon, Barry Manilow, Bronski Beat, Judy Collins, Steve Forbert, Air Supply, John Cale, The Bongo's, Burning Spear, Steps Ahead, The Manhattan's, Special FX, Dizzy Gillespie, Lillo Thomas, Mark Egan, Joe Piscopo, The Nails, Richard Thompson, Robert Duvall, Ray Goodman and Brown

### •••• SLEEPY HOLLOW SOUND INC.

also REMOTE RECORDING  
39 Cedar St., Dobbs Ferry, NY 10522  
(914) 693-8537  
Owner: Mark Friedman  
Studio Manager: Mark Friedman

### •••• SONALYSTS AUDIO STUDIO

215 Parkway No., Waterford, CT 06385  
(203) 442-4355  
Owner: Sonalysts, Inc.  
Studio Manager: Rob Rainwater

### •••• SONGWRITERS STUDIO

5819 Dade, Capitol Heights, MD 20743  
(301) 350-5872

Owner: Carla Hattley, Curtis R. Hattley  
Studio Manager: Michael S. Brown, Howard Covington Jr.

### •••• SONIC IMAGES, INC.

also REMOTE RECORDING  
4590 MacArthur Blvd. N.W., Washington, D.C. 20007  
(202) 333-1063

Owner: John Ramo, Zenon Slawinski, Jolie Barbieri  
Studio Manager: John Ramo, Zenon Slawinski  
Engineers: John Ramo, Zenon Slawinski, Bob Skye, Peter Ramo.

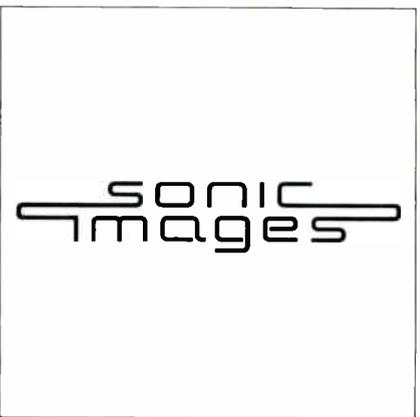
Dimensions of Studios: 350 sq. ft.

Dimensions of Control Rooms: A. 300 sq. ft., B. 100 sq. ft.  
Tape Recorders: MCI JH24, 24-track; (2) Otari MTR-10, 2-, 4-track; (2) Otari MKIII-5050, 2-track; Otari 5050B, 2-track; Sony PCM-F1, 2-track; (2) Nakamichi B-1, 2-track; Otari 5050, 8-track.

Mixing Consoles: NEOTEK Series II, 28 x 24; Sound Workshop Logex Series, 20 16.

Monitor Amplifiers: Yamaha, Crown, Bryston.

Monitor Speakers: KEF 104 2s, 103 2s, 101s.  
Echo, Reverb & Delay Systems: Yamaha REV7s, MXR, Lexicon, MICMIX.



**SONIC IMAGES, INC.**  
Washington, D.C.

Other Outboard Equipment: Symetrix comp/lims, Gair Brains, Dyna-Mites

Microphones: Neumann, E.V. Shure, Crown, AKG, Sennheiser, Audio-Technica, Sony

Instruments Available: Kurzweil 250 w/sampling and MacAttach, Yamaha DX7 w/extensive library, Roland GR-700 guitar synth, Roland Juno-6, MSQ-700 sequencer, ARP Axxe.

Video Equipment & Services: Sony 1/4-inch and 1/2-inch off line editing facilities. Complete multi-room 24-track audio/video synchronization for dialogue replacement audio enhancement, sweetening with frame accuracy.  
Rates: Fully-synchronized A/V Q.Lock mix \$130/hr, 24-track \$100/hr., 8-track \$60/hr.

Extras: Sonic Images specializes in award-winning music productions for all A/V presentations. All styles and techniques are used from solo instruments to orchestral scores. Working in a certified LEDE controlled environment with a design by Neil Muncy insures you the most accurate audio image available today. With the latest audio/video synchronization tools on hand, we can offer you show the highest quality audio production at affordable prices.

Direction: Our award-winning video team produces a wide range of programs from TV spots and PSAs to art films and documentaries. We also offer 16 and 35mm film animation and art production. Call us for a bid on your next project whether it be music, a script, talent or the complete presentation. You'll like what you'll hear.



**SONIC SOUND RECORDING STUDIOS INC.**  
Freeport, NY

•••• SONIC SOUND RECORDING STUDIOS INC.  
292 Locust Ave., Freeport, L.I., NY 11520  
(516) 223-2788

Owner: Al Falcon, Gerry Comito  
Studio Manager: Pamela Matheson  
Engineers: Artie Ware, Al Falcon, Denny McNerny, Gerry Comito, Chris Bubacz and freelance engineers  
Dimensions of Studios: A. 25 x 14; B. 28 x 20, live room: 22 x 14

Dimensions of Control Rooms: A. 18 x 14; B. 12 x 9.  
Tape Recorders: TEAC/Tascam 80 8, 8 track, Ampex ATR 102 1/2- and 1/4-inch, 2-track, Technics RS 1500 US, 2 track; Otari DP 40 50 OCF hi speed duplicator; Studer A80 VU MARK IV, ATR 102, 2-track; (2) Nakamichi MHI cassette decks.

Mixing Consoles: A. Trident Series 80 32 x 24; B. Sound Workshop Series 30 24 x 24 x 8

Monitor Amplifiers: A. UREI 6500, (2) Carver PM 1.5s w/JBL 5234 crossover, (2) Crown 300, B. McIntosh 2200, Crown 300

**Monitor Speakers:** A: JBL 4430, Yamaha NS-10, IBL 4301, Auratones; B: JBL 4333B, Yamaha NS-10, Auratones, Fostex RN 780s, AR18B, Fostex RN 780s.

**Echo, Reverb & Delay Systems:** Lexicon Prime Time, Lexicon Delta 92, DeltaLab DL4, DL1, (4) Loft 440s, (2) Ecoplates, Master Room, Super C reverb, 8 x 32 Ursa Major digital reverb, Lexicon 224X, Quad 8 system 5, EMT 140 tube plate, Lexicon PCM60, Lexicon Prime Time II, Roland 3000 and 1000 digital delays.

**Other Outboard Equipment:** (2 racks) dbx 900 series—compressor/limiters, parametric EQs, noise gates, de-essers, flangers, dbx 165s, Orban de-esser 526A, MXR pitch transposer, EXR Exciter, (4) Drawmer noise gates, (2) Teletronix LA-2A tube limiters, UREI LA4s, Pultec EQs, Tube-tek EQ.

**Microphones:** 70 different mics including Neumann, AKG, Electro-Voice, Sennheiser, Audio-Technica, Shure, Telefunken U47 tube, Sony tube, PZM.

**Instruments Available:** Oberheim, Moog, Kawai, Linn, Marshall HH, Mesa Boogie, Gallien Krueger, Fender, Rhodes, Hammond, Ludwig, Simmons drums, Ensoniq Mirage, Simmons EPB Eprom blower and sampler, Roland MSQ 700 sequencer

**Rates:** On request.

◆◆◆◆ **SORCERER SOUND**

also **REMOTE RECORDING**  
19 Mercer St., New York NY 10013  
(212) 226-0480

**Owner:** Acoustics, Inc

**Studio Manager:** Vera Besen

**Engineers:** Dave Avidar, Marion Salvati, Robert Derby, Bob Kuttruf, Douglas Rice.

**Engineers:** A: 17 x 27 w/13 ceiling, B: 24 x 52 w/25 ceiling

**Dimensions of Control Rooms:** A: 15 x 22, B: 18 x 22, D: 15 x 12.

**Tape Recorders:** Studer A 800, 24-track; Studer A-80, 24-track; Studer A-80, B67, 1/2, 1/4 inch 2-track; MCI JH-114, 24-track; MCI JH-110B, 2-track; (4) Technics 1500, 2-track; (2) Tascam 80-8, 8-track.

**Mixing Consoles:** Neve w/automation 62 x 32, Acoustilog GB-1, 32 x 24, Acoustilog GB-2 28 x 16.

**Monitor Amplifiers:** Phase Linear, BGW, SAE.

**Monitor Speakers:** Altec, UREI 604s (biamped), Yamaha NS-10M, ROR B, ROR G, ROR E3, ROR D.

**Echo, Reverb & Delay Systems:** Lexicon 224 x w/LARC, Lexicon 224, PCM60s, PCM42s, Prime Time II, Prime Time, H949 Harmonizers, Publison, DHM89s, Lexicon, Delta T, DeltaLab DL1s, Publison keyboard, (2) EMT 140 stereo plates.

**Other Outboard Equipment:** Dolby and dbx on all machines, UREI and ROR EQs, many Kexep IIs and Gain Brain IIs, Pultecs, LA-2A, dbx 162, 164, UREI metronome, Acoustilog image enhancers, Dynatex, Panscan, API EQs.

**Microphones:** AKG 414, 451, 224, D160, D12, D310, D320, D330, C535, C33, C34, C422, AKG stereo mics, Sony C22, C37, Neumann U87, U47 (tube), KM84, Beyerdynamic M160, Sennheiser 421, 441, Shure SM57, 58, 545, RCA 77-DX, E-V RE-15, RE-16, RE-20, DS35, 664, PZM.

**Instruments Available:** Steinway B (7-foot), Yamaha DX7, TX816 rack, CX5M, RX-11, Roland JX-8P, Super Jupiter, SBX-80, CZ-101, LinnDrum, E-mu SP-12 sampling drums, Roland Octapads, Syntech sequencing, Prophet 2000 sampler, Prophet 5, Fender Rhodes, Dr. Click, Mesa Boogie and many Fender amps, Tama and Slingerland drums, Hohner clavinet, Hammond organs/Leslies.

**Video Equipment & Services:** Sony BVU-200A, Lock-up w/audio machines (SMPTE)

**Rates:** Call for rates.

◆◆◆◆ **SOUND HEIGHTS RECORDING STUDIOS**

124 Montague St., Brooklyn, NY 11201  
(718) 237-0250

**Owner:** Sounds Heights Recording Studios, Ltd.

**Studio Manager:** Louis Lofredo, Abdu Malahi

**Engineers:** Vince Traina, Questar Welsh, Blaise Castellano.

**Dimensions of Studios:** 25 x 30

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

**Tape Recorders:** MCI JH114, 24-, 16-, 8-track, Scully 280, 4-track; Scully 280, 2-track.

**Mixing Consoles:** MCI 416, 24 in x 24 out w/transformerless inputs (trans amps).

**Monitor Amplifiers:** Phase Linear 700B, CR, 400, studio; Crown DC300A, cue.

**Monitor Speakers:** UREI Time Align 811, Big Reds with Mastering Lab crossovers.

**Echo, Reverb & Delay Systems:** EMT plate, Lexicon Prime Time DDL, Eventide

**Other Outboard Equipment:** Eventide Harmonizer, UREI parametric EQ, Pultec EQ, UREI graphic EQ, UREI 1176 limiter/compressors, UREI LA4A, UREI LA3A, UREI LA2, Allison Kexep, Roger Mayer gate. All tape recorders variable speed. Pultec filters, UREI digital metronome, MXR doubler/flanger.

**Microphones:** Neumann U67s, U47s, KM84s, U64; Sennheiser 441s; Synchron S10s; AKG 224E, D170E; Sony ECM

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**Rates:** 24 track \$95/hr., 16-track \$75/hr., 8 track \$50/hr., 4 - 2-track \$40/hr  
**Extras:** Instrument amplifiers, Fender, Ampeg All at no extra charge. Separate copy and editing room. High quality video, cassette duplication, record pressings  
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**SOUND LAB STUDIOS LTD.**  
 Brooklyn, NY

•••• **SOUND LAB STUDIOS LTD**  
 2687 E. 14th St., Brooklyn, NY 11235  
 (718) 934-8585  
**Owner:** Peter C. Diono  
**Studio Manager:** Michael Potash  
**Engineers:** Peter Diono, Michael Potash, Marion Salvati, Beth, Simon  
**Dimensions of Studios:** 30 x 20 x 10  
**Dimensions of Control Rooms:** 20 x 14 x 10  
**Tape Recorders:** MCI JH 24, 24-track, MCI JH 110B, 2 track (1/4 or 1/2 inch format), Studer A 80, 24 track  
**Mixing Consoles:** Harrison 4832 (full computerization), 48 in x 48 out  
**Monitor Amplifiers:** (3) Crown DC 300As Crown D75 Crown D60, QSC 31  
**Monitor Speakers:** Big Reds (with new Gauss 3588 speakers), Yamaha NS-10M, RORs  
**Echo, Reverb & Delay Systems:** Lexicon 224 X 200 digital reverb, Prime Time, DDL-2 digital delays, Super Prime Time, tape delays, AMS digital delay  
**Other Outboard Equipment:** (10) Kepex, (6) Gain Brains, (2) Orban parametric EQs, UREI 1176 limiters, dbx 161 comp/lim, Eventide H949 Harmonizer, MXR doubler/flanger  
**Microphones:** Neumann U89, U87, U46, KM84, AKG 414, 451EBs, D244, Tube; Sennheiser 441s, (5) 421s, E V RE20, Shure SM57s and 58s  
**Instruments Available:** LinnDrum, DMX drum machines, Yamaha grand piano, Prophet 5, Korg CX3, D6 Clavinet Fender Dyno My Rhodes, Fender Twin, Music Man, Marshall amplifiers, Yamaha DX7, Kurzweil 250 Mirage, Yamaha power drums Seymour-Duncan amp  
**Extras:** Probably the most unique feature of Sound Lab Studios is their service of custom recording and duplication of digital drum machine sound chips Unlike Linn, for example, who requires sounds for chips on analog tape that has already suffered analog degeneration, Sound Lab permits you to record your favorite drum or dog bark direct from mic to chips Every producer's dream come true  
**Direction:** Sound Lab will be upgrading their track capability to 48 tracks in the near future We will also be purchasing (2) Studer 24 tracks, (2) Studer 2 tracks

•••• **SOUND RECORDING TECHNOLOGY PROGRAM**  
 also **REMOTE RECORDING**  
 Mason Hall, Room 143, State Univ. of NY

## NORTHEAST STUDIOS

## 24 TRACK

**Fredonia, NY 14063**  
 (716) 673-3221  
**Owner:** The State University of New York, College at Fredonia, School of Music  
**Studio Manager:** David Peelle

•••• **SOUND SELLER PRODUCTIONS**  
 Rt. 49, Pittsfield, MA 01201  
 (413) 499-3899  
**Owner:** Steve Schwarz



**SOUND WORKS DIGITAL AUDIO/VIDEO STUDIOS**  
 New York, NY

•••• **SOUND WORKS DIGITAL AUDIO/VIDEO STUDIOS**  
 254 W. 54th St., New York, NY 10019  
 (212) 247-3690  
**Owner:** Charles Benarty  
**Studio Manager:** Charles Benarty  
**Engineers:** Roger Nichols, Wayne Yurgin, Eddie Osorio, Gerald Solomon, Phil Burnett, Gerry Garzava, Daniel Lazarus, Eric Thorngren, Steve Stahley Jack Number, Eric Stark  
**Dimensions of Studios:** 25 x 32 (stage A), 60 x 60 x 40 (stage B)  
**Dimensions of Control Rooms:** 20 x 20  
**Tape Recorders:** Sony 24 track digital; Mitsubishi 2 track digital X80, Mitsubishi 32 track digital X800, 3 M 32 track digital, 3 M 4 track digital, (2) Studer A-80, Otari MTR 90 Mark II 24 track, Otari MTR 12 2 track, Sony 1610 (2) Sony PCM F1  
**Mixing Consoles:** SSL6000E total recall, 48 in x 48 out  
**Monitor Amplifiers:** McIntosh, Crown  
**Monitor Speakers:** UREI, 813s, Yamahas, Visoniks, JBLs  
**Echo, Reverb & Delay Systems:** EMT plates, Lexicon AKGs Eventide, live chambers, AMS RMS 16, AMS DMS 15  
**Other Outboard Equipment:** Neve EQ rack, API EQ rack, Pultec rack GMI EQs Teletromix rack, dbx 160s, dbx 902s, Drawer gates, Lexicon PCM 42s, Lexicon 224, 224XI, Prime Time, Eventide 2016, 949 and 910, Quantec Scamp Rack, Publison Internal 90 Yamaha 2600  
**Microphones:** AKG, Sennheiser, Neumann, E V, and others  
**Instruments Available:** W-ndel, DX7, Linn, Roland, B 3, Yamaha grand drums, ARP, Ob Xa, Synergy Kurzweil 250 Emulator II w/programming assorted keyboards  
**Video Equipment & Services:** EditDroid/SoundDroid suite, off line/on line 1/2 - 1/4 - 1/8 inch Complete camera and sound stage package Shooting Stage A (insert) 25 x 25 x 12, Stage B 60 x 60 x 40 Complete digital audio for video in studio or location Pre production and post.  
**Rates:** Half day full day, week month or year On request according to project requirement  
**Direction:** Clients include Steely Dan Stevie Wonder

John Denver, Donald Fagen, Diana Ross, Robert Palmer, Joan Jett, Joe Cocker, Kiss, Christie McVie, Willie Colon, Ruben Blades, Steel Pulse, English Beat, Channel, Harry Belafonte, Chaka Khan, Aerosmith, Scorpions, Lene Lovich, Lou Reed, Talking Heads, Kashif, Eddie Murphy, Nina Hagen, Camero, Krokus, Motoshara Sana, Whitney Houston, Laurie Anderson, Duran Duran, Thompson Twins, Barry Manilow, Bronski Beat, Tarumasa Hino, MTV, ABC-TV, HBO and others

•••• **SOUNTEC STUDIOS**  
 25 Van Zant St., E. Norwalk, CT 06855  
 (203) 853-3433  
**Owner:** Richard Hodgson  
**Studio Manager:** Doug McLennan  
**Engineers:** Ron Bacchiocchi, Mark Carbone, Earl Cohen, Peter Hodgson, Bobby Gordon, Tom Edmonds  
**Dimensions of Studios:** 48 x 44, 23 x 22, Iso booth: 12 x 8 Drum booth: 11 x 11  
**Dimensions of Control Rooms:** 26 x 22  
**Tape Recorders:** Otari MTR-90 MKII, 24-track; Otari MTR-12 MKII, 1/2-inch 24 track, Otari MTR-10 MKII, 1/4-inch 2 track, Nakamichi MRI cassette; Otari MX-5050B MKII, 2-track, Otari MX 5050BQ 4-track, AMPX AG 440, 4-track, Tascam 122B cassette.  
**Mixing Consoles:** Neve 8058, 28 in x 24 out  
**Monitor Amplifiers:** UREI, Yamaha, Hafler  
**Monitor Speakers:** JBL 4435, JBL 4333A, Yamaha NS-10M, Auratone 5C, Altec A-7, E V Sentry 100A  
**Echo, Reverb & Delay Systems:** EMT 140 stereo, AMS RMX 16, Lexicon 200, Ursa Major Space Station, Lexicon Prime Time, Eventide Harmonizer, Instant Flanger, Loft 440, Roland stereo chorus, Yamaha REV7  
**Other Outboard Equipment:** Limiters: UREI LA 3A, LA-2A 1176, dbx 160, 160X, 118, 117; Neve 32264A; Gain Brain I and II, ADR vocal stresser, Gates Kepex I and II, Aphex B, Dolby, Roland, dbx 80  
**Microphones:** Neumann M 49, U67, U87, TLM-170, AKG: C-24, C 414, D-12, D-202E; Sennheiser: MD 421; E-V: RE-20, Shure SM 57, Crown PZM 31S; Altec 21-B  
**Instruments Available:** Fairlight CMI Series 2X, Simmons SDS5, Yamaha RX 11, Roland Juno 106, Fender Rhodes, Kawai grand piano, Ludwig drum kit, Yamaha drum kit, Marshall amplifiers  
**Rates:** Available upon request

•••• **SOUNDTRACK NY/LTD.**  
 23 E 21st St., New York, NY 10010  
 (212) 420-6010  
**Owner:** Rob Cavicchio  
**Studio Manager:** Chris Rich

•••• **SPECTRA COMMUNICATIONS**  
 also **REMOTE RECORDING**  
 Box 621, Port Washington, NY 11050  
 (516) 883-9902  
**Studio Manager:** Jay Jayson

•••• **SPECTRA SOUND**  
 also **REMOTE RECORDING**  
 P.O. Box 621, Port Washington, NY 11050  
 (516) 883-3395  
**Owner:** Spectra Communications  
**Studio Manager:** Tom Thomas

•••• **SPECTRUM RECORDERS**  
 151 S. Main St., Lanesboro, MA 01237  
 (413) 499-1818  
**Owner:** Spectrum Recorders, Inc  
**Studio Manager:** Peter Seplow  
**Engineers:** Peter Seplow, David Fowle  
**Dimensions of Studios:** 25 x 30 x 15 plus vocal and drums rooms.  
**Dimensions of Control Rooms:** 16 x 20  
**Tape Recorders:** MCI JH-24, 24-track; Tascam 58, 8-track; Mitsubishi digital available X80, 2-track, Scully 280B, 2-track, Technics RS1500, 2-track; Technics RSM63, cassette; Pioneer CT599WR, cassette, Alpha-42 high speed cassette copier.  
**Mixing Consoles:** Audio Processing Systems, Inc 3000 32 x 32 x 32 plus 6 sends FET automate and 4 band parametric EQ all inputs.  
**Eventide SP2016:** (2) Lexicon PCM41, PCM42; Lexicon Prime Time II; Master Room XL-305  
**Other Outboard Equipment:** Compressors (3) UREI LA4, UREI 1176LN, (2) dbx 160, (2) Ashly SC-50, Gates: (2) Ashly SC 33, Omni Craft GT-4 Exciters: Aphex B, EXR SPLI, Equalizers: Orban 622B parametric, UREI 527, Misc: Orban 536 De-esser, (2) MXR 129 pitch transposers, MXR 174 pitch shift doubler, Technics SLB205 turntable.  
**Microphones:** Neumann: (2) U87, TLM170, U89, KM84; Sennheiser: (2) MD441, MD421, AKG 414EB, 451, D12, D222; (2) Electro-Voice RE20; Crown PZM-61P, (2) Beyer M300, (2) Altec C71; (5) Shure SM57  
**Instruments Available:** MemoryMoog Plus synth, Roland Juno 106 synth, Fender Rhodes, LinnDrum, 5-piece Tama

drum kit w/Zildjian cymbals, Hammond L100 organ w/Leslie 122, Hume 6'1" grand piano, Fender Twin Reverb amp, AKG and Fostex headphones, Countryman and Sescom D.I. boxes  
**Rates:** \$80/hr.

◆◆◆ SPECTRUM STUDIOS

701 A Moore Sta. Ind. Park, Prospect Park, PA 19075  
 (215) 522-1177, 565-5755

Owner: Bob Szczepkowski  
 Studio Manager: Bob Szczepkowski  
 Engineers: Vince Warsavage, Mike Petruzzi, Bob Szczepkowski, Mark Hafer, Ron Damiani  
 Dimensions of Studios: 22 x 25 w/20-foot ceiling (11,000 cu. ft.)

Dimensions of Control Rooms: 16 x 15 x 10  
 Tape Recorders: MCI/Sony JH-24, 24 track; Tascam 85-16B, 16-track w/dbx noise reduction and autolocator; Otari 5050 BII, 2-track; Nakamichi MR-1; Technics and Hitachi cassette decks.

Mixing Consoles: Scorpion 28 x 12 x 2 x 24 by Amek TAC.

Monitor Speakers: Altec Big Reds, JBL 4311, Ultralinear, Auratone Cubes, Harman Kardon, Altec and Technics.

Other Outboard Equipment: Lexicon digital reverb, Lexicon Prime Time, Ecoplate III stereo reverb, DeltaLab Super Time Line and ADM 64, Aphex Aural Exciter, dbx 166 stereo gate/comp., dbx 160 comp/limiter, Omni Craft GT4A noise gate, Rocktron Exciter-linager, Ibanez stereo 2/3 octave EQ and HD 1000 harmonics/delay, BSR EQ-3000/Spectrum Analyzer and EQ-110X, Korg digital tuner.

Microphones: Neumann, Sennheiser, Electro-Voice, AKG, Shure, Audio Technica and Countryman direct box  
 Instruments Available: Tama Techstar electronic drums, Prophet 600, Hammond B 3 w/Leslie, Fender Precision Bass, Hohner Clavinet, Marshall, Acoustic Lab and Sound City amps.

Rates: 24-track 10 hrs \$395, 30 hrs. \$995, 16-track 10 hrs. \$295, 40 hrs \$995, tapes 2-inch reel \$180, 1/4-inch reel \$25, 1-inch reel \$110, cassette (CrO<sub>2</sub>) \$5 A \$50 deposit is required with each booking, and full payment is due upon completion of each session. No tapes or copies will be released until bill is paid in full

◆◆◆ STARMAKER INC.

12 Willard Dr., Pittsburgh, PA 15236  
 (412) 653-6423

Owner: Randy Lako  
 Studio Manager: Terry Lako

◆◆◆ STARR RECORDING, INC.

201 St. James Pl., Philadelphia, PA 19106  
 (215) 925-5265

Owner: David S. Starobin

◆◆◆ STARTEC RECORDING STUDIOS

1737 De Sales St. N.W., Washington, D.C. 20036  
 (202) 347-2519, 347-8864

Owner: James Wallace, Paul Wolff  
 Dimensions of Studios: Three sections, 20 x 40, 20 x 30, 10 x 12

Dimensions of Control Rooms: 18 x 21  
 Tape Recorders: Studer A80, Stephens 24-track, Studer 2-track, (2) Ampex 2 track, several cassettes.

Mixing Consoles: API custom (from Sunset Sound studio 1) 32 in with 32 additional inputs, 24 monitor, 24-track  
 Monitor Amplifiers: UREI 813B, Yamaha NS-10, Aura tones.

Monitor Speakers: EMT, Yamaha, REV1, Lexicon 224, several small digital reverbs, at least 12 delays

Other Outboard Equipment: Tube this, tube that, gates, ducks, EQs, limiters, all of the cool stuff  
 Microphones: Several tubes, etc

Instruments Available: Yamaha grand piano, Studio B "MIDI city" with everything.

◆◆◆ STUDIO 4 RECORDING

also REMOTE RECORDING  
 444 N. 3rd St., Philadelphia, PA 19123  
 (215) 923-4443

Owner: David Johnson, Phil Nicolo, Joe Nicolo  
 Studio Manager: David Johnson  
 Engineers: Phil Nicolo, Joe Nicolo, Gary King, Eric Powell  
 Dimensions of Studios: 20 x 20 designed by Tony Bongiovi.

Tape Recorders: Studer A80 Mark III, 24 track, Studer A80 Mark III, 2-track; various 1/4 tracks and cassette machines available

Mixing Consoles: Custom Neve 8048 w/4 band EQ 32 in x 24 out; custom solo and group switching.  
 Monitor Amplifiers: Bryston 4B, Yamaha 2200, Crown D150 etc

Monitor Speakers: Masterlab monitors w/604 E2s, Yamaha NS 10s, UREI 813s, ROR "G"s, ROR cubes, KEF 105s, I.M.F. TLS 50 Mark IIs

—LISTING CONTINUED ON NEXT PAGE

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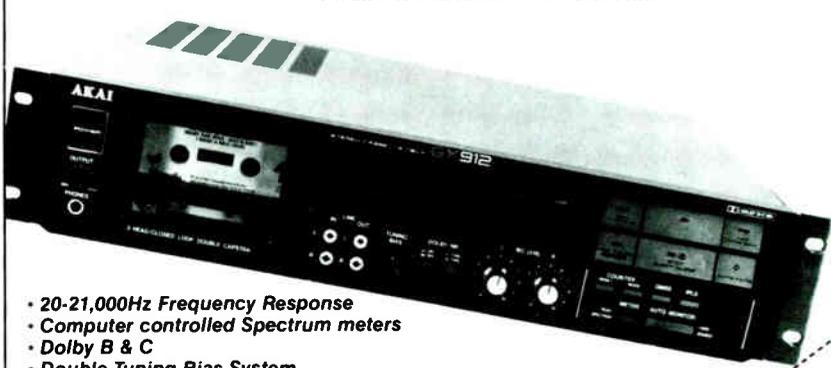
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**nep** 56 West 54th St.  
N.Y., NY 10036  
NEP Productions, Inc.

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## NORTHEAST STUDIOS



## 24 TRACK

**Monitor Amplifiers:** Carver, SAE, Pioneer, Sherwood.  
**Monitor Speakers:** UREI Time Align, Altec 604E, Auratone.

**Echo, Reverb & Delay Systems:** LP 140 stereo plate, DeltaLab DL-2, Loit 440, 450, Lexicon 224X available.  
**Other Outboard Equipment:** UREI limiters, dbx limiters, gates, TNE.

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

**Instruments Available:** 1926 Heintzman grand piano, various electronic keyboards and drum machines.

**Video Equipment & Services:** 1/2", 3/4 inch on line, 3 camera capability w/control room switching.

**Rates:** Rates are low and negotiable, but always include use of lounge, kitchen and shower facilities.

### STUDIOHOUSE-NORTH

3418 S. Dakota Ave. N.E., Washington, D.C. 20018  
(202) 529-1856  
Owner: Robert H. Shaw  
Studio Manager: Robert H. Shaw

### SUPER HIT PRODUCTIONS

138-48 87th Ave., Briarwood, NY 11435  
(718) 297-8225  
Owner: Ricardo Alcaraz, Gail Arnett  
Studio Manager: Raquel Gonzalez Eras

### SUPERDUPE

295 Madison Ave., New York, NY 10017  
(212) 683-6854  
Owner: Gordon Enterprises, Ltd  
Studio Manager: Keith M. Gordon

### SUSQUEHANNA SOUND

also **REMOTE RECORDING**  
48 A Street, Northumberland, PA 17857  
(717) 473-9733  
Owner: Bob Spangler  
Studio Manager: Scott Berger

### SYNC SOUND, INC.

450 W. 56th St., New York, NY 10019  
(212) 246-5580  
Owner: William Manno, Kenneth Hahn  
Studio Manager: Elissa Kline  
**Engineers:** Ken Hahn, Grant Maxwell, Tom Fritze, Pam Bartella, Luis Martinez, Allen Hale  
**Dimensions of Studios:** B 11 x 14, C 10 x 16  
**Dimensions of Control Rooms:** B 23 x 22, C 16 x 14  
**Tape Recorders:** (3) Otari MTR-90 II w/24", 16", 8 track headstacks, Otari MTR 20, 4 track, (4) MTR 12, 2 track's with center channel time code, mono and stereo Nagra capability, cart machines, Multi Track Magnetics 106 16/36 mm mag. recorder and Sony 701. Also available Sony 3224, 1610, X80.

**Mixing Consoles:** Solid State Logic 6000 series automated console w/stereo modules. Soundcraft 2400, Soundcraft 200B and Soundcraft 200.

**Monitor Amplifiers:** Ashly FET 500s, Ashly FET 200s, Crown DI50, Crown D75, Symetrix A-220s.

**Monitor Speakers:** B-UREI 813s, Auratones C JBL 4411s, Auratones. Equipment room: JBL 4411s Pre-production/synth room

**Echo, Reverb & Delay Systems:** Lexicon 224x w/LARC, Lexicon PCM60, Lexicon PCM42, Lexicon Prime Time II

**Other Outboard Equipment:** Aphex Aural Exciter, Dynaflex DX1 DX2, Dolby SP 24, (6) TTM NR frames w/cat 22 cards, UREI 1176, Sony 1610 and F 1 digital audio processors, Dolby Surround mixing

**Microphones:** Neumann U 89s, U 87s, E V RF-20  
**Instruments Available:** Synclavier, Kurzweil, DX7, E mu SP 12

**Video Equipment & Services:** Synchronizers: Proprietary Edit System allowing lock up, edit rehearsal, and editing to subframe accuracy of all standard audio, digital and video tape machines VTRS: Sony one-inch w/Dolby BVH

2000, (3) JVC 8250s. Full interface capability and available upon request: BVU-800, Betacam, and VHS Hi-Fi. Video Monitors: Panasonic PT-101 video projection system w/100 inch diagonal soundscreen, Sony PVM-1220, Sony 25-inch and 19-inch monitors. Switchers/editors: Monitor switches in all production areas to facilitate multi-video source operations

**Rates:** Call for information.

**Direction:** Sync Sound is a full service audio post-production house, ready to meet your audio needs with experience and enthusiasm. Our facilities are specifically designed to accommodate editing and mixing to picture (digital or analog), dialogue replacement, overdubs to picture, sound effects design, electronic composition, audience sweetening, and Dolby Surround Sound mixing for film. Sync Sound also provides ancillary functions such as: technical consultation, Nagra and mag dubs, SFX library, and video tape laybacks



**SYNCO SOUND STUDIOS**  
Boston, MA

### SYNCO SOUND STUDIOS

331 Newbury St., Boston, MA 02115  
(617) 424-1062

Owner: Studio 81, Inc.

Studio Manager: Gene Amoroso

Engineers: Thom Moore, Gary Wright

Dimensions of Studios: Main: 32 x 20, iso booth: 20 x 32

Dimensions of Control Rooms: 15 x 17

**Tape Recorders:** MCI JH636, 24-track; (2) Ampex ATR-102, 2-track; Studer B67, 2-track; (2) Tascam 122 cassette decks.

**Mixing Consoles:** MCI JH636, 36 in x 36 out, w/8 wild faders

**Monitor Amplifiers:** Yamaha P2200, BGW 750, Crown DC300, Crown 150, BGW 100

**Monitor Speakers:** Control room: UREI 813 Time Align, Yamaha NS-10M, JBL 4311, Auratones, Studio: JBL 4311

**Echo, Reverb & Delay Systems:** Lexicon 224X, EMT plate, AMS DMX 15 80 S (stereo), Lexicon Prime Time II, Eventide H910 and 1745M Harmonizer/delay.

**Other Outboard Equipment:** Eventide Hanger, Eventide phaser, Marshall Time Modulator, dbx Over Easy, dbx 900 rack w/noise gates, flanger, Over Easy and parametric, (4) Orban 622B EQ, Aphex 602, (3) Lang PEQA, (3) 529, (2) LA2A, ADR F769X/R Vocal Stresser, Eventide Harmonizer H910 and H949, (4) UREI 1176N limiters, (8) API 550 graphics, (3) Allison Gain Brains, (3) Allison noise gates, (2) Aphex B&B compressor/expander, Lexicon Prime Time, UREI Major Space Station.

**Microphones:** (4) Neumann KM84s, (7) U87s, (2) U47s, (2) AKG 414s, (4) Sony C37P, AKG C12, D12, (8) Sennheiser 421s, (2) UREI 20s, Shure 57, 58s.

**Instruments Available:** Synclavier II, LinnDrum machine, Roland 808, all types of polyphonic synthesizers, GTR amplifiers, Yamaha grand piano, Hammond C3 w/Leslie 122, Syndrums, Simmons drums, vintage Fender and Ampex amplifiers.

**Video Equipment & Services:** Video access to all rooms w/monitors and cameras and playback facilities (all formats).

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**Mixing Consoles:** Allen & Heath semi-automated CMC-24, 24 x 16.

**Monitor Amplifiers:** Carver PM-1.5, Crown P-150.

**Monitor Speakers:** UREI 809s, Yamaha NS-10s, Aura tones.

**Echo, Reverb & Delay Systems:** Lexicon PCM-70, PCM-60, PCM-41, PCM-42, DeltaLab DL-4.

**Other Outboard Equipment:** Ashly MXR comp/limiters  
**Microphones:** Electro-Voice RE-20, RE-15, Beyer M50Q, M69, Shure SM58 (2).

**Instruments Available:** Synclavier digital music system, w/50 kHz-16 bit sampling, 32 stereo FM synthesizer voices, 32-track sequencer, digital guitar interface w/Pedulla XJ-S synthesizer guitar, and MIDI interface to MIDI synths, Yamaha DX7, Roland JX-8P, Oberheim Xpander, Lyncron, and Yamaha U3 upright piano.

**Video Equipment & Services:** SMPTE

Rates: \$45/hr. package includes 32-track digital synclavier, 16-track analog recording studio, engineer/programmer.

•••• SYSTEMS TWO RECORDING STUDIOS

also REMOTE RECORDING

2949 Avenue U, Brooklyn, NY 11229

(718) 332-5429

Owner: Joseph Marciano

Studio Manager: Nancy Gill

•••• 39th STREET MUSIC PRODUCTIONS, INC.

260 W. 39th St., New York, NY 10018

(212) 840-3285

Owner: Michael Karp

Studio Manager: Rod Funston



*TIKI RECORDING STUDIOS, INC.*  
Glen Cove, NY

•••• TIKI RECORDING STUDIOS, INC.

186 Glen Cove Ave., Glen Cove, NY 11542

(516) 671-4555

Owner: Fred Guarino Jr., Fred Guarino Sr.

Studio Manager: Camille DiTrani

Engineers: Mark Gaide, Bob Spencer, Bob Fudjinski, Fred Guarino.

**Dimensions of Studios:** 40 x 25 x 13.

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

**Tape Recorders:** Studer A80 MKIII, 24 track, Studer A80 MKII, 1/2-inch 2-track, Studer A80 MKII, 1/4 inch 2-track; Otari MTR 10, 1/4-inch 2 track; 3M M79, 2-track; TEAC 8-track; TEAC 4-track; (3) TEAC 2 track copy decks, (4) Onkyo cassette decks; (4) Sony cassette decks

**Mixing Consoles:** Trident TSM 40 x 32

**Monitor Amplifiers:** UREI 6300, Yamaha P-2100, 2050,

Crown DC 150 A (4) McMartin MS752

**Monitor Speakers:** UREI 8L3A, Yamaha NS 10M, JBL 4311,

Auratone 5C, Tannoy NFM 8, JBL216

**Echo, Reverb & Delay Systems:** Lexicon 200 digital reverb, Echoplate II, Yamaha REV7 digital reverb, Lexicon Prime Time II MEO DDL, (2) Lexicon PCM42 MEO DDL, (2) Eventide Harmonizers, (3) DeltaLab 1024 Effectron DDL, Korg SD-2000 sampling DDL.

**Other Outboard Equipment:** (4) Kepex JIs, (7) Kepex I,

(2) Gain Brain IIs, (2) UREI 1176 LN, (2) UREI LA3A

comp/lim., (2) dbx 160 comp/lim, Trident stereo comp/lim,

(2) Ashly SC 50 comp/lim, (2) Symetrix CL-100 comp. (2)

Aphex Aural Exciters, Eventide 201 flanger, Orban 516EC

de-esser, Orban 622 EQ, (25) Isomix HP-4 4 channel

headphone systems, Ashly SC 66A EQ, Roland 830

phaser

**Microphones:** Neumann, AKG, Milab, Sennheiser, Beyer,

E-V, Shure, Audio Technica, Sony (all popular models

including tube), AKG K240 phones, Foslex T 20 phones,

Koss Pro 4X phones.

**Instruments Available:** Yamaha C-5 6'6" grand piano,

Slingerland drums, LinnDrum machine (extra chips), Kay

pro PC20 meg computer (IBM comp.) Korg Poly-6, Hammond organ/Leslie, Roland, Marshall, Ampeg, Fender amps.

**Video Equipment & Services:** Closed circuit monitors of all rooms.

Rates: Please call Fred Guarino, Camille DiTrani Block rates and day rates available.

**Extras:** Conveniently located 35 minutes out of NYC on Long Island's scenic north shore, minutes from beaches. Comfortable lounge w/TV, video game and full kitchen. Studio B dubbing-editing room, synth/computer programming room, full art and graphics dept., extensive music library.

**Direction:** Tiki is a professional, efficient recording facility where clients such as Brian Setzer, Don Gehman (EMI-Capitol), Tim Moore, Rob Freeman (Elektra), Duke Jupiter, Glen Kolotkin (Motown), Melanie, Nils Lofgren, DJ Rome (Lifestream), Chappell Music, etc. got what they came for—great sound and service

•••• TRACKMASTER AUDIO, INC.

also REMOTE RECORDING

One Franklin Park N., Buffalo, NY 14202

(716) 886-6300

Owner: Alan C. Baumgardner

Studio Manager: Rose Grucela, Michael E. Sak

Engineers: David M. Bellanca, Alan Baumgardner, Kim Ferullo, Mike Sak, Thomas Streich, Alan Dusel, Jim Albert, Averell Thorne, Ross Willenweber.

**Dimensions of Studios:** A: 28 x 32 w/25 ceiling, iso booth: 8 x 14 w/12 ceiling; B: 15 x 8 w/10 ceiling; D: 12 x 11 w/10 ceiling.

**Dimensions of Control Rooms:** A: 23 x 18 w/12 ceilings; B: 14 x 12 w/10 ceiling; C: 8 x 10 w/10 ceiling; D: 15 x 12 w/10 ceiling.

**Tape Recorders:** A: MCI JH 114 w/AL II 24-, 16-track, MCI JH-110B 1/4-, 1/2-inch 2-track, Technics RS 1500 US 2 track; (2) Aiwa M 700 cassette; TEAC 2300 1/4-track; B: MCI JH-110A 1/4-, 1/2-inch 2-track or 4 track, Otari MX5050 MKIII, 8-track; Scully 280-14, 2-track, Nakamichi BX 1 cassette, Akai GX 4000D 1/4-track, C: Otari MX 5050 MKIII, 2 track; Otari MX 5050 MKIII, 8 track; TEAC 25-2, 2-track; Scully 280-12, 2 track; (3) Technics RS234X cassette; TEAC 124 AV cassette, Akai GX 4000 1/4-track; (3) Wollensak Sync cassette and reel-to-reel; ICM cart machines. D: Otari MX 70 16-, 8-track; Sony APR 5003, 2 track w/Center Time Code, Otari MX 5050, 2-track; Technics RSM 85 cassette, Otari MX 5500 1/4-track.

**Mixing Consoles:** A: Audtronic 532, 32 in x 32 out, 16 aux returns, fully automated; B: MCI (customized) JH 416 18 in x 16 out; C: Audio-Technica 1220 12 in x 8 out; D: Soundcraft 1600 Prod. Series 24 in x 24 out, 48 channel remix

**Monitor Amplifiers:** Crest, Crown, Yamaha, SAE, McIntosh.

**Monitor Speakers:** A: Custom 4 way UREI/JBL; B: JBL 4311; C: JBL 4401; D: Westlake BBSM-10. All rooms have: Yamaha NS-10, ADS470, JBL 4401, and Auratone 5C

**Echo, Reverb & Delay Systems:** Lexicon M-200 digital reverb, EMT 140 tube, Echoplate II, customized 5 x 9 stereo tube plate, (2) Yamaha REV7, (3) Yamaha R-1000, URSA Major 8 x 32 MKII, Orban 105 reverb, Lexicon PCM60 dig. rev., AKG BX 20E, Lexicon PCM42, (3) Lexicon PCM41, (2) Yamaha D 1500, Lexicon Prime Time M 93, Lexicon Prime Time II, Korg sample-delay, Eventide 949 Harmonizer, MXR pitch transposer w/display

**Other Outboard Equipment:** ADR Compex limiter-gates, Drawmer gates, Audioarts parametrics, Ashly parametrics, Pultec EQs, Teletronix LA2A limiters, UREI 1176 limiters, dbx 160 limiters, TEAC parametrics, Aphex exciters, MXR EQs, GateX gates, Orban 245 F. stereo synth, Technics SP-10 (w/SME) turntables.

**Microphones:** Neumann: U87, U47, KM84; AKG: 414, 451, 224; Beyer: M160, M500; Sennheiser MD421; Shure: SM81, SM57, SM58 SM53, 545, E V RE20, Sony C-500, Altec: M-49; Crown PZM, Countryman, Jensen and Westlake direct boxes (tube mics available).

**Instruments Available:** Baldwin 9-foot concert grand piano; Hammond B 3 organ, Yamaha: DX7, DX9, DX21, RX11; Memory Moog Plus; Minimoog; Roland: SH101, Juno 60, Juno 106, Korg Lambda, EX 800, Emulator II, Ludwig drum kit; Simmons; and just about every other drum machine or synth you could want.

**Video Equipment & Services:** All studio's have Pro-Feel monitors, 1/4 inch Sony decks, 1-inch Sony deck, 1/2-inch Beta and VHS dubbing (Hi fi), full SMPTE synchronization, dubbing and layback.

Rates: A \$70/hr., \$80/hr. w/automation (2/hr. min.). B \$70/hr (1/2/hr min.) C. and D. same as B studio. Layback to video \$100/hr. (1 hr min.)

**Extras:** Designed by Sugarloaf View/John Storyk, Robert Walsh 6 independent production companies and musicians, vocalists, composers, arrangers, orchestrators, producers, kitchen, shower Packages w/air service, limousines, hotels, car rental, catering and chef prepared meals 5 complete music and EFX libraries.

**Direction:** Clients include Rick James, Yes, Bobby Militello & RPM, Melanie, Elvin Bishop, Charlie Byrd, Robert Klein, John Sebastian, Gabe Kaplan, Rile Aid, Hoover, Dads' Pet Food, Agway, Philo TV Kodak, Dunlop Rich Products, Sylvia, film scoring for Vamping, etc. Our goal is the

ultimate in services at prices below national industry average. Artist and group recordings, records, ref acetates, multimedia presentation, film scoring, TV and radio spot production, custom jingles, music beds, narrations, tape duplication, music law, audio for video, layback production services.

•••• TRACKS RECORDING STUDIO

52 Main St., Port Washington, NY 11050

(516) 944-5316

Owner: Thomas Dicandia

Studio Manager: Thomas Dicandia

•••• TRADEMARK MUSIC & RECORDING

P.O. Box 1259, Browns Mills, NJ 08015

(609) 893-5132

Owner: WC Berends

Studio Manager: R.L. Harris

•••• TRANS/AUDIO, INC.

254 W. 54th St., New York, NY 10019

(212) 265-6225

Owner: Jack Vorisek, Mark Wortreich, Dick Vorisek

Studio Manager: Jack Vorisek, Mark Wortreich

•••• TULLEN SOUND RECORDING

26 Altamont Ct., Morristown, NJ 07960

(201) 539-8120

Owner: Skipp Tullen

Studio Manager: Helen Tullen

•••• TWAIN RECORDING

also REMOTE RECORDING

18 Hiawatha Pass, W. Milford, NJ 07480

(201) 697-7540

Owner: Robert Both

Studio Manager: Robert Both

Engineers: Robert Both, Bob Nicholson, Karen Koehler.

**Dimensions of Studios:** 20 x 25; isolation booth: 10 x 12.

**Dimensions of Control Rooms:** 13 x 14.

**Tape Recorders:** MCI JH-100, 24-track; Ampex ATR-

100, 2-track; TEAC 3300S, 2-track; Sony 8545, 4-track.

**Mixing Consoles:** Speck Electronics 800C 28 x 28

**Monitor Amplifiers:** SAE, Hitachi.

**Monitor Speakers:** JBL 4411, JBL 4312, Braun L200, Aura-

tones

**Echo, Reverb & Delay Systems:** Lexicon 200 digital reverb, Lexicon Prime Time, Lexicon PCM42, Eventide 910 Harmonizer, MICMIX XL305 reverb.

**Other Outboard Equipment:** dbx noise reduction, Roger Mayer noise gates, EXR III Exciter, Eventide flanger and phaser, dbx 160 limiter/compressors, Orban stereo parametric EQ, Soundcraftsman 2012, graphic EQ, Nakamichi DMP-100 digital converter.

**Microphones:** Neumann U87, KM86; AKG 414, 452, C12, Sennheiser 441, 421; Shure SM56, SM57; Electro-Voice RE20, RE10, RE16, DO54, 635A, Sony CT22

**Instruments Available:** Kawai grand piano, Fender Rhodes, Elka Strings, 10-piece Slingerland drum set, Roto toms, percussion, Korg II synthesizer, Ampeg and Fender amps, MXR pedals, Crumar organ w/Leslie, Rockman, Poly-6 synth, Roland 106 synth w/sequencer, Roland 707 drum machine

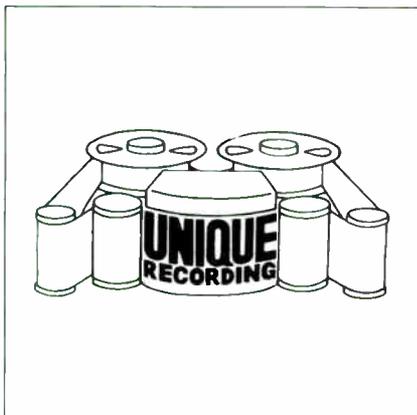
**Video Equipment & Services:** Hitachi V16 VCR

Rates: 24-track \$75/hr., 16 track \$45/hr. Block rates available.

*Electronic*  
MUSICIAN

... the first magazine devoted exclusively to the new technology that's revolutionizing the industry, covering MIDI, computer music applications, SMPTE/synchronization, video, music sampling/synthesis, and much more! See page 83 for complete information.

A Mix Publication



**UNIQUE RECORDING**  
New York, NY



**UNIQUE RECORDING**  
New York, NY

•••• **UNIQUE RECORDING**  
701 7th Ave. 8th & 10th Fl., New York, NY 10036  
(212) 921-1711  
Owner: Bobby Nathan, Joanne Georgio Nathan  
Studio Manager: Mary Culum  
Engineers: Michael Finlayson, Chns Lord Alge, Tom Lord Alge, Peter Robbins, Bob Rosa, Steve Pecorella, Roey Shmir, Acar Key, Kennan Keating, Programmers Jeff Lord Alge, Jeff Neublum, Jack Hotop, Maintenance: Bruce Freeman, Marty Strauss, Tony Maffucci  
Dimensions of Studios: A 12 x 15, B 40 x 20, MIDI City 6 x 12.  
Tape Recorders: A (2) Otari MTR-90 MKII, 24-track w/24 channels Dolby or dbx in Gotham TTM frame, Sony PCM 3324 digital 24-track, Time-Line SMPTE (48-track and video syncing) Studer A80 1/2-inch 2-track, Studer B67 1/4-inch w/Dolby 361s, Ampex ATR 104, 4-track w/SMPTE Sony BVU-800D w/PCM ADR (digital 2 track), Onkyo TA-2090 cassette deck, B Otari MTR-90 MKII 24-track w/24 channels Dolby A or dbx in Gotham TTM frame, Sony PCM 3324 digital 24 track, Time-Line SMPTE (48 track and video), Studer A80 1/2-inch 2-track; Studer B67 1/4-inch 2-track; Onkyo TA-2090 cassette deck, MIDI City (2) Otari MTR-90 MKII, 24-track; Ampex ATR 102 1/2-inch 2-track Beta and VHS Hi-Fi. Edit room: (2) Otari MTR-12 1/2-inch, (2) MCI JH110 1/4-inch, 10 Onkyo TA-2070 cassette.  
Mixing Consoles: A Solid State Logic 4000E 64 chan w/Total Recall, 8 Neve 1077 Mic Pre and EQ, 4 API 550a and 4 API 560a, B Solid State Logic 4000E 48 chan w/Total Recall, 8 Neve 1077 Mic Pre and EQ, 4 API 550a and 4 API 560a, MIDI City: Neve 8068 MKII 32 chan, 16 Neve 1077 Mic Pre and EQ, 4 API 550a and 4 API 560a  
Monitor Amplifiers: PC5002Ms, Crown DC300s, DC150s, DC60s.  
Monitor Speakers: UREI 813s, Yamaha NS-10Ms, Founer 8s E-V Sentry 100s, Auratones.  
Echo, Reverb & Delay Systems: A Sony DRE 2000A, Yamaha REV1, Lexicon 224XL, (2) AMS RMX16, Quantec QRS, Klark-Teknik DN780, Lexicon PCM70, Yamaha REV7, Yamaha SFX90, Ursa Space Station, Echoplate, AMS DMX1580s, Publison Infernal 90, Bel BD 80, (3) Lexicon PCM41s, (2) PCM 42s, Eventide 949 and 910, Cooper Time Cube, B Sony DRE 2000A, Yamaha REV1, Lexicon 224XL, (2) AMS RMX16, Quantec QRS, Lexicon PCM70, Yamaha REV7, Yamaha SFX-90, Ursa Space Station, AMS DMX 1580s, Publison Infernal 90, (2) PCM 41s, (2) PCM 42s, Prime Time, Yamaha D1500, (2) Eventide 910, MIDI City Lexicon 224X, (2) Lexicon PCM70, Lexicon PCM60, (2) Yamaha REV7, Quantec QRS, Ursa Space Station, (4) Yamaha D1500.

**Other Outboard Equipment:** Roland SBX 80s, SRC, Master Beat's, Dr. Click's, Drum Doctor, Drum Slave, I.L. Cooper SBII MIDI patch bay, Syco MIDI percussion A; Sony KX1901a video monitor, UREI LA 3As, LA-2A, dbx 165as, 160s, 160Xs, (7) Kepex II, Drawmer 1960 tube, (3) Gain Brain II, (6) Dyna-Mites, (4) dbx 904 gates, (2) dbx 902 de-essers, Pultec EQH 2s, EQP-1As, MEQ 5, (2) MXR 15 stereo bands, MXR flanger/doubler, MXR instant flanger and phaser, Dyno-My-Piano CS 5 and Cylco Quad panner, ADR Panscan, Roland SVC 350, Vocoder, B UREI LA 2As, LA 3a, LA 4s, dbx 165s 160s, 160Xs, (8) Dyna-mites, (4) Kepex II, (4) Gain Brain II, Pultec EQH-2s, EQP-1as, MEQ 5, (2) MXR 15 stereo bands, Dyno My-Piano CS 5 and Cylco quad panner, Moog Vocoder MIDI City; (4) dbx 165, dbx 160Xs, dbx 166s, Kepex IIs, Gain Brains, (8) Dyna-Mites, (4) Pultec EQP 1As  
**Microphones:** Neumann M49s, U47s, U48s, U67s, U87s, KM84s, KM64, KM54; AKG C-12, C 12as, C 28s, 414s, 414EBs, 451s, D 12, Telefunken 251, Sennheiser MD 421s, MD441s, 406; E V RE-20, Shure SM57, SM81, RCA 77DX, BK 5, Sony C-500 and C 37as

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—FROM PAGE 34, CONSOLE DESIGN  
FETs that have been optimized for audio attenuation. The devices are available in commercially feasible quantities, in a relatively small package, at a relatively small cost. In a properly designed implementation with zero-crossing and support logic, MDACs also appear promising on initial investigation.

An MDAC is a ladder attenuator rather than a series resistor. All of the FETs in the package short to ground. As each stage goes down, it reduces the load, and the requirements for the next stage are less demanding. All switch elements are optimized for their respective signal currents. The combination of these factors makes it possible to produce a variable programmable analog circuit with negligible glitch noise.

Under certain conditions however, the switching and non-linearity within the device compounds, resulting in audible distortion at high frequencies. It is possible to adjust the circuit to minimize this distortion, but these adjustments involve another trade-off, this time between distortion and noise.

MDACs don't have any gain. They are voltage input, current output devices with resistors shorting to ground, requiring that they be used with an op amp. One can obviously get the necessary gain from this op amp. But if the circuit is adjusted to minimize the distortion products of the MDAC, the impedances become rather too high for the op amp. Even though the total circuit only has a gain of one, the op amp ends up with a gain of more than one.

In other words, audio processors using MDACs tend to be noisy. Moreover, this noise is almost constant regardless of the gain settings. Typically, it is in the range of -78 to -74dB, (CCIR 468 quasi-peak weighted). The effect that this has on minimum noise (i.e. mic amps at unity, faders at infinity) can seriously compromise the usefulness of a console, particularly one with a large number of inputs.

While this does not preclude the use of MDACs in some applications, it renders them less than ideal as the main building block for a totally programmable analog audio processor.

### Data System Breakthrough

In addition to the various noise and distortion products generated by the audio components themselves, the designer of a programmable analog audio processor must be concerned with breakthrough of digital noise from the control interface data system.

Data-induced noise is cyclic or coherent in nature. Breakthrough within the audio band, even at exceedingly low levels, is readily detectable by the ear. In audition tests conducted by

the Solid State Logic Research Group at Oxford, data noise in the region of 500 Hz to 5 kHz, at levels of 30dB below the normal analog noise floor, was both audible and objectionable to most listeners.

Any programmable analog design must pay serious attention to preventing data noise breakthrough into the audio paths. Unfortunately, this is quite difficult to accomplish practically, since all but a few of the available devices are obliged to share common earthing between audio and data buses, whose physical proximity cannot be totally avoided.

### Summary

One of the nice things about analog circuitry is that it lends itself to tinkering. It is possible that some combination of the devices listed above, perhaps in conjunction with technology presently under development, might yield practical solutions to these problems. But it is more likely that for any device or combination explored, the patterns encountered thus far will be repeated, because the physics involved remain unchanged.

Solutions to the audio problems of programmable analog consoles involve a delicate balance between all of the factors just mentioned. While it is unlikely that these trade-offs can be resolved to achieve standard analog performance levels in all respects, the benefits of programmable analog technology may, in certain applications, outweigh this drawback.

The resolution of this issue depends very much on the design of the control surface itself, and the power and reliability of the control and automation software and hardware. Because the issues of control architecture are also critical in any evaluation of digital consoles, they will be addressed in Part 3 of this series, which will run in the July 1986 issue of *Mix*.

The issues of digital audio as they affect the console designer and user—and the potential advantages of an entirely digital design—are discussed in Part 2 of Solid State Logic's report on The Future of Audio Console Design, which will appear in next month's issue of *Mix*. ■

*About the authors: Colin Sanders is the founder and managing director of Solid State Logic. Douglas Dickey is the company's vice president for design communications. Chris Jenkins is SSL's product development manager. Collectively, their professional involvement as mixing engineers, designers, inventors and builders spans some 35 years of experience behind, beneath and inside of audio consoles and studio computers.*

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—FROM PAGE 105, **INDIE INDEX**

list of indies with all sorts of products from African to comedy to rock to sound effects. Each listing includes the types of music (or whatever) offered, the names of its artists, a brief comment, catalog information, and details of one title.

One pass through these pages yields dozens of interesting prospects. A few examples: Catskill Mountain Records offers "minimalist hammer dulcimer" in addition to contemporary acoustic music. Crypt Records releases "primitive, raw, raunchy, rare rockin' teenage garage punk from '65, '66, '67 (no psychedelia!)." For a subscription price of \$50 per year, Fast Folk releases ten compilations of new songs by "contemporary singer-songwriters." Steel guitarist Pete Drake's First Generation Records pushes old greats such as Ernest Tubbs, Ferlin Husky, and Charlie Louvin.

The Library of Congress' Motion Picture Broadcasting and Recorded Sound Division ("Uncle Sam's own label, and just as underpromoted as any

other independent," notes Schreiber) offers field recordings and compilations of music and poetry, including the work of Son House, Woody Guthrie, and Robert Frost.

Reference Recordings, "an audiophile's label," features 45 rpm LPs by the Kronos Quartet, Mavis Rivers and others, plus *Datos* by Mickey Hart, Airto and Flora Purim. And Zoar Records' catalog of "radical music, new music, new rock, and improvisation" includes *State of the Union—One Minute Each* by 34 Artists.

More than 200 record companies are listed, and Schreiber promises to assemble another edition in a year or so. *The Scouting Party Index* offers "access to thousands and thousands of remarkable recorded performances," and as such is a pretty cool way to spend five bucks. For a copy, send \$5 to Scouting Party Press, 343 Seventh Avenue, Brooklyn, NY 11215 (New Yorkers add 41 cents tax.) Independent record people who wish to be listed should contact Norman Schreiber at the same address. —D.G.

—FROM PAGE 113, **MVP**

award-winning videos creates a production level "high water mark" that must be met or exceeded on each production.

The excitement in music video is in the music. Fortunately there seems to be no stopping the flow of new and innovative musical artists on the domestic and international music horizon. Mr. Mister, a-ha, 'til tuesday, Tears for Fears, Simple Minds, WHAM, Sade, and Whitney Houston are some of the new artists who have added new life to the music scene. In each case, a series of music videos have been created to help project and portray these artists to new audiences. At the same time established artists like Aretha Franklin, Dire Straits, and Tina Turner have all benefitted by imaginative and occasionally inspiring video productions. Hopefully, 1986 will bring a higher level of industry professional support and equitable participation for the people who bring the "vision" to music video. ■

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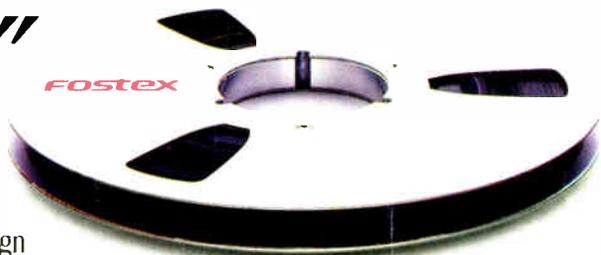
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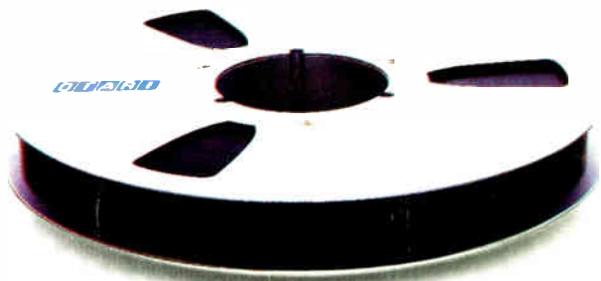
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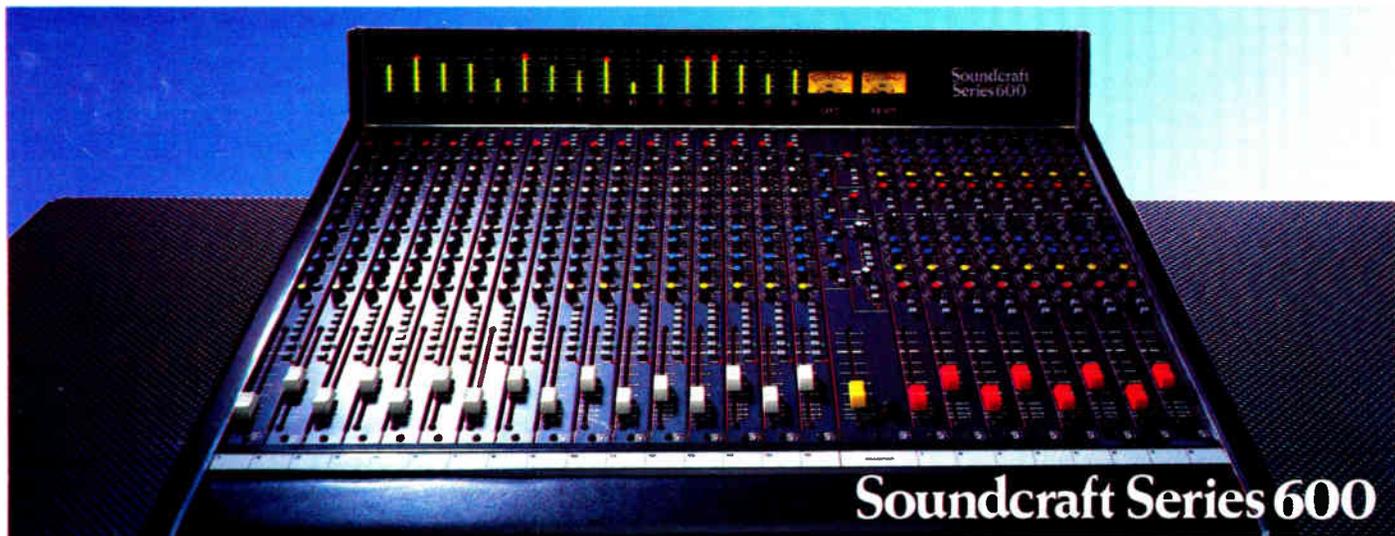
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