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THE RECORDING INDUSTRY MAGAZINE

Mix

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World Radio History



Cover:
Crescenda Recorders, in Atlanta, with over forty gold and platinum albums in its past, has upgraded all their audio facilities and added a state-of-the-art 3/4" 1" master computer-controlled editing suite with 46 track audio interlock.

Photo by:
Robert Simone

Corner photo by:
David Holzman

APRIL 1983

VOLUME SEVEN
NUMBER FOUR

The Mix is published at 2608 9th St., Berkeley, CA 94710 and is ©1983, by Mix Publications, Inc. This is Volume Seven, Number Four, April, 1983. The Mix (ISSN 0164-9957) is published monthly. Subscriptions are available for \$24.00 per year. Single or back issue price is \$3.00. Subscriptions outside U.S.A. are \$28.00.

Please address all correspondence and changes of address to the MIX, 2608 Ninth St., Berkeley, CA 94710 (415) 863-7901.

Controlled circulation postage paid at Berkeley, CA and additional mailing offices.

The Mix is distributed in recording studios, pro audio stores, music stores and other related businesses. If you have a recording or music related business and would like to distribute the Mix, please give us a call. Display advertising rates, specs and closing dates are available upon request.

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CURRENT

Industry-Wide Consumer Purchase Data Issued by RIAA

The first industry-wide market trend information study on consumer purchases of records and prerecorded tapes has been released by the Recording Industry Association of America, Inc. (RIAA).

The initial publication is a three-year trend report spanning 1979, 1980 and 1981, prepared under the direction of the RIAA Market Research Committee and with the cooperation of the National Association of Recording Merchandisers (NARM).

Prepared for RIAA by NPD Research, Inc., with data drawn from a representative nationwide panel of 13,000 families, the information will be updated annually, with 1982 input available this spring.

"Consumer Purchasing of Records and Prerecorded Tapes in the United States" examines buying habits for the total market, and includes the retail and direct marketing sectors; offers in-depth consumer profiles for each sector based on age, sex, race, region and music type; and provides a brief overview of gift-purchasing trends.

The survey is divided into five parts:

"Trends in Market Size" examines total industry shipments and dollar volume, with separate breakdowns for the retail and direct marketing sectors. "The Retail Sector" looks at product configurations, purchasing trends and consumer profiles through purchases made from record and tape clubs and direct mail outlets. "Profile of the Consumer by Music Type" highlights consumer profiles for specific music formats, as defined by buyers. "Gift Purchasing of Records and Tapes" encompasses trends in retail and direct marketing sectors. The report was designed and produced by Cambridge Graphics.

Highlights from the survey include:

- Unit shipments in the total market have declined 13 percentage points from 1979/81, according to RIAA, with a drop from 683 million to 594 million units. While retail dollar value of these RIAA shipments has declined slightly from \$3.676 billion to \$3.626 billion over the same time period, this decline represents a drop of 9 percentage points in real, inflation-adjusted dollars.

- Cassettes have captured a greater share of the consumer market, as defined by the

NPD data, eclipsing 8 tracks and making inroads against LP sales. Over the three-year period, cassette sales increased from 7% to 18% of the retail market, and from 16% to 26% in the direct marketing sector. Cassettes bought as gifts made up 23% of all cassette purchases in 1981 up from 20% in 1979.

- The record buyer is getting older. In the retail sector over the three-year period the 15-19 year-old segment dropped from 23% to 18% of the buying public, while the 20-24 year-old segment increased from 23% to 27%, and the 25-34 year-old group increased from 25% to 26%. More dramatic, in the direct marketing sector, 44% of all buyers were over 35 in 1981, compared to only 24% from this age group in the retail sector.

- Rock music has only slightly increased its share of the retail market over the three years, from 42% to 43%, but country music sales have increased from 9% to 14%. Black/disco music has dropped sharply in the retail pie, from 14% to 7%. In the direct marketing sector, rock music still leads with 29% of sales in 1981, but country music has grown from 20% to 24% of the market and classical has increased from 4% to 7%.

To obtain a complimentary copy of the three-year survey, and for further information, contact: Stephen Trauman, Executive Director, RIAA, 888 Seventh Avenue, New York, NY 10106, (212) 765-4330.

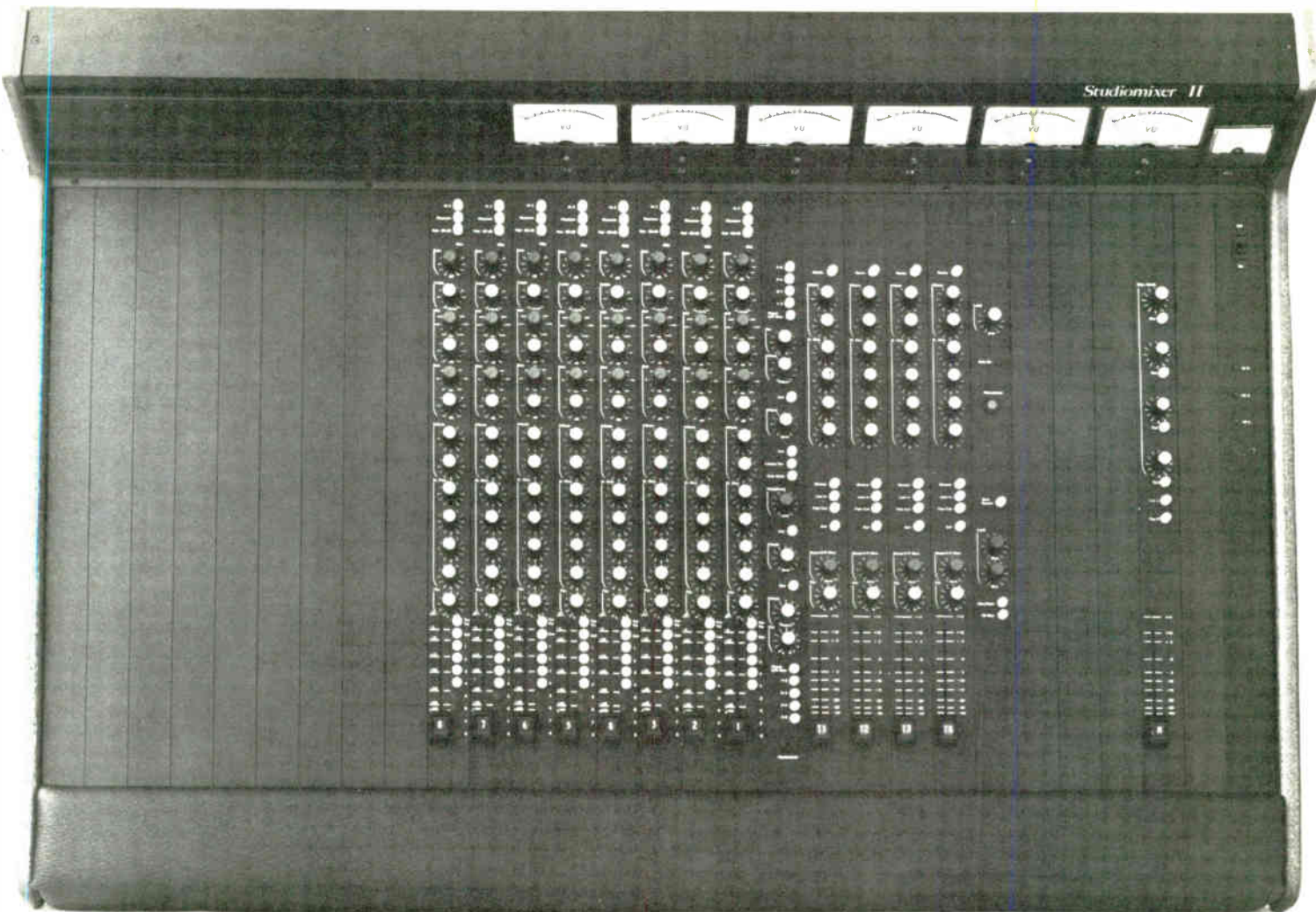
notes

Soundstream, Inc. has announced a major expansion of their digital recording and editing facilities, located on the Paramount Studio lot in Hollywood, CA. The facility will now offer additional 2, 4 and 8 track digital recording gear, and comprehensive digital editing capability. . . . The **NSCA Contractor's Conference** will be held May 3-5 at the Las Vegas Convention Center. The event will feature over 60 hours of technical and management workshops, and an expo of new tech/high tech equipment. Discount hotel and airfares are available. Contact the National Sound and Communications Association, 5105 Tollview Drive #201, Rolling Meadows, IL 60008 (312) 577-8450. . . . The **Calzone Case Company** have expanded their national network of representatives for their line of musical instrument, pro audio and audio-visual video cases. For more information, contact Calzone Case Co., Box 862, S. Norwalk, CT 06856. . . . **Quad/Eight Electronics** has named Mr. **Tracy Battle** as their director of marketing. . . . The west coast sales office of **Gotham Audio Corporation** and Gotham Export Corporation will be located on the premises of Quantum Audio Labs, Inc. a company recently acquired by Gotham. The new ad-

dress is 1909 Riverside Drive, Glendale, CA 91201 (213) 841-1111. . . . **Donald V. Kleffman**, vice president and general manager of **Ampex Corporation's** Audio Video Systems Division, has been assigned to the International Division to assume greater worldwide responsibility for the company's video business segment.

Evans Sales and Marketing, of Nashville, TN, have been appointed representatives for **Sound Technology** and will be responsible for all Sound Technology markets in the states of Alabama, Mississippi, North and South Carolina and Tennessee. . . . **John Loeper** of **Flanners Pro Audio** announced that due to the expansion of their business, Flanners has moved to new quarters at 2323 Bluemound Rd., Waukesha, WI 53186. The new building is more than double the size of its predecessor. Flanners has also computerized its operation, increased the size of its service facilities, and plans to open a fully functional demo room in late Spring. . . . **Noel Lee**, founder of **Monster Cable**, manufacturer of high-end connecting wire for hi-fi and car audio systems, has promoted **Tim Francis** to National Sales Manager, and **Bruce Brisson** has been appointed Director of Research and Development. . . . The

Dallas Communications Council, a trade association of over 600 individuals and media businesses in the Dallas/Fort Worth area, has just completed its first year of operation. For information on the DCC, call (214) 934-8930. . . . After 14 years, the **National Audio-Visual Association** (NAVA) has changed its name to "NAVA: The International Communication Industries Association." The move reflects the widening scope of member technologies into new fields, such as computers and video. . . . **Martin Audio**, the New York based audio video sales and engineering facility, has added **Randall Sanderson** and **David Prentice** to its staff. . . . **Paul Murphy**, General manager of **Beyer Dynamic Inc.**, has announced the appointment of **Tony Hawkins** as National Sales Manager. . . . **Michael P. Oravec** has been named vice president, management information systems for Sony Corporation of America. . . . **Sound Workshop** has expanded its product lines to include a variety of new equipment specifically for broadcast production. New modules and interface packages designed for the Series 30 and 40 mixing consoles are available now and will be exhibited at the NAB Convention.



Announcing Some Major Changes

The first is our name. From May of this year onward, **Studiomixer** will be known by the new trademark of **TMS Studiomixer**. We hope that **TMS** will substantially identify us as from other products available in the mixer marketplace. Our quality and features already do.

Secondly is our product line. **Studiomixer II** is being joined by two new consoles. The first is a small, standard 19 inch rack mount unit which is still *Totally Modular* and economically priced. With a maximum of 4 submasters and 3 auxilliary busses, this mixer can accomodate most small recording studios and club bands, or even be used on location for cinema or television production with our portable power supply, also rack mounted. And with another rack kit, it can more than double its module complement. Our new top line console will be the serious recordist's dream. Known as the **TMS Studiomixer III**, its in-line format will offer expansion to 24 outputs if desired with 6 auxilliary busses, VU meter or optional liquid LED metering, and tantalizingly priced at about \$12,500 for a 30X24X6X2.

The third change is to several of our specifications. We have begun using a 5534 chip at crucial stages in the console circuitry and can now boast a minimum signal-to-noise ratio of 83dB throughout the product line, a 7 dB improvement from previous models. Our consoles perform with virtually no slew limiting, input through output, at +4 or -10dB, and with either balanced or unbalanced outputs. Quiet, reliable mixers in any price range.

With these exciting new changes, **TMS Studiomixer** now offers something for everyone, including existing **Studiomixer II** owners. Any console we have sold thus far can be upgraded to our current, improved specifications. And we'll even put a new **TMS** logo on your existing console! We promised you that we would continue with our *Totally Modular* philosophy. With our two new consoles and our continuing personal attention to each of our customers, we hope to be able to welcome many sound professionals to the ranks of our satisfied, **TMS Studiomixer** users, soon.

TMS Studiomixer
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(714)630-6611

World Radio History

NORTHEAST

At the *Sound Cottage*, Port Jefferson, NY, work is under way for *Phil Liquoris* demo project. **Andy Watson** is putting the finishing touches on his endeavor. . . . The creative team of **Franklin-Douglas Recording Studios** in Port Washington, NY, has just completed another original music score for Eastern Airlines' Corporate Communications Division. The multi-media soundtrack was composed and produced by **Doug Wood** with **Frazer Henry** behind the board. . . . Recent activity at *Electric Lady Studios* in New York City includes, in Studio A, **August Darnell** producing *Kid Creole and the Coconuts*. Engineered by **Mike Frondelli** and assisted by **Ed Garcia**. . . . At *Sigma Sound Studios* in Philadelphia, PA, a new group from Philadelphia called *Rainbowe* is cutting tracks for a project being produced by **Norman Harris** and **M.E.J. Productions**. . . . At *Comfort Sound* in Toronto, Ontario, the cast of 'Barnum' recorded some demos while in town for a three week stint at the Royal Alex. . . . At *Minot Sound Studios* in White Plains, NY, **Dave Sanborn** has started his latest Warner Brothers album with **Michael Colina**, **Ray Bardani**, and **Marcus Miller** producing and Bardani engineering. . . . At *Spectrum Recorders* in Lanesborough, MA, **Rich Dewing** and **Skip Baker** have two of their tunes in the can and the next two toward the album are presently being completed. Engineering by **Peter Seplow**. . . . In Boston, at *Syncro Sound Studios*, **Ministry** finished up their album for Arista Records, produced by **Ian Taylor** and **Vince Ely**, engineered by Taylor and assisted by **G.S.** . . . The *Aura Sonic* Mobile out of Flushing, NY, was on location at Network in Island Park, Long Island for the taping of *Polrock* with chief engineer **Steve Remote** mixing the date. . . . The *Greencastle Band* are recording their second album at *DunRaven* in Narragansett, RI. The album is being produced by **David Stewart-Smith** of DunRaven who is co-engineering with **Michael Reilly** of Greencastle. The album is to be distributed through Philo-Alkazar in Vermont.

At *Squires Productions* in White Plains, NY, **Greg Squires** continues to produce and record the Handel Festival Orchestra of Washington, D.C. and the New Jersey Symphony using the Sony and JVC digital systems. . . . At *Sound-Scape Studios* in Farmingdale, NY, **Bernie Felton** has just completed his first single already released on MCA Records, entitled "Fired, Laid Off, Terminated, Let Go." Produced by **Lamar Thomas**, executive producers **Sammy Lowe** and **Laura Greene**, with **Bob Lessick** engineering. . . . At *Chelsea Sound Studios* in New York City, Academy award winner **Keith Carradine** is recording songs from his current Broadway hit, 'Foxfire.' **Jonathan Holtzman**, musical director and composer for the show, is producing along with **Roger Mason**. **Phil Bulla** is engineering and **Mike Allaire** is assisting. . . . At *39th Street*

Music in New York City, **Amy Bolton** is recording her upcoming release for *Cyclops Records*, **George Wallace** and **Jimmy Bralower** producing and **Steven Guardigli** engineering. . . . At *A&R Studios* in New York City, **Lynn Stanford**, pianist for the New York City Ballet, recorded four LP sides of classical music for Bodarc Productions, Dallas, TX. Produced by **Tim Roberts** and **Robert Weigel**. Engineered by **Alan Silverman**. . . . At *Trod Nossel Recording Studios* in Wallingford, CT, **Dave Watson** mixed "Save the World" and "Hey Girl," completing these songs for a single release. **Mike Aldieri** and **Steve King** produced several country-styled songs for Good As Gold Records. . . . At *Blank Tapes* in New York City, **Mark Kamins** mixing "Pulsallama" for Y Records and "Galaxy" for Island Records. **Butch Jones** engineering. . . . At *Le Studio* in Morin Heights, Quebec, **Asia**, with **Mike Stone** producing and co-engineering with Le Studio's **Paul Northfield**, **April Wine** and **Rush**. All the groups are mixing on Le Studio's JVC digital recording system. . . . **Fredrix Clark** and **the Immigrants** have released a single from their debut LP "Reasons." The single "Asia" b/w "Doin' the Immigrant Rock" is also on Free Soul Experience Records. Both were recorded at *Unique Studios*, NYC, and engineered by **Mike Finlayson**, produced and arranged by guitarist vocalist **Fredrix Clark**. **The Sharks**, a seven piece rock and roll band from Albany, NY, are proud to announce that their debut EP, "Shark Treatment," will be released in early spring on Blotto Records. The project was produced by **Broadway Blotto** and engineered by **Mark Ernst** at *M.C.E. Studios* in Schenectady, NY. The tracks were mastered at *Masterdisk* in New York. . . . Session activity at *Kajem Studios* in Gladwynne, PA, includes **Dave Whitman**, engineer for **Foreigner 4** and **Kiss**, among others, is producing and engineering an EP for Philadelphia's *Witness*.

SOUTHEAST

Lucky Pierre recently entered *Eddy Offord Studios* in Atlanta, GA, to begin work on their first recording project. Producing the sessions is **Chuck Allen**, who is also engineering the tracks. . . . At *Stargem* in Nashville, TN, Warner Brothers recording artist **Hazard** was in working on some new material. Producer **Eddie Kilroy** and **Tom Pick** were in recording **Poodles'** new release. . . . At *West Wind Studios* in Augusta, GA, the new Western Sizzlin' Steak House jingle has just been completed. It was written, produced, and engineered by **Robbie Ducey** of Augusta. . . . Opera star **Placido Domingo**, at *Criteria Recording* in Miami, FL, recording vocal overdubs for an album on CBS Masterworks. **Milton Okun** produced with **Bob Castle** engineering. . . . Recent activity at *Web IV Studio* in Atlanta, GA, includes **Peabo Bryson** producing tracks for the upcoming Roberta

Flack/Peabo Bryson duet album; **Ed Seay** and **Tommy Cooper** are engineering. . . . At *Compass Point Studios* in Nassau, Bahamas, the *B-52's* are back at Island Records' recording studios with **Steve Stanley** (Tom Tom Club) producing. . . . At *Soundshop* in Nashville, TN, MCA's **Lee Greenwood** in the studio finishing up his new LP with producer **Jerry Crutchfield**, and **Ernie Winfrey** engineering. . . . At *Catfish Bay Sound Studio*, Nashville, TN, gospel saxophonist **Harold E. Thomas** from Macon, GA, cut an instrumental album for the H.S.E. label; engineer **Chuck Emery** remastered **Little Richard's** "God's Beautiful City" LP for release by Black Label Records. . . . Members of the **Allen Collins Band** were at the *Wishbone Studio* in Muscle Shoals, AL, recently overdubbing the Muscle Shoals Horns on their upcoming MCA album. . . . **Artisan Recorders, Inc.** out of Pompano Beach, FL, provided production and post-production services for the latest *Florida Mass Choir* album project entitled "You Can Be Saved," their fifth live recording session. The Artisan Mobile Unit recorded the choir and orchestra live at the Emmanuel Missionary Baptist Church in Jacksonville, FL. **Peter Yianilos** engineered with assistance from **Kevin Ryan** and **Rey Monzon**. *Soundshine Productions* in Ft. Lauderdale, FL, has been busy recording with key-boardist-percussionist **Gary Mayone**. **Mark Wicker** has just completed a song called "Music Box" which has made its way to the finals of the Country Songwriter's Contest. . . . At *Music Mill Studios* in Nashville, TN, **Harold Shedd** finishing new album on **Mel Tillis**, **Jim Cotton** engineering. Shedd has also been cutting new tracks on **Marlow Tackett**; **Jim Cotton**, **Joe Scaife** engineering. . . . Activity at *Emerald Sound* in Nashville, TN includes Warner Brothers recording artist **Conway Twitty** with **Jimmy Bowen/Conway Twitty** producing, **Ron Treet** and **Steve Tillisch** engineering. . . . At *Bullet Recording*, Nashville, TN, **Kevin Gillis** and **John Stroll** of Evergreen Raccoon Productions mixing the soundtrack of "Raccoons and the Lost Star," and animated television special featuring the voices of **Dottie West** and **John Schneider**. **Scott Hendricks** and **Holly Peterson** are engineering.

NORTH CENTRAL

At *Gnome Sound Studio* in Detroit, MI, MCA Recording artists **The Automattix** finishing up their debut LP recorded on Gnome's new Soundcraft console and 24 track recorder. Production team for that project was **Jerry Jones** and **Bruce Nazarian**, the two founding members of the group. Engineered by **Warren Woods** and **Bruce Nazarian**. Additional recording for the project at *The Sound Suite*, Detroit, and all tracks mixed at *United Sound*, Detroit. . . . In Cincinnati, OH, at *QCA Recording Studios*, **Pure Prairie League** is in recording with engineer **Ric Probst**. **Adrian Belew** producing debut album by the raisins on

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THE AMPEX SOUND

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Struggle Baby Records with **Gary Platt** engineering. . . . At **Tantus Studio**, Detroit, MI, **John Jeromin's** soon to be released single "Winter Rose," featuring **Miss Lisa Rett**, is receiving final touches by co-producers **Tanis Tramontin**, **Michael Talley** and **John Jeromin**. Engineering this single is **Tanis Tramontin** and **David Schreiner**. . . . At **Audio Village** in Bloomington, IN, **Dillon Bustin** has completed tracks for his album of original old time music. Playing on the sessions were guitarist and singer **Bob Lucas** of Electricity, **Peter Southerland**, and **Malcolm Dalglish** and **Gray Larsen** of the Dalglish Larsen Band. The project was produced by **Gray Larsen**. . . . At **Studio A**, Dearborn Heights, MI, new wave artist **Bruce Michaels** producing a single on himself to be released on **Body Records**. Pop singer **Leona Scott** cutting new material for her first album. **Eric Morgeson** behind the console for both projects. . . . Recent activity at **Studiomedia** in Evanston, IL, includes: **Brad Yost** of **Outrage Productions** engineering and producing demo projects by singer/songwriter **Cliff Holm** (4 songs), and Chicago band **The Mix** laying a 5 song demo for **True Art Productions**, with **Brad Yost** engineering and co-producing with the band. . . . At **Chicago Recording** in Chicago, IL, **The Kind**, the Chicago rock band who penetrated many leading radio station playlists throughout the nation with their premiere album, is working at **CRC** with producer and engineer **Craig Leon** (whose credits include **The Ramones**, **Moon Martin**, **Rodney Crowell** and **Doug Sahm**) on their second LP for **360 Records**.

SOUTHWEST

Country recording artist, **J. David Sloan** and his band, **The Rogues**, are currently recording their debut album at **Chaton Recordings** in Scottsdale, AZ. Working with them is veteran producer **Billy Williams**, and although **J. David** is no newcomer to the studio, this is his first solo attempt. **Ben Taylor** and **Steve Moore** are sharing the engineering duties. . . . **Rosewood Studios**, Tyler, TX, is working on a first album for **Susie Nelson**, Willie Nelson's daughter. Producing is **Tim Gillespie**. Engineering is **Greg Hunt**. Album is being recorded for **Delta Records**, Nacogdoches, TX. . . . Artists **Brook Benton**, **John Nash**, **Arthur Prysock** and **Ed Townsend** have united for an album on **Legend Records** at **Sunrise Sound Studios** in Houston, TX. **Ed Townshend** producing, **Les Williams** engineering. . . . Following their recent live release, **The Planets** are busy at **Dallas Sound Lab** in Dallas, TX, on their upcoming album with engineer **Johnny Marshall** and **Paul Rogers** producing. . . . In Tulsa, OK, at **Long Branch Studios**, producer **Tom Claiborne** is laying tracks for new pop/rock group **Rajah** from New York City **Danny Goldberg** of **Modern Records** is assisting with **Bill Belknap** behind the board.

NORTHWEST

At **Music Annex** in Menlo Park, CA, **Darwin Gross** recording for **Eckankar** with **Al Harris** and **Rodney Jones** producing, **Russell Bond**, engineer. Also, for **Eckankar**, **Jerry Leonard** recording music tracks. . . . At **Forte Studios** in Tigard,

OR, **Buzz Clifford**, who had the 1961 hit on Columbia records, "Baby Sittin' Boogie," is in sessions cutting demos for possible disk release. His lineup includes himself on guitar and lead vocals; **Bruce Bye**, bass; **Mike McLean**, keyboards, vocals; **Walter Bruhn**, drums, percussion, vocals, chief engineer. . . . At **Ultra Sound Studios** in San Jose, CA, **David Sweet** of **Jingles Etc.** is in the studio recording a jingle for **Big Brothers** organization. The jingle is featuring **Joe Cambra** on lead vocals with **Skip Cramer** engineering and **Derek Jones** assisting. . . . **The Residents**, just off a national tour, mastered the live album at **Sonic Arts** in San Francisco, CA. This follows the release of "Mark of the Mole" and "Tunes of the Two Cities," all on **Ralph Records**. . . . At **Rhythmic River** in San Francisco, CA, **Rayos-x** has assembled a five song EP featuring top musicians from both coasts. Featured artists are **Dan Lauter** on sax and keyboards, **Chris Cunningham** of **New York's James White & The Blacks** on **Chapman Stick**, and ace drummer **Paul Revelli** of **Red Seven**. . . . **Police** drummer **Stewart Copeland** is working continuously on a secret project at **Tres Virgos Studios** in San Rafael, CA. **Robin Yeager**, **Gordon Lyon** and **Robert Missbach** engineering. . . . At **Montage Studios** in Newark, CA, recent projects include an album for **Doug Baker** soon to be released on **Tina Records**, **Will Mullins** producing and engineering with **Dave Hartzheim** tracking basics. . . . At **Triad Studios** in Redmond, WA, **David Maddux** producing LP project for **Pat Pfeiffer** and extended mixing for **The Allies** complete; **Dave Kincaid** producing. . . . At **Bear West Studios** in San Francisco, CA, **Jennette Sartain** recording her new project with **Robin Sylvester** engineering, **Derrick Youman** working with the studios' new **MCI 24** track, **Mark Needham** engineering. . . . **Peekaboo Mountain Studios** in Colfax, CA, has **Bob Woods Hillbilly Cadillac** following up their album of a year ago with a four song EP, **Jeff Hester** engineering. . . . **Corasound Recording** in San Rafael, CA, recently remastered and edited a compilation album of Bay Area talent for **RPM Magazine**. **Jalaeeddin** has just completed an album of Middle Eastern music to be released in April, engineered by **Mikey Razor**

SOUTHERN CALIFORNIA

The Ivar Studios, in Los Angeles, (formerly **Wally Heider Studios A, B, and C** in the **RCA** building), now under new management, has **Leon Sylver's** group **Wet Betty** in with **Joey Gallo** producing and engineering and **Kirk Ferraioli** assisting. . . . Composer **Bruce Broughton** is at **Evergreen Recording Studios** in Burbank, recording his main title for the pilot of "Smithsonian Discovery Theatre." Producers of the show are **Michael Fields** and **Michael Young**. Engineer is **Murray McFadden**, assisting is **Gary Luchs**. . . . At **Soundcastle** in Los Angeles, **Tommy Tutone** has been in mixing a new record for **CBS Records**. **Ed Thacker** producing and engineering; **David Marquette** assisting. . . . At **Salty Dog** in Van Nuys, artist **Michael Smotherman** is in with producers **Joe Sample** and **Wilton Felder** for **Crusader Productions**. **David Davore** is engineering the **Epic Records** project. . . . Fu-

sion group **Slider-Glenn** is tracking at **Skyline Studios** near **Malibu**. **Britt Bacon** engineering, **Dan Slider** producing. . . . At **Magnolia Sound** in North Hollywood, **Chrysalis** recording artist **Leo Kottke** is recording his next LP, **T Bone Burnett** producing. **Warner Brothers' Delia Bell** is recording an LP with **Emmylou Harris** producing. . . . At **Sunset Sound** in Hollywood, **Doobie Brothers** percussionist **Bobby La Kind** producing album for Japanese rock megastar **Eikichi Yazawa**, singing in English. **Bobby** playing percussion and adding vocals. **John McFee** and **Richie Zito** on guitars, **Dennis Belfield** on bass, **Alan Pasqua** on keyboards, **Keith Knudsen**, **Jeff Porcaro**, and **Rich Shlosser** on drums, **David Morgan** engineering. . . . At **Spindletop** in Hollywood, producer **Steve Sykes** is currently working on a new album with artist **Rick Sandler**. Also in is **Banner Records** group **Red Zone** with producer **Richard Copeland**. . . . **Geffen** recording artists **Berlin** mixed their newly released single and 12" dance single "Sex," at **Gopher Baroque Studios** in Westminster. . . . **Serafine FX Studios** in West Los Angeles has just completed production of music, sound effects and production mixing for **Faerie Tale Theatre's** "Jack and the Beanstalk," produced by **Shelley Duvall** for **Showtime Cable Network** and several nationally televised commercials for **Chrysler**, **Suzuki** and **Pacific Stereo**. . . . At **Westwood One Recording** in Los Angeles, **Frank Marino** in recording and mixing, with engineer **Biff Dawes** and producer **Richard Kimball**. . . . Singer-songwriter **Chris Bennett** has just completed final work on her first major recording sessions at Hollywood's **Sound Labs** studios. **Tom Saviano** produced, with engineering by **Juergen Koppers**. . . . At **The Complex** in West Los Angeles, **George Massenburg** is engineer for **The Tubes**, who are mixing selected tracks of their upcoming **Capitol** album in the studios. **Massenburg** is being assisted by **Robert Spano**. **David Foster** is producing the project. . . . At **Sound City Studios** in Van Nuys **Ronnie Dio**, formerly of **Black Sabbath** and **Rainbow**, is producing his first solo LP for **Warner Bros.**, with **Angelo Arcuri** engineering and **Ray Leonard** assisting. . . . At **A & M Studios** in Hollywood, **Henry Lewy** is producing and engineering **Jude Johnstone's** debut album. Mixing will also be completed at **A & M Studios** by **Henry Lewy** and **Skip Cottrell**. . . . At **Larabee Sound** in Los Angeles, **Marvin Gaye** in recording for **CBS Records** with the production of **Harvey Fuqua**. Engineering is **John Kovarek** and **Judy Clapp** assisting. . . . At **Skyline Recording Studio** in **Topanga Canyon**, **TSB** (The Street Band), **Jamal**, **Miss Patrice** all in mixing singles for **Scuzzie Gulch Productions** and **All the Sound Production You Can Ink**, with producers **Dale O. Warren** and **Vicki Gray**, co-producers **Ira Leslie** and **Ananias "Bubba" Chambers**, and engineering by **Ira Leslie**. . . . **Papa John Creach** recording new album at **Dr. Music Studio** in Hollywood. **Kurt Farquhar** producing, **Peter Hirsch** engineering straight-ahead pop rock album with the venerable father figure of that Ol' San Francisco Renaissance. . . . At **Group IV Recording** in Hollywood, reed player **Tom Scott** laying tracks for new **Electra Asylum Records** single, "Winds of War," with engineer **Hank Cicalo**, assisted by **Steve Burger**.

studio news

Wine Tree Village Recording Studio in Claremont, CA, celebrated its grand re-opening in March. New equipment includes a Harrison Series 4 console, 28 x 24 complete with A.R.M.S. automation (the first Series 4 installed in California), a Lexicon 224X digital reverb with the newest 8 E update, Otari MTR 10 master recorder, new Yamaha C7 grand piano, and a selection of vintage tube mikes, including Neumann U47 and M49. Acoustical design by *Brian Cornfield* of Everything Aven. *Mushroom Studios* in Vancouver, B.C., Canada, announces the immediate availability of a wide spectrum of

services based on the Fairlight CMI Music Computer through *Audio-Digital Inc.*, the sound creation and musical production company of Vancouver composer/producer Jean Piche. Producer/owner *Derek Jones* of *Ultra Sound Studios* (San Jose, CA) has assumed *Skip Cramer* to the position of Chief Engineer. Skip, who has recorded many prestigious groups including The Younger Brothers, Jeff Larson Savannah, and soon to be released, Atlantic artist, The Royal Brothers, will be taking an active part as chief engineer and session director at the newly built studio. *Startrax* in Las Vegas, NV, announces that they are now a full 10-track studio with the recent installation of a new Soundcraft 762-24 recorder with full autolocation and all the options. *Rosewood Studios*, Tyler, TX, has recently installed all new MCI 24-track equipment, including JH 636 console, JH 24-24, and

JH 110B machines. Rosewood incorporates LED/E design control room with 3,000 sq. ft. facility. *Jim Williamson, Roy Clark, and CAC Investments* have purchased *Sound Emporium Recording Studios, Inc.*, one of Nashville's leading recording facilities. According to the new agreement, the Sound Emporium complex now consists solely of Studios A and B at 4102 Belmont Boulevard (the original Jack Clement Studios). All other interests have been deleted.

Mark Friedman, owner of *Battery Sound* in New York City, announces the upgrading of their facility with the installation of a Harrison MB 4, an Otari MTR 90-24 track, an MTR 10-2 track and a Lexicon 224X, all supplied by *Martin Audio*.

David Rubinson is pleased to announce the promotion of his longtime aide *Vincent Lynch* to Vice President/General Manager of David Rubinson & Friends, Inc. His current duties include the handling of all business and investment affairs for David Rubinson & Friends, Inc., including the Automatt Recording Studios, Adam's Dad Management and Judith Jukes. *A Square Studios* of Ann Arbor, MI, has recently installed a unique 56 input Neotek Series III C console. Besides the acquisition of a variety of new outboard gear and tube microphones, Al Hirschman, chief engineer, also reports the 8 E update of the studio's Lexicon 224X digital reverb.

Evergreen Recording, New York City, has recently acquired the Allison 65K programmer, completing the automation for their new Harrison MB 3.

Randy's Roost, one of Music Row's busiest record mastering facilities, has changed its name to *Disc Mastering Inc.*, effective March 1, 1983. The facility is equipped with Studer tape machines, a Neumann VMS 701 tape with SX 74 head, and a Neumann SP75 console with Neve 2087 custom equalizers.

Kewall Recording & Records in Bayshore, NY, announces they have added a new Story & Clark baby grand piano to their studio. *Strawberry Jamm Recording Studio*, West Columbia, SC, has just installed a new JBL 4435 bi-racial monitor system.

Spectrum Recording Studios, Inc., in Deerhold Beach, FL, has upgraded to 24 tracks with an MCI JH 114 (with Autolocator III) recorder and additional IO modules for their Sound Workshop Series 30 console. Spectrum is managed by *Ray Lyon* with *Michael Grosso* as chief engineer. *Midnight Modulation* in Saugerties, NY, has recently upgraded from 8 to 16 tracks in a new studio. *Michael Bitterman*, owner and chief engineer, designed the new studio, which features a ceiling that can be opened for a live sound or closed for a dead sound. New equipment includes a Sound Workshop series 30, a Tascam 85 16B, Otari 5050B, Urei A Major reverb and a Lexicon delay.

Rocshire Records in Anaheim, CA, begins construction of second studio and audio video sound stage. Design and construction by *Lakeside Associates*, Irvine, CA. *Joe Tarsia*, president/owner of *Sigma Sound Studios*, announces the promotion of *Debbie Knetz* from media services coordinator to studio manager for the Philadelphia, PA, studios. *Unique Recording* in New York City, announces the opening of Studio B. The new 24-track facility includes an Otari MTR 90, outboard, and instruments in the Unique tradition. A new MTR 90 II was also installed in Studio A.

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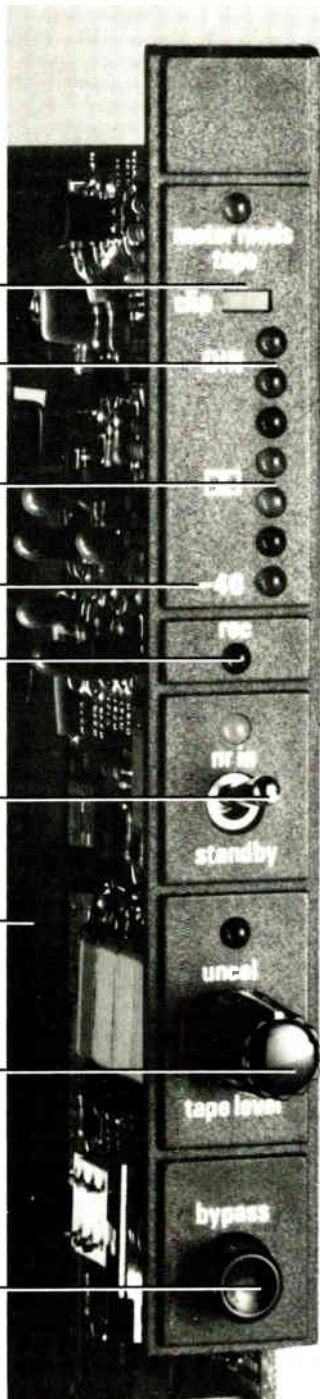
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Prospects

for

Stereo Television

not too great, but awfully good

by Mark Schubin

In the beginning there was music, and people heard it, and it was good. Then came cylinders and disks and, if they didn't sound as good as live musicians did, at least they were easier to take home. After records came radio, and music, interspersed with crackling static in a loose pair of headphones, was heard simultaneously by millions.

Then, in 1941, the first commercial television license was issued. The first television sets seemed to concentrate as much on sound as on pictures. Television sound was (and is) transmitted on an FM carrier for improved quality. Some television sets used completely separate receivers for the sound signals and the picture signals; virtually all had powerful amplifiers and large, state-of-the-art speakers. For many years television set speakers were larger than tele-

vision set pictures.

Over the years both television technology and sound technology improved; television sound technology didn't. Foil-coated cylinders begat smooth vinyl disks; crackling crystal radios begat FM stereo tuners; tiny black and white pictures in huge cabinets begat giant color pictures in small cabinets. And the powerful amplifiers feeding the large television speakers? They begat the now-classic "ten cent amplifier feeding a three-inch speaker."

The stunted growth of high-fidelity television sound can be ascribed to two trends in the television industry: the change in the status of a television set from a luxury to a necessity, and the growth of television networks. The first trend forced television sets to get smaller and cheaper. A smaller television set meant a smaller speaker; a cheaper set generally meant cheaper amplifiers and

speakers, and receivers that used as much common circuitry as possible between their picture and sound sections.

The second trend created the famous "vicious cycle of blame" for poor television sound. When television set manufacturers were asked why they didn't offer television sets with high fidelity sound sections, they pointed at television stations, broadcasting low fidelity sound. The statement was true enough. Up until 1979, virtually no television station broadcasting a network signal offered a frequency response better than 100 Hz to 5,000 Hz — many television stations considered themselves lucky if they could broadcast as little as 200 Hz to 3,500 Hz, little better than the fidelity of a telephone call!

Television stations, of course, pointed the finger at those responsible for network transmission, primarily the Long Lines Department of AT&T. And AT&T, for its part, asked why it should spend millions of dollars improving network transmission lines, just so stations could broadcast to ten cent amplifiers feeding three-inch speakers.

Of course, the vicious cycle wasn't the only factor contributing to the decline in television sound quality. In 1956, Ampex introduced the first commercially successful videotape recorder. Its ability to record and play pictures was considered so miraculous that the sound quality was not a major consideration. The standard of recording that was introduced by that machine lasted for more than 20 years, during which time television almost ceased to be a live entertainment medium entirely.

The prospects for improved television sound brightened considerably in the 1970s. In 1971, AT&T first demonstrated the capability to transmit high fidelity, stereo sound along with a television program by superimposing the sound on the video transmission channel in the form of FM subcarriers. In 1979, this technique, called "diplexing," was applied to all network television transmission, not only breaking the vicious cycle, but also putting television stations in the awkward position of enjoying better network sound quality than did radio stations.

Also in 1971, the Society of Motion Picture and Television Engineers (SMPTE) standardized a time code that could be recorded on a videotape recorder to allow it to be synchronized to another recorder. High-fidelity audio recorders synchronized to video recorders in this fashion made possible such early stereo television shows as ABC's "In Concert."

"In Concert" was a stereo tele-



vision show in the sense that it was a television show that had associated stereo sound. The stereo sound, however, was not carried by television stations. Instead, FM stereo stations broadcast the stereo portion of the show simultaneously with the television stations' broadcasts, a technique that became known as FM simulcasting.

FM simulcasting grew during the 1970s, aided by the expansion of diplexed television network lines, and by the development of stereo videotape recorders. In 1977, the SMPTE standardized a new videotape recorder, called Type C, that finally ended the reign of the type of recorder introduced by Ampex in 1956. All Type C recorders offer at least three audio tracks; European versions often offer four.

Still, FM simulcasting isn't necessarily the best way to offer stereo to television viewers. Some FM stations are reluctant to participate in simulcasts, for good reason. Many simulcasts are good television shows but lousy radio shows. What happens to listeners who aren't also viewers?

In 1978, Japan solved that problem by offering stereo television for the first time. A single television station transmits not only a picture signal, but also a fairly high-fidelity stereo audio signal. For the first time, stereo television shows could consist of material other than music. In fact, some of the most popular stereo television shows in Japan are those featuring sumo wrestling or baseball, where the stereo separation contributes to the viewer's sense of actually being at the event. Few FM radio stations would ever consider simulcasting a baseball game.

Since Japan uses precisely the same sort of television transmission system as is used in the United States, stereo television broadcasting here seemed just around the corner. In fact, television set manufacturers on both sides of the Pacific Ocean had received patents for a variety of stereo transmission schemes years previously.

The Electronic Industries Association (EIA) formed a multi-channel television sound committee to investigate the various systems proposed, and to recommend one of them for approval by the Federal Communications Commission (FCC). Besides a variety of noise reduction systems, three basic transmission systems were submitted to the EIA committee: the Japanese system, one proposed by Zenith, and another proposed by a company called Telesonics.

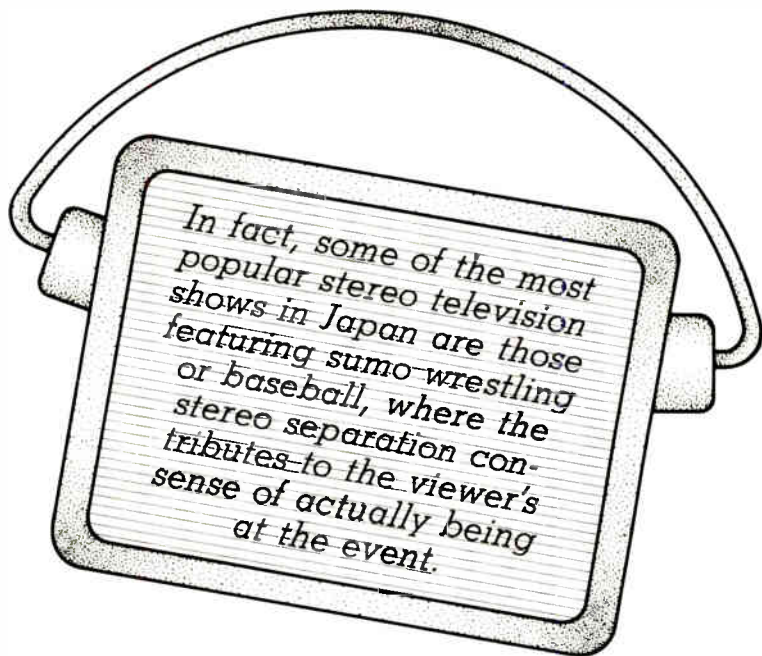
While the EIA was studying the various systems, West Germany became the second country in the

world to actually begin broadcasting stereo television, this time using a system totally unlike any of those being studied. Although no one insisted the EIA add the West German system to its tests, the committee was placed under a great deal of pressure in 1982 for other reasons.

One was the FCC "decision" on

sound in the near future. It opted for the latter course, shortly after Telesonics, which, unlike Zenith and Japanese set manufacturers, did not stand to make any money if its system was not chosen, questioned certain of the committee's procedures.

As an added surprise, cable television engineers studying the



the standard to be used by AM radio stations wishing to transmit in stereo. After initially deciding on a particular system and then backing off in the face of displeasure with that decision, the FCC decided to let "the marketplace" determine which AM stereo system to use. A few AM radio stations have begun broadcasting in different AM stereo systems, no commercial AM stereo receivers are being sold as this is being written, and AM stereo seems about as unlikely as ever to become successful in the near future.

On the issue of TV stereo, the FCC hinted in 1982 that it might let the marketplace decide on the choice of that system as well. Due to the vagaries of the American regulatory system, it seemed as though the work the EIA committee was doing was quite acceptable, as long as the objective was to present the FCC with facts to help it arrive at a decision. However, once the FCC issued a "marketplace decision," the EIA committee's work could be considered anti-competitive and subject to anti-trust investigation.

The EIA was thus faced with an awkward decision: either it could race to complete its work or it would actually have to plead with the FCC *not* to authorize stereo television

various systems began to suspect that any of the three systems chosen could cause significant interference problems on cable television systems. With roughly a third of the television viewers in the United States presently hooked up to cable and another third in a position to hook up whenever they want to, such concerns were not considered insignificant.

The end of 1982, therefore, saw the EIA testing all over again, the FCC about to abdicate responsibility (thereby, conceivably, making it impossible for the EIA to release its test results), cable television engineers biting their nails, and Grumman Aerospace muddying the waters still further.

At the 1982 SMPTE convention, Grumman, a newcomer to the video equipment field, described and demonstrated something called a "Rainbow Sound" system, capable of transmitting stereo sound without affecting those portions of the transmitted television signal that worried the cable television engineers. There is no indication yet about whether or not the EIA will study the Grumman system.

Cable television has, in fact, been at the forefront of stereo television work in recent years. On August 1, 1981, MTV: Music Tele-



vision, began transmitting rock music stereo television pieces 24 hours a day. Although it was not the first cable programming service to *offer* stereo sound, it was the first to *require* its cable television systems to carry it in stereo.

To a listener/viewer at home, receiving MTV in stereo is similar to receiving an FM stereo simulcast — the picture portion is picked up by a television set and the stereo sound is picked up by an FM tuner or receiver. Such cable simulcasts offer all of the advantages of FM simulcasts (such as the use of an FM sound carrier wider in bandwidth than a TV sound carrier is, and freedom from picture-related sound interference), and eliminate some disadvantages (there are no non-viewing listeners to worry about offending with a heavily visual show, and the cable-carried signal is free of multipath interference and is never too weak), though some cable television systems have a hard time getting the hang of cable FM transmission and hookups.

Warner-Amex, which owns MTV, also transmits stereo sound on its pay-TV service, The Movie Channel, whenever movies are available with stereo sound. Until its demise, CBS Cable was also transmitted in stereo, and so are a variety of other cable programming services (to cable systems, at least — only MTV insists on stereo transmission to subscribers). In fact, the satellite television channels feeding various television signals to cable systems are chock full of stereo signals, some having nothing whatsoever to do with the television pictures they're "riding" on.

On transponder number three of the most popular satellite serving cable television systems, one can find the pictures, and sound, of WGN-TV, a popular Chicago independent television station. On the same transponder (think of it as a television channel),

"riding" on the same pictures, however, one can also find the stereo signals of WFMT, Chicago's premier classical music station, as well as the stereo signals of five different radio networks, and one mono radio network. Stereo audio quality on network television transmission channels, even those not carried by satellite, is so good that radio networks are beginning to use television circuits, without pictures (the .38 Special New Year's Concert from Memphis was carried around the country on video circuits, the only picture being a sign, for the benefit of transmission technicians only, that said, simply, "Stereo Sound From Memphis").

Video transmission circuits, satellite channels, and stereo television stations aren't the only way that stereo television might enter homes, however. Besides other forms of electronic distribution—direct broadcasting satellites and fiber optics, for example—there are also videocassettes and videodisks.

Both videodisk systems presently on the market, the LaserVision format and the CED format, offer high-fidelity, stereo sound. Technically, there's little to fault in either system. The only problem with videodisks as the standard bearers for improved television sound is that, by most estimates, by the beginning of 1983, roughly 350,000 players of either type had been sold, cumulatively.

That may sound like a lot, but it represents considerably less than half a percent of the homes with television sets in the United States. At the same point in time, cable television served roughly 33%, video games were in roughly 16%, and videocassette recorders were in more than 6% — 5.3 million homes.

Videocassette recorders have not exactly been the harbingers of improved television sound quality. With tape speeds as slow as less than

half an inch per second and audio tracks just one millimeter wide, frequency response could typically fall to 8 dB below reference at as little as 3 kHz, with comparable noise performance. A few machines were introduced in 1982 offering stereo sound (by splitting that one millimeter track) with noise reduction, but the sound quality improvement seemed insignificant.

However, thanks to a process jointly introduced this year by Aiwa, Marantz, Nakamichi, NEC, Pioneer, Sanyo, Sears, Sony, Teknika, Toshiba, and Zenith, videocassettes may now offer the most astonishing quality yet associated with television sound. The process is called Beta Hi-Fi, and it applies the same sort of FM encoding techniques used in the video network circuits to stereo sound recorded on a Beta format videocassette. Instead of the audio "riding" above the video, however, it is placed between the picture details and the color. The sound is so good that one record company plans to release videocassettes that have no pictures on them at all, simply to take advantage of sound quality said to exceed both phonograph records and audiocassettes.

One very nice feature of the Beta Hi-Fi format is its cross compatibility. Since the stereo sound is recorded within the video tracks, the normal audio track can continue to be used for normal (actually not very good) audio. Thus, a Beta Hi-Fi tape can be played on an old Beta format recorder or an old Beta tape can be played on a Beta Hi-Fi machine. Alternatively, three unrelated audio tracks can be recorded.

Sony is pressing its Beta Hi-Fi advantage by getting into the tape distributing business, offering everything from MTV-like rock video "singles" to Vladimir Horowitz in the high fidelity format. However, Matsushita (Panasonic and Quasar), principal manufacturer of VHS machines, has already demonstrated a similar capability in a prototype.

Improved television sound? 1983 could be the year it happens, but there are some "ifs." If Beta Hi-Fi gets off the ground, if videodisk player sales improve, if stereo cable television proliferates, if cable television engineers figure out a way to keep stereo television from interfering with other channels, if the EIA recommends a single system to the FCC, if the FCC accepts the recommendation and does not ask for a "marketplace" decision, and if the Department of Justice doesn't find the whole business too fishy.

A lot to ask? Maybe. But it's been 14 years since the first person walked on the moon. ■

FRANK ZAPPA

31 January 1983

Mr. Tex Rudloff
Compact Video
2813 Alameda
Burbank, CA 91505

Dear Tex:

This is just a note of thanks to you and your entire staff at Compact Video's film dubbing facility for the extra care and interest taken on behalf of "BABY SNAKES" in its new 88 minute incarnation. Not only do you have the best facilities around for the type of audio quality a person from the record world desires when making a music film, but the staff you have chosen to operate all those electronic goodies is the most conscientious and easy-going I have ever had the pleasure to work with.

Best wishes for continuing success from all of us here at INTERCONTINENTAL ABSURDITIES.

Yours truly,



Frank Zappa

FZ:sr

"THANK YOU FRANK"

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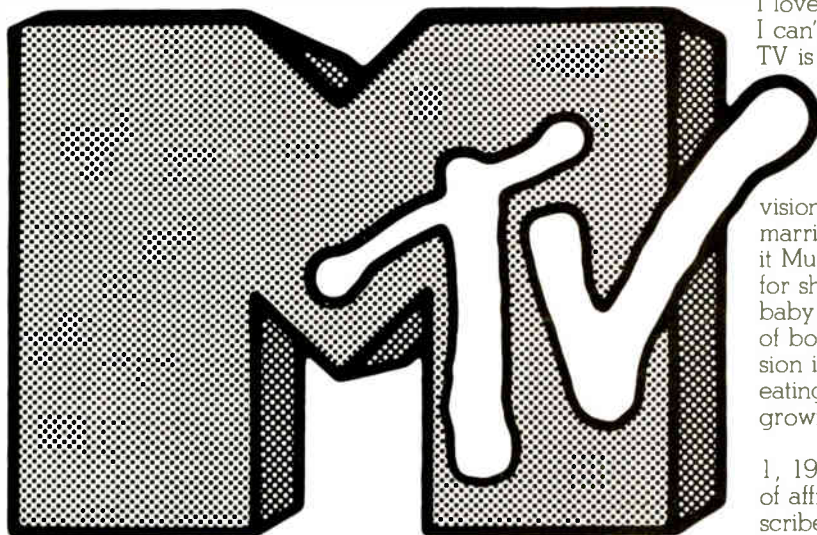
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A Friendly Monster Stakes Its Claim

by Bruce C. Pilato



I really love my . . . television
I love to sit by . . . television
I can't turn off my . . . television
TV is king . . . you're my everything.
—“TV Is King”
The Tubes
from *Remote Control*.

It was bound to happen. Television and the record industry got married and had a baby. They named it Music Television, but we call it MTV for short. But MTV is no ordinary baby! In addition to being the darling of both the record and cable television industries, MTV seems to be eating up everything in sight and growing bigger and bigger.

Officially launched on August 1, 1981, it began with a small handful of affiliates and maybe 2 million subscribers. As this goes to print, MTV has 1300 affiliates and 9.5 million subscribers. By early 1984, they realistically expect to have another 15 million viewers.

Music Television is simply that: rock and roll music broadcast in stereo on television. In short, it is 24 hours a day, 7 days a week of 3 to 4 minute record company artist promotional video clips, shown three or four in a row and introduced by one of five video jocks, or VJs, as they are known. In addition to the video clips, the programming is supplemented by music news, artist touring schedules, in-studio artist interviews, special 2 hour live concerts, and rock and youth oriented films, such as “Jimi Plays Berkeley” or “Reefer Madness.”

MTV is a project of Warner Amex Satellite Entertainment Company, which in itself is a joint venture between Warner Brothers and American Express. The company has spent nearly \$21 million just to get it off the ground; developing better equipment for stereo broadcasting, building studios for production and transmission, setting up six regional sales offices around the country, and developing talent and programming. That's not to mention a tremendous amount of money budgeted for promotion.



MUSIC TELEVISION'S VJs (Back row l - r) J.J. Jackson, Nina Blackwood, Mark Goodman; (front row) Martha Quinn, Alan Hunter

THE CHOICE OF PROFESSIONALS.

When it comes to recording/remixing consoles, survey after international survey shows MCI ranking as the undisputed number one choice of the world's leading studios. Surprised? You shouldn't be. Feature for feature, Sony's best selling MCI JH-600 Series beats out every other comparably priced console on the market. And for performance and reliability, the JH-600 Series can stand up to any console at any price.

Let other manufacturers take credit for the "most expensive" console and make outlandish performance claims that have nothing to do with real world situations.

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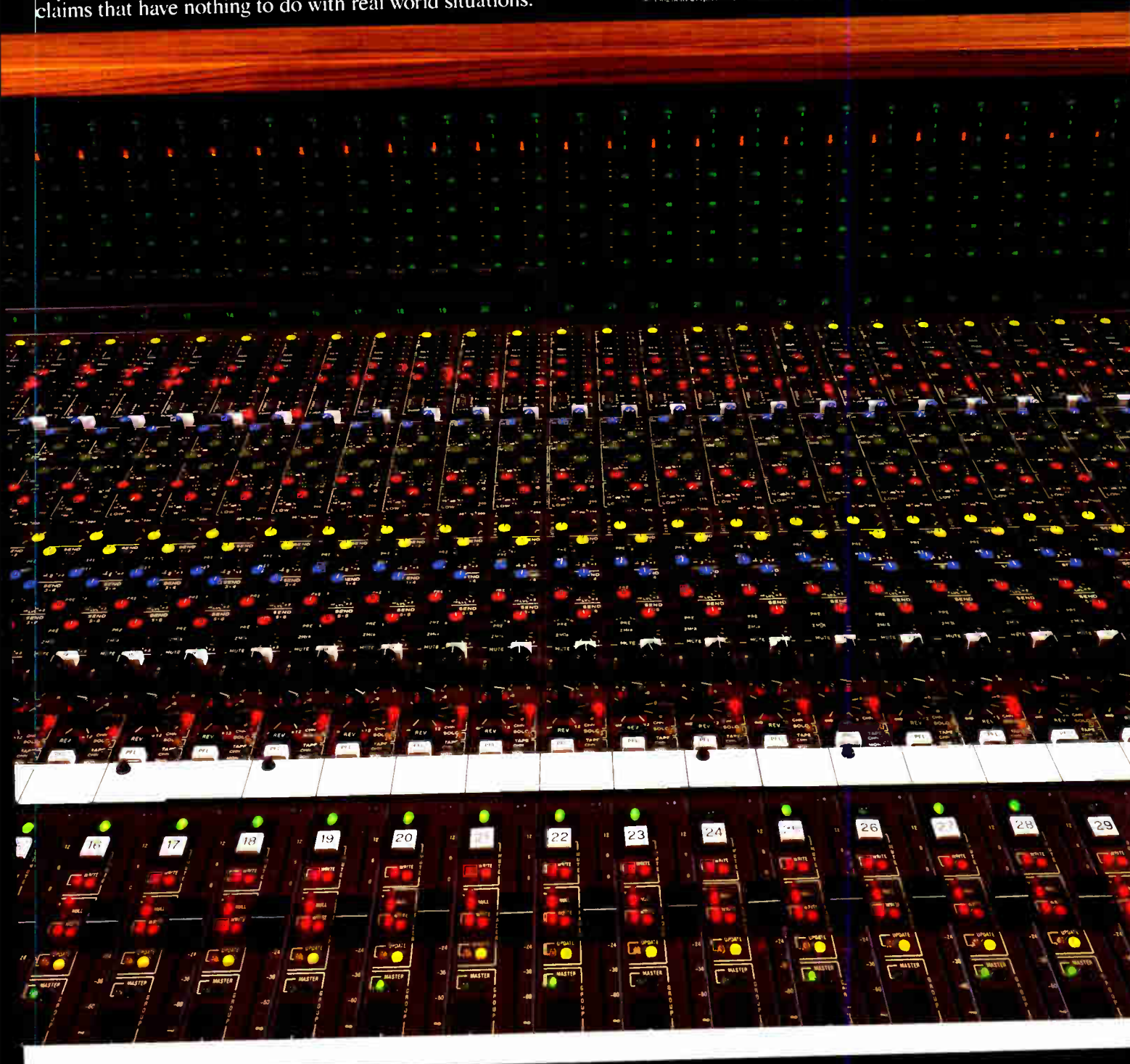
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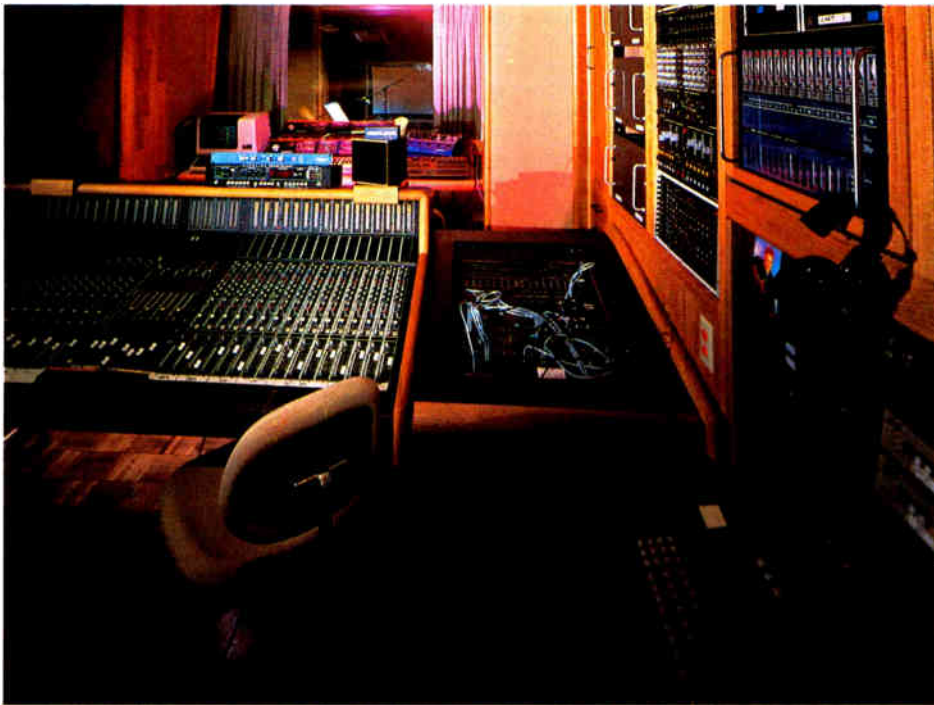
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World Radio History

are up, especially with the new and non-AOR acts that MTV has been programming. Although radio industry members will probably never admit it, it was MTV and not AOR that really broke The Human League, Flock Of Seagulls, Men At Work, and several other records that were the biggest hits of 1982.

In fact, MTV in some cases is deciding which songs AOR radio across the country should add. One AOR program director from an FM station in the Northeast recently told a trade journal, "Okay! I guess I've got to play The Stray Cats because MTV is relentless with that clip and people are calling me up like crazy."

Sykes, who, as promo man for CBS Records for many years knows the frustration of not being able to get a great record on the radio, now shows obvious pleasure in the alternative of MTV. "It used to be: break it on radio, budget for video and then go for the video. Now, it's just the opposite: put out a video, force radio and then we have a hit."

Although MTV is a rock and roll channel and will not program R&B, country, or jazz, it will program just about anything that can be classified as rock and roll, whether by an established artist or by someone new and totally off the wall. In the same hour, it is not unusual to see clips by Paul McCartney, Judas Priest, Bow Wow Wow, The Rolling Stones, and Ultravox, shown one after another.

"We try to give everything possible a shot," says Sykes. "When something comes in, if it fits our technical standards, we do everything within our power to give it a shot, even sometimes if we don't think it's going to be a hit. It's tough to be the judge, four people sitting in a room, deciding the fate of an artist."

Sykes continued, "After three or four weeks and after a lot of research with our audience, with whom we talk every day, if they don't like it then we move it out because something new is moving in."

"If it's high quality, interesting video, it usually gets on," said Jackson. MTV does not expect every video that comes in to be highly conceptual and cost \$150,000 and look like something done by Queen. They do, however, want it on 1" video tape with a solid stereo mix. Once they accept a video, MTV will spend about \$1,000 preparing the clip for broadcast, which includes putting it onto a 2" stereo video cart.

Because MTV is a cable service, reproduction on the consumer's TV is usually excellent. It is broadcast in stereo via RCA Satcom f-1, Transponder #11. Consumers (for a small



David Johansen, MTV New Year's Eve '81

monthly charge) can hook the audio to their home stereo system while watching the video on TV. A special stereo transmission processor was developed by Warner Amex, solely for the purpose of getting the best possible audio signal. In addition, MTV broadcasts in Dolby.

"We're looking for creative rock and roll songs. That's basically it," said Sykes. "Technically it has to be on one inch with a stereo mix, but other than that, we simply leave it up to the

viewers to decide whether or not it's a hit."

Minority members of the music and cable TV industry and other critics of MTV have charged that it is a racist medium, unwilling to showcase minority artists. MTV, however, feels the charges are unjust and stands by its programming.

"See, that's not fair," said Jackson, who is a black American. "Everybody picks on MTV for that. Basically,

—Page 129

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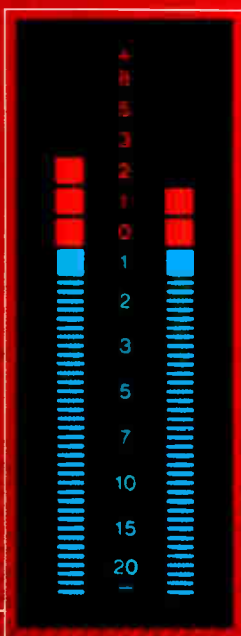
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M I S S I N G



Los Angeles new wave rock band Missing Persons was only a few months old when they accepted a part in the movie *Lunch Wagon*. While the film didn't exactly become the rage of Hollywood, it did give Missing Persons exposure in many areas of the country, and signaled the beginning of the group's use of video as a promotional tool.

Missing Persons has three videotapes currently being shown on MTV—"Destination Unknown," "Words," and "Mental Hopscotch"—and insiders feel the band's video exposure has had a direct influence on record sales (Missing Persons' first album, *Spring Session M*, is a certified Gold Record.) The band is becoming a powerful concert draw, too, as witnessed in their recent sellout of San Francisco's Warfield Theatre, which

was also videotaped for future MTV airing. The foundation of Missing Persons is drummer Terry Bozzio, a San Francisco Bay Area native who moved to Los Angeles after joining Frank Zappa's band in the mid-seventies. Bozzio's extraordinary drumming ability and his furious, no-holds-barred attack on the skins won over the Zappa fans immediately. Writhing behind the two bass drums, his body arching up as if standing, hair falling about his shoulders, face in a vicious snarl, Bozzio presents a visual image not easily forgotten. "Frank built up my confidence and gave me the opportunity to go crazy," he says of his former employer. "I used to wear black leather-studded jockstraps onstage, jump off my drum stool during drum solos, wear makeup and a devil's mask, sing about 'Punky's Whips,' and spit, fight, and kick my way through shows. Once I got that

bold and saw that people liked it, I just kept doing it. I'm basically very shy and conservative," the drummer says, "but when I get out there behind the drums, I just get to let loose, and that's what I do."

Bozzio left Zappa in 1979, after recording a total of eight albums with him. "Being a sort of band leader now myself," he says, "I wish I could have been more sympathetic to his situation. He had all the responsibility; therefore he was always nailing us about one thing or another. But we did have fun. He's such a humorous cat. It's like constant entertainment."

Bozzio joined the British progressive-rock trio, U.K., which featured Eddie Jobson (a Zappa bandmate) on violins and keyboards, and John Wetton on bass and vocals. Bozzio was a major visual force in this band, too, as he perched his drum set at the front of the stage rather than the back—a practice that continues on in Missing Persons.

Near the end of U.K., the

P E R S O N S

Missing Persons concept began to take shape. "Terry and I began working things out in hotel rooms on the down time of U.K.," says lead vocalist Dale Bozzio. "He had a lot of ideas about what he might do when he branched off from U.K., and we just tweezed everything and intertwined it all, and came up with some really great music. And when Terry got off the road with U.K., we came home and started working with Warren [Cuccurullo]. The three of us pretty much work together... it's quite a family affair."

Dale Bozzio is a former model and Playboy bunny whose vocals are heard on Zappa's *Joe's Garage* albums and the single "I Don't Wanna Get Drafted." Her platinum-blonde hair boasts streaks of pink, and her self-designed stage outfits have consisted of scraps of plastic or metal strung teasingly over her body. What her voice lacks in professional polish she makes up for with breathy grit and unconventional phrasing techniques. Her hiccuping style, initially a source of critical derision, now seems to be an accepted—at times eagerly awaited—characteristic. Her stage manner is unhurried, anything but overblown. "I act pretty real-life," offers Dale, tossing back her hair. "I mean, I don't put any facade on to go up on stage. I'm being Dale Bozzio for once, and it works real well. I let the music flow through me. And with Terry's energy..." she begins, speaking of her husband. "He's just a complete crazed drummer, which of course is in the positive sense."

Guitarist Warren Cuccurullo also recorded the *Joe's Garage* albums with Zappa, and just as he is the heartthrob in that tale, so is he the romantic interest of countless Missing Persons devotees. "Warren would come to every Zappa gig within five hundred miles, and would always hang around," remembers Terry. "He played me some tapes, and I said, 'God, this kid can play.' Lo and behold, I came back from a tour with U.K., and Warren was playing with Frank, and playing well. Warren would be playing Frank's solos note for note. Frank would let him do the solos live, 'cause he has a phenomenal mind and memory, and ear as well." Cuccurullo has a swarthy look, a bit Adam Ant-ish, only more handsome—a look that is solid and yet futuristic, like his guitar lines.

Patrick O'Hearn is a longtime friend of Bozzio's and a valuable addition to the band on bass and synthesizer bass. O'Hearn played with Bozzio in the Zappa rhythm section, and in the band Group 87. Synthesist Chuck Wild has also been a solid fixture with the band since its early days.

One of the first songwriting efforts of the Bozzios and Cuccurullo, "I Like Boys," received substantial airplay in the Los Angeles area and became the theme song of *Lunch Wagon*. Producer Ken Scott had heard Terry and Warren play with Zappa, and he expressed interest in hearing the new band. After seeing them perform live, he agreed to produce a demo tape. Scott's KoMoS Productions actually released a 7" Missing Persons EP in 1981, containing the songs, "I Like Boys," "Mental Hopscootch," "Destination Unknown," and a cover of The Doors' "Hello I Love You." The disk gathered a lot of media attention, and after several months of negotiations the group was signed to a record deal with Capitol. Ken Scott is still involved in managing, engineering, and producing the group with KoMoS Productions.

In terms of promotional effectiveness, signing with Capitol seems to have its advantages. "Capitol-EMI has a bigger video department than most record companies," says Steve Brooks

enthusiastic crowds at airports in cities they've never played. And most of the fan mail they receive, he says, is from people who first learned of the band from MTV.

Of the three videotapes Missing Persons has done, Capitol Records paid for two and KoMoS paid for one, Brooks said. Capitol arranged the filming of "Destination Unknown" by bringing British filmmaker Simon Milne to Los Angeles. Milne listened to the band, met with the members and began storyboarding and scripting the song. The group then flew to England for two days of shooting. "The meetings with Simon were basically discussing what ideas the band members had for the song, and how they wanted it to look," says Brooks. "The band is very particular about their videos—they want to be represented in certain ways, in a certain image, a certain light. They know only too well how valuable video is, and a bad video can do nothing but make you seem worse." The "Destination Unknown" video is well crafted and conceived, and gives the band a very mysterious image, not unlike what they seem to aspire to onstage.

PHOTO © STEVE WEXLER



MISSING PERSONS (left to right): Chuck Wild, Dale Bozzio, Patrick O'Hearn, Terry Bozzio, Warren Cuccurullo

of KoMoS. "Video is becoming very important. The response we've gotten from MTV is astronomical. From the Midwest, for example, the response is amazing, and you know it can only be from MTV." According to Brooks, Missing Persons has been met by

And then there is the question of record companies recouping their money from the artists for video which doesn't generate revenue from cable TV or nightclub airings. "It's under negotiation now how Capitol recoups, if in fact they do," according to

Brooks. "Records have been around for a long time, but videos are so new that no one really knows how to deal with them. Everybody is at odds, because there is no normal, set way of doing things. It would be great if we got paid for the videos. But if it came to being paid, or them saying 'no' and not having it on MTV, we would lose a lot of markets that we just wouldn't have except by touring. And touring is a lot more expensive than making a video. Videos can't replace touring, but you can't go everywhere; you can't play every city."

THE SHOOT

Capitol's latest video project with the band was a live filming before an excited crowd at San Francisco's Warfield Theatre. Capitol hired Keefe-Co, a video production company with offices in Los Angeles and London, to produce the event. Keefe-Co sent up producer John Weaver and director Keith MacMillan, and contracted One Pass Video of San Francisco to supply the video equipment and logistical coordination for the filming. The day began early for the One Pass crew, and by 10 a.m. the grip truck was almost completely loaded. "Are there sandbags on the truck?" someone yelled, as One Pass unit manager Scott Ross went over a mental checklist to make sure they weren't leaving anything behind. The crew arrived at the theatre at noon, only to find that they could not put the remote audio and video trucks into place. A refrigeration truck used by the Ice Follies the night before had collapsed under its own weight and was tilting precariously near the stage door. It would be 2½ hours before the truck could be righted and moved. In spite of the unexpected delay, the projected 5:30 p.m. soundcheck only had to be moved back half an hour.

Four of the five cameras used on the production were Ikegami HL79DAL models. Two cameras were hand-held, stage left and stage right, and two were mounted in front of the stage. The fifth camera was a \$60,000 studio Ikegami on a pedestal near the back of the hall, with a 30 to 1 lens that allowed closeups of everything as well as wide shots of the stage. Once the cameras were in place, the crew went through the chore of "registering" each one, in effect tuning the three tubes in each camera to each other to guarantee "true color."

Producer Weaver paced nervously through the theatre, checking minute details in the camera setup and trouble-shooting everywhere he went.

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An extra lip had been added to the front of the stage, but it hadn't been painted black like the rest of the floor. Stage manager Ron Bergman of Bill Graham Presents felt Weaver's presence and anticipated his question. "Yes, John, the front of the stage *will* be painted," he said. "Thank you, Ron," smiled the amicable Englishman.

Keeffe-Co ordered three one-inch Sony BVH1000 tape recorders from One Pass. "What they wanted was a program record and two iso records," says Scott Ross. "However, it has been my experience that there are times when tape machines don't work right. I brought in another 1" machine and did a backup program record in case there was any problem." In doing a five-camera video, some producers and directors like to record all five cameras onto separate machines, but that makes the editing process much more complicated, Ross explained. Some directors might be able to work with only two tape machines, but having three helps prevent getting stuck with unintentional sweeps.

At the sound check before the

show, the roving cameramen onstage let the performers know what they would be doing. "I'm going to be right here," one of them told Terry Bozzio as he leaned over the drum kit for a closeup shot. "The drummer was a big part of the show," says Ross, "though you might have thought Dale was the show by looking at her. Keith got all this great footage of Terry, because he always iso'ed two cameras on him. So he'd get a program shot of Terry, and then just cut-cut-cut—three different angles of the drummer. On one drum fill he'd do five or six camera cuts."

Director MacMillan called his shots from the mobile video truck, where he watched the monitor screens of each camera. Producer Weaver sat by the lighting console in the balcony, with a single video screen monitoring the program record. The men communicated with each other, as well as with the camera people and Missing Persons' lighting director, by headsets. Engineer Ken Scott took a 24 track feed into the audio truck, where he mixed not only for the video project, but for an upcoming "King Biscuit Flower Hour" radio show.

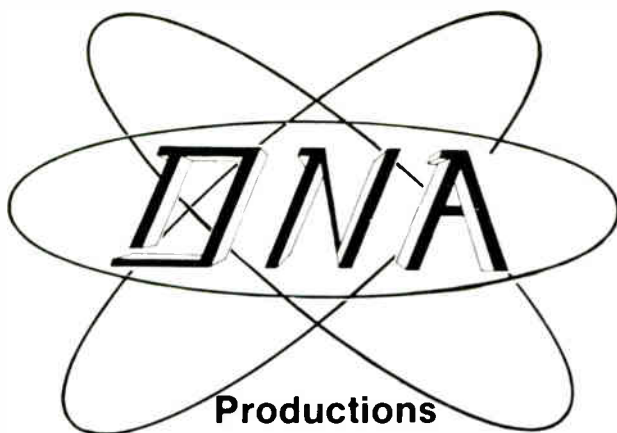
Missing Persons worked the crowd into a frenzy several times over the course of their set. Dale's trips to

the edge of the stage showed a lot of guts — her petite body came close to being yanked into the adoring crowd more than once. The dashing Cuccurullo brought screams with his liquefied melodies. And Terry's drum explosions served as exclamation marks, prodding the crowd to hysteria and serving as jet fuel for the rest of the band.

Sitting by the balcony video monitor during the show, I was amazed at how lighting changes quite noticeable to my eye hardly picked up on the TV screen at all. As Ross explains it, "Lighting that is theatrically radical 'live' is subtle on television. Somebody should give a seminar for lighting people that work with rock and roll bands. They light, and rightfully so, for their audience. They light theatrically, however, and try to incorporate themselves with the band, as if the lights are an instrument. For a live show, that's great.

"Working for television, though, as soon as I have less than 30 or 50 foot-candles on the stage, I can't make pictures. Not only that, but when you go to black at the end of a song, I don't see anything. My screen goes black. My camera operators can't focus. So if I had a shot of Dale Bozzio close up, she's moved. And when the lights come back up, there's no focus. All these guys have to recapture focus. We had a problem with that." Other than an overactive fog machine during the smog song, "Walking in L.A.," there didn't seem to be any other major problems during the shooting. After the show, Weaver allegedly told Ross, "I'm very happy; however, it's bad for a producer to say that in public."

Missing Persons is currently in the midst of their most far-reaching tour to date, in promotion of *Spring Session M*. The album holds at number 18 on the *Billboard* charts as of this writing, and the band's charging pop/New Wave blend is becoming more and more familiar to the ears of the public. The eyes of the public are turned on the band as well, thanks to the work they've done in the video field. It is quite ironic that none other than Frank Zappa, in the February 1983 issue of *Guitar Player*, comes out very strongly against MTV and the whole cable movement, saying that the performers are being "hosed." While the jury is still out on many questions regarding video, the people behind Missing Persons are very happy to be associated with a record company ready to take chances and try to make something happen in the video market. ■



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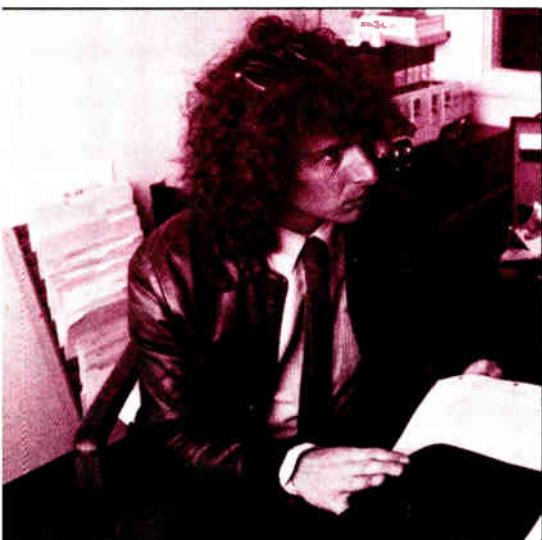
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by Scott Ross

With the coming of MTV, the economic disaster in the recording industry, and large sums of money being invested in "videos," record producers and recording studios alike have turned to the visual medium as the second coming of the Messiah.

I am a believer, but I must say that video is not a panacea. At best it's a tremendously flexible art form, and at worst it's embarrassing. There are currently two principal forms that a music video can assume: concert performance and conceptual pieces.

Concert Performance - a live performance, shot with multiple cameras (usually 5 or 6) and several videotape machines. Audio is laid down on tandem multi-track machines with SMPTE code being recorded simulta-

neously on video and audio tape. The videotape then is "cut" (edited) at a postproduction facility, and the multi-track is mixed down onto an 8 track. The 8 track now contains mixed stereo (left and right), a mono mix, dry vocal and announce, audience left, audience right, a guard track, and original SMPTE code.

After pictures are cut, a lay-back is done whereby the master VTR and the 8 track ATR are locked up, and an audio-only edit is enabled on the master VTR. One now has a full performance piece. Obviously there are many variables to consider, i.e. how many cameras, tape machines, type of tape machines ($\frac{3}{4}$ " or 1"), lighting, opening graphics, etc. The list can go on forever. Assuming that your project is for broadcast, here are a few guidelines that have panned out for me:

1. Hire an experienced, competent director and associate director. These folks (though expensive) will keep the cost of postproduction to a minimum. At an average rate of \$300 per hour for postproduction, a seasoned director could save you thousands of dollars by making his decisions during production.

2. Establish a working relationship with the band's lighting director. One should be sensitive to a paying audience and not blind them with 300 foot-candles of light. However, the lighting director and performers must be made aware of the lighting requirements of video. Ultimately, you, the producer, should hire a professional television Lighting Director. More good concert videos than I care to mention have been lost to tape vaults because of insufficient lighting.

3. Have the majority of your cameras work close to the stage, and keep them off the stage for the most part. This will enable you to get an intimate feel as well as keep your camera people out of each other's shots.

4. Try to utilize some type of onstage set. After all, this is a visual medium. Let the set work spatially, enabling the use of camera dollies and cranes to add to production quality.

5. Minimize the amount of crew overtime to be paid by carefully pre-producing your show. Organize a schedule and stick to it like clockwork.

Make sure that all details—legal, technical, creative and financial—are finalized before signing a contract. And finally, even through your anxiety level is stretched to the limit, remember you're a professional and never lose your temper, not in public anyway.

Though a concert performance may not be as exciting as a conceptual piece, it is much less expensive and has the ability to bring in revenue. Most cable and broadcast outlets receive conceptual pieces free of charge, but there are many windows for full-length concerts—and the producer can also edit single tunes out of the show for promo clips.

Conceptual Videos are a horse of a different color. A conceptual piece can assume a variety of different forms. They are generally storyboarded and produced much like major national commercial spots. They are usually shot on film, transferred to video tape and then edited.

As the producer, I usually structure a timetable as follows:

1. Receive a cassette of the tune to be shot.
2. Hire a director whose persona and style fit the tune.
3. After becoming intimate with the music, arrange a meeting with the band members and their manager. At this meeting try to ascertain what the band wants the piece to look like. One should also size up the group and decide how they will play to camera as actors, not as musicians.
4. With all this information in hand, start to write and storyboard.
5. Scout locations and start casting.
6. Have the manager approve all ideas.
7. Lock down dates, crew, and equipment.

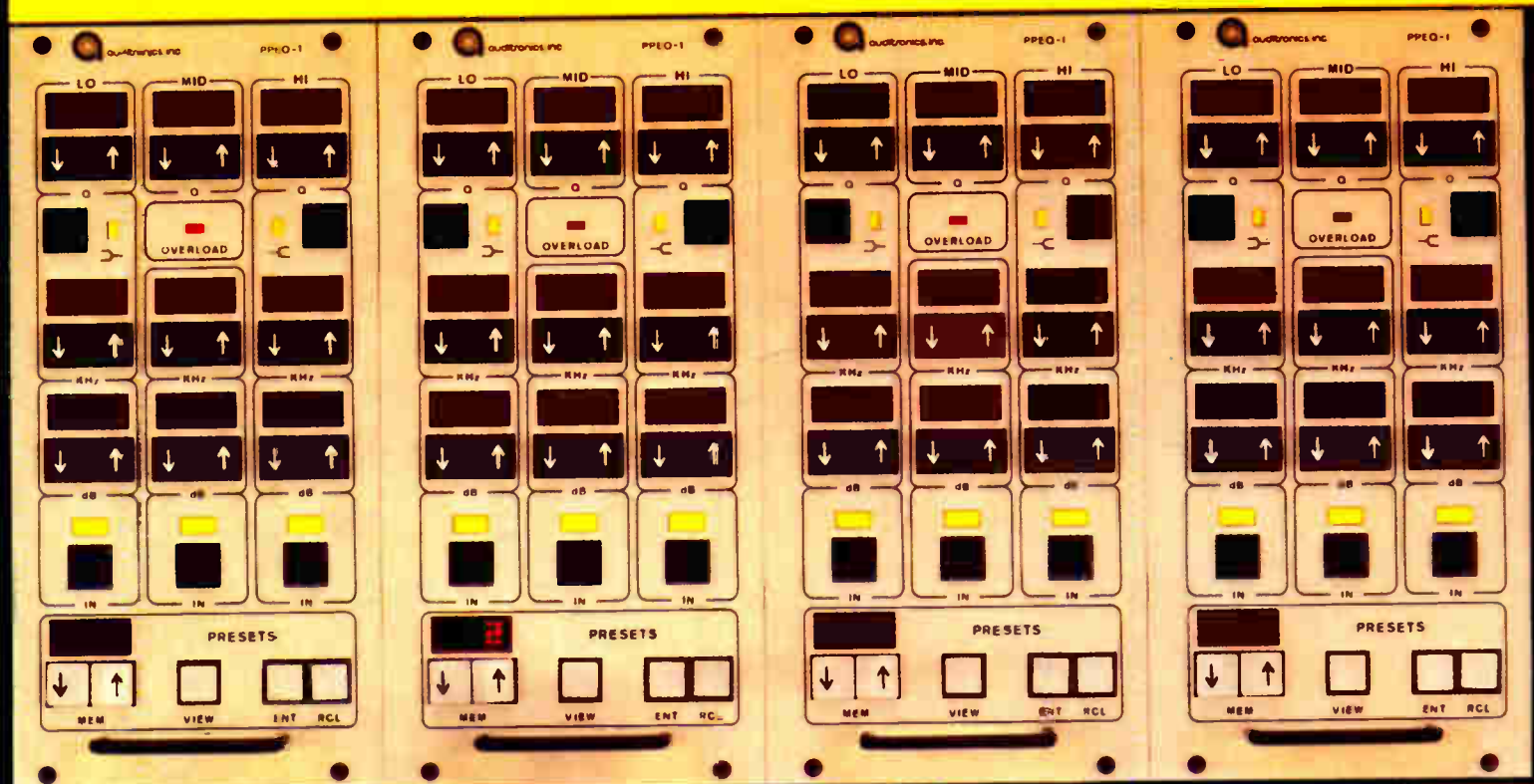
Technically, the options are vast, but since the audio is lip-synched, I have found a formula that works well:

By transferring the master to an 8 track and laying down time code, one now has a synch master to be laid back onto 1" videotape after the piece is post-produced; during production you should use a dub of this new time-coded master for playback.

In conclusion, please remember that no matter how elaborate the production, how much you spend, or how wonderful the crew is, your piece is about *music*, and if I may paraphrase a well-worn quote, "It don't mean a thing if it ain't got that swing." ■

EQUALIZATION

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Development of the Auditrionics Model PPEQ-1 Programmable Parametric Equalizer marks another milestone in the evolution of master equalization. Carefully designed to provide the flexibility and expediency demanded by today's production methods, the PPEQ-1 is a totally new concept. Each equalizer is a self-contained unit, and up to four mono or stereo tracking equalizer units may be mounted in a compact 19" equip-

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The features don't stop here; 8X Series consoles also include super solo sections (giving instant access to pre-fader, post-fader and tape solo), comprehensive slate and talkback systems, a built-in calibration oscillator, and a high speed LED metering array in an easy-to-read meter bridge assembly. Standard module features include XLR balanced inputs (both mic and line), XLR balanced outputs (buss and stereo master outs), continuously variable mic and line input gain controls, switchable phantom power, phase reverse, pad, 12dB octave high pass filter, EQ bypass switch, channel

on button (w/LED indicator), channel peak clip LED, and the exclusive Audioarts Engineering M-104 precision conductive plastic linear fader.

The 8X is an excellent choice for the small studio in need of upgrading performance or expanding format. For the large studio the 8X is an ideal system for your Studio B or 24 track mixdown room. Because it is compact the 8X is also ideally suited to video and remote recording applications.

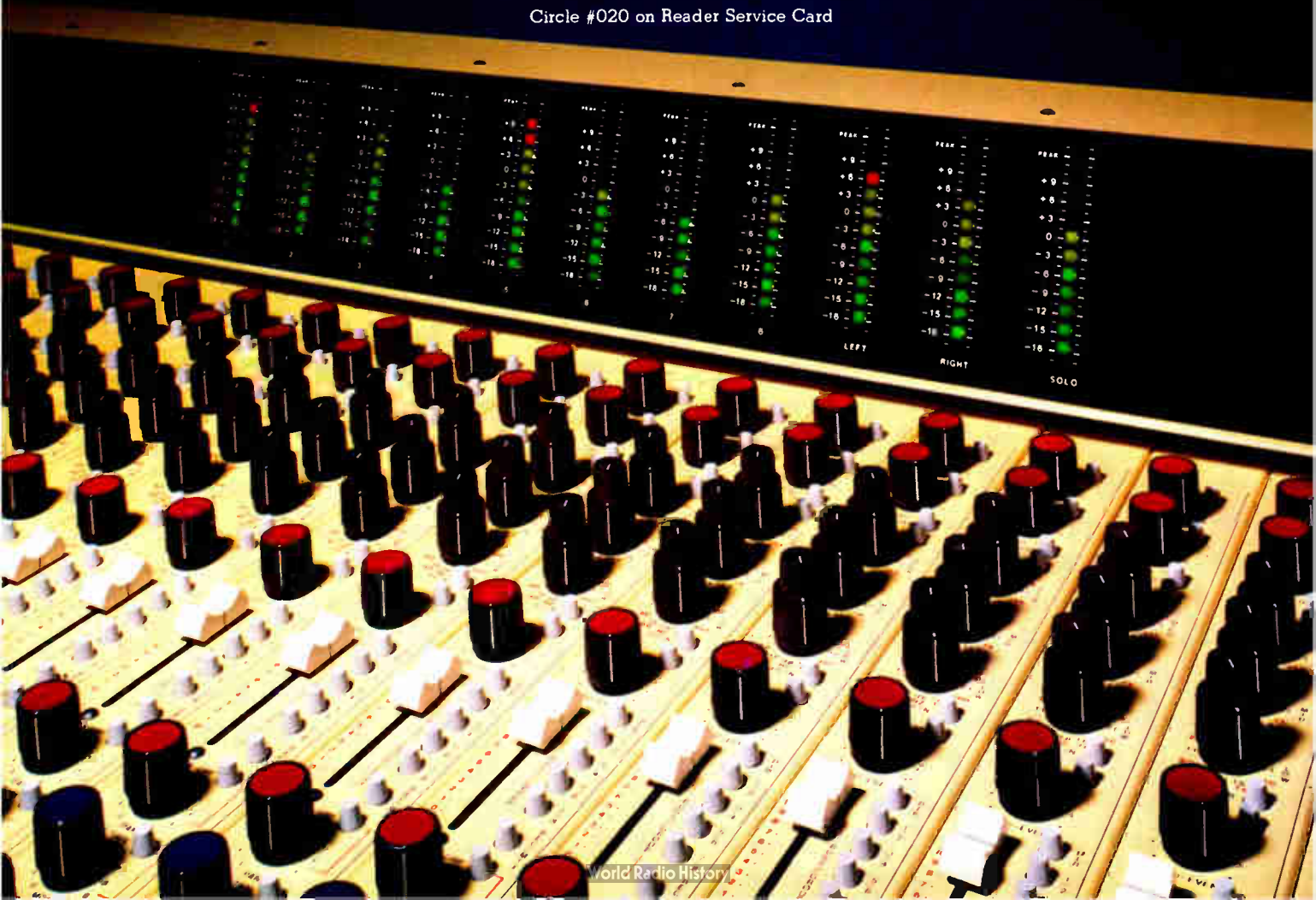
Whatever your application, the Audioarts Engineering 8X recording console comes loaded with features previously not found on medium format systems. The mixing engineer is afforded maximum control and creative freedom. The technical excellence of this console approaches the theoretical limits of today's technology. If you demand sonic excellence, meticulous craftsmanship and flexible control take a good look at the 8X.



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VIDEO NEWS

by Mia Amato

Home Video Market Gets "Singles"

The first titles as "video 45s" released through *Sony Corporation* have hit the stores following an enthusiastic reception by retailers. *Pacific Arts* is offering two popular video-music cuts from *Mike Nesmith*, "Cruisin'" and "Rio." *Duran Duran* has created its own label for release of the controver-

sial "Girls On Film" plus a B-side. The third title hails from a company called *Scotland Video* and is two clips for a new act, *Jessie Rae*. The latter videos were done at Utopia Studios in Bearsville, and, interestingly, *Jessie Rae's* singing with Columbia Records occurred *after* the Sony deal was inked.

The short tapes are selling for \$15.95 in the new stereo Beta format and \$19.95 in stereo VHS. According to *George Atkinson*, founder of the Video Station chain which includes over 400 affiliated home video retailers,

the short tapes are expected to bring in the teen market, kids already fronting \$30-\$40 for video game cartridges. "It's a good idea, and the price is right," says Atkinson. "But what's really needed is superstar acts, *Rick Springfield* for example."

Atkinson speculates the singles could sell a respectable 15-20,000 copies each, even if retailers also offer the programs for rentals. "That's probably a conservative estimate," he adds, "*Olivia Newton John's* 'Physical' has already passed 30,000 copies sold." Regrettably not in stereo is the *Island Pictures* release of an hour long *Grace Jones* concert directed by *Jeane Paul Goude*. *Vestron Video* has distribution rights.

In the Studios . . .

Criteria Recording (Miami) now offers its studio clientele in-house production of promo clips, by way of a new working arrangement with *Tel-Air Films* and *Speed of Light Productions*. An earlier venture into the video music area by *Criteria* was a co-production deal in 1982 with Video Tape Associates and a third party; the first project, a New Orleans jazz concert, was shelved after taping due to financial problems.

The new venture will concentrate on production of promo clips and the occasional longer-form program. *Speed of Light* is run by *Lou CasaBianca*, an alumnus of John Roseman Productions and no stranger to the clip genre. *Tel-Air*, run by *Grant Gravitt*, has been active in remote shoots ranging from football games to beauty pageants. *Criteria*, run by *Mack Emerman*, is, of course, one of the most sophisticated recording facilities in the southeast, boasting 24 track mobile facilities plus 32 track Mitsubishi digital recording. The company's audio-for-video experience extends as far back as orchestration for the "Jackie Gleason Show."

CBS artists *Earth, Wind &*

Rockamerica's Video Survey

APRIL 1983

This chart reflects the current most popular promo clips played in clubs, colleges and record stores, as compiled by Rockamerica Video, Inc. 41 East 20th St., New York City 10003

Artist	Clip
1. Devo	Peek-a-Boo
2. Thomas Dolby	Blinded by Science
3. Heaven 17	Let Me Go
4. Malcolm McLaren	Buffalo Gals
5. Musical Youth	Pass the Dutchie
6. Peter Gabriel	Shock the Monkey
7. Culture Club	Do You Really Want To
8. Lene Lovich	Its You, Only You
9. Toni Basil	Mickey
10. The Cure	Let's Go To Bed
11. The Clash	Should I Stay or Go
12. Wham	Young Guns
13. Blancmange	Living on the Ceiling
14. Joan Jett	Do You Wanna Touch
15. Billy Idol	White Wedding
16. Stray Cats	Rock This Town
17. Scandal	Goodbye to You
18. Hall and Oates	Maneater
19. Prince	1999
20. The Clash	Rock the Casbah

Fire did not go to Egypt for the "Fall in Love with Me" promo - only as far as the soundstage at *The Complex* (Los Angeles), where the Great Pyramid of Cheops was Ultimatted behind the band. *Chuck Cirino* directed. . . *Tony Basil* returned to *Video Transitions* to produce and post "Shopping from A to Z." The LA-based facility has also completed a *Canned Heat* concert program for Japanese television.

In San Francisco, *One Pass Video* provided fax for the *Missing Persons* concert aired on MTV [see story in this issue]. *John Weaver* produced and *Keith McMillan* directed for Keefe-Co. *Guerrilla Audio* handled the remote recording. *Mobile Video Productions* taped at five Bay area locations for the British group

Cloneheads' clip, "Deprogramming Seymour."

Century III in Boston has added a plush new editing suite with CMX editing to handle four 1" VTRs (for A-B-C-D rolls. . .) plus 24 track Soundcraft audio board and DVE. The large multi-level room has two client lounge areas and can be patched into either of two soundstages when not used for post work. In San Antonio, *The Studio* is moving its 24 track facility into the same building as TMS Video Film Production and Willming Reams Animation, for the ease and convenience of commercial clients. *Harry Hartman* joins *E.J. Stewart* (Philadelphia) as general manager from Center City Video. E.J. Stewart recently added a Dubner animation system to its video services.

Rock Returns to Broadcast TV?

At least two weekly television series to feature rock performances are presently being pitched to TV syndication markets. *Alive Enterprises* plans a late-night show, to be based in LA and produced by veteran video-concert heavies *Bob Emmer* and *Neal Marshall*. "RadioActive TV" is the title of a half-hour program created by *Merv Griffin Productions* for the teen market, to be pushed by *Metromedia*, still hot from the syndicated success of "Dance Fever." The pilot was produced by *John Lauderdale* and focused on sets by *Devo* and *Adam and the* (original backup) *Ants*. The show is co-hosted by Bruce Penhall, beachboy co-star of "CHiPs," and *Nina Blackwell*, the first MTVJ to jump ship from cable to broadcast TV.

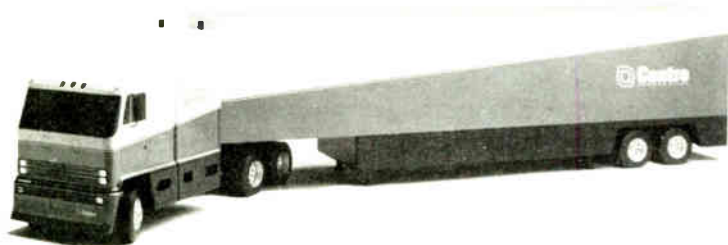
One Pass Media has successfully sold its first music-video product, "Eddie Money Live at the Kabuki" to MTV, "Nightflight," and several STV outlets. Offered in stereo, the show was directed by *Stanley Dorfman*.

A Tokyo-based video music production firm called *Scanning Pool* has released a two-hour tape of Japanese "progressive" bands through *Rockamerica* (NY) which is distributing it to U.S. clubs. The program features art rockers *Auto-Mod*, *Lizard*, *Friction*, the teen girl band *Zelda* and computer-music artist *Izunematsu Masatoshi*. As most Japanese clubs are too small for shooting and most others reluctant to allow videotaping, the four camera shoot was accomplished over three days in a rented concert hall with a planned audience of 150. Nearly 600 people jammed the space for the event, captured in perhaps not the best light levels but fascinating nonetheless.

Hardware: SSL Gets Real Serious

The 1983 NAB Convention in Las Vegas this month marks the first opportunity many video people will have to sample *Solid State Logic's* amazing audio-video mixmaster, the SL 6000E, which was unveiled at last spring's IBC. This console includes transport remote control for slaved 1" Type C video recorders, synchronizers, and speaks timecode fluently, in addition to providing up to 32 mike or 64 line inputs for live teleproduction or postproduction editing. The SL 6000, as the first single-console unit for video music production, portends a serious convergence of the separate, but similar, magnetic audio and video tape technology. If you can't make it to Vegas you can write to MusicWorks Int'l, 2352 Wisconsin Avenue, Washington, D.C. 20007 for an informative brochure. ■

NEOTEK AND CENTRO GO TO DENVER



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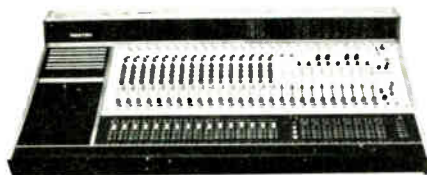
NEOTEK SERIES I consoles have been universally acclaimed as today's finest sounding audio consoles. They are now available with an expanded complement of options to suit professional broadcast and production applications. Their functional design and sonic excellence are unsurpassed, setting standards for others to emulate.

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Production and Post Production Facilities

The following studios span the spectrum from audio recording studios with basic video interfacing equipment to full video production centers with audio sweetening capabilities. We have included this list as a basic guide for those readers involved with the growing field of video music production.

As this area is in a dynamic growth and up-

date period, we encourage readers to contact the facilities for specifics.

Please note: In the following listings each facility's particular capabilities are indicated below its name using the following initials: VPF (Video Production Facility); OLVP (On Location Video Production); VPP/E (Video Post-Production/Editing); APPV (Audio Post-Production for Video).

NORTHEAST

ALL MOBILE VIDEO

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New York, NY

ALL MOBILE VIDEO
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630 Ninth Ave., New York, NY 10036
(212) 757-8919
Owner: **Bob Lipp**
Manager: **Bob Lipp**
EQUIPMENT
VTRs: **Sony DCR-100, Ampex 2300, 2300A**

VCRs: **Hi-Fi, JVC, Sony, VHS, VHS-C, VHS-E, VHS-L, VHS-M, VHS-N, VHS-O, VHS-P, VHS-Q, VHS-R, VHS-S, VHS-T, VHS-U, VHS-V, VHS-W, VHS-X, VHS-Y, VHS-Z, VHS-AA, VHS-AB, VHS-AC, VHS-AD, VHS-AE, VHS-AF, VHS-AG, VHS-AH, VHS-AI, VHS-AJ, VHS-AM, VHS-AN, VHS-AO, VHS-AP, VHS-AQ, VHS-AR, VHS-AS, VHS-AT, VHS-AU, VHS-AV, VHS-AW, VHS-AX, VHS-AY, VHS-AZ, VHS-BA, VHS-BB, VHS-BC, VHS-BD, VHS-BE, VHS-BF, VHS-BG, VHS-BH, VHS-BI, VHS-BJ, VHS-BM, VHS-BN, VHS-BO, VHS-BP, VHS-BQ, VHS-BR, VHS-BS, VHS-BT, VHS-BU, VHS-BV, VHS-BW, VHS-BX, VHS-BY, VHS-BZ, VHS-CA, VHS-CB, VHS-CC, VHS-CD, VHS-CE, VHS-CF, VHS-CG, VHS-CH, VHS-CI, VHS-CJ, VHS-CM, VHS-CN, VHS-CO, VHS-CP, VHS-CQ, VHS-CR, VHS-CS, VHS-CT, VHS-CU, VHS-CV, VHS-CW, VHS-CX, VHS-CY, VHS-CZ, VHS-DA, VHS-DB, VHS-DC, VHS-DD, VHS-DE, VHS-DF, VHS-DG, VHS-DH, VHS-DI, VHS-DJ, VHS-DM, VHS-DN, VHS-DO, VHS-DP, VHS-DQ, VHS-DR, VHS-DS, VHS-DT, VHS-DU, VHS-DV, VHS-DW, VHS-DX, VHS-DY, VHS-DZ, VHS-EA, VHS-EB, VHS-EC, VHS-ED, VHS-EE, VHS-EF, VHS-EG, VHS-EH, VHS-EI, VHS-EJ, 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VHS-ZN, VHS-ZO, VHS-ZP, VHS-ZQ, VHS-ZR, VHS-ZS, VHS-ZT, VHS-ZU, VHS-ZV, VHS-ZW, VHS-ZX, VHS-ZY, VHS-ZZ**

Direction: **Bob Lipp**
Other major equipment: **1/2" VHS, MS, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ**

AUDIO INNOVATORS, INC
APPV
216 Blvd of the Allies, Pittsburgh, PA 15222
(412) 471 6220
Owner: **Thomas J. Kelly**
Manager: **Thomas J. Kelly**

AURA SONIC LTD
OLVP, APPV
140-02 Poplar Ave., Flushing, NY 11355
(212) 886 6500
Owner: **Thomas J. Kelly**
Manager: **Thomas J. Kelly**
EQUIPMENT
VCRs: **VHS, VHS-C, VHS-E, VHS-L, VHS-M, VHS-N, VHS-O, VHS-P, VHS-Q, VHS-R, VHS-S, VHS-T, VHS-U, VHS-V, VHS-W, VHS-X, VHS-Y, VHS-Z, VHS-AA, VHS-AB, VHS-AC, VHS-AD, VHS-AE, VHS-AF, VHS-AG, VHS-AH, VHS-AI, VHS-AJ, VHS-AM, VHS-AN, VHS-AO, VHS-AP, VHS-AQ, VHS-AR, VHS-AS, VHS-AT, VHS-AU, VHS-AV, VHS-AW, VHS-AX, VHS-AY, VHS-AZ, VHS-BA, VHS-BB, VHS-BC, VHS-BD, VHS-BE, VHS-BF, VHS-BG, VHS-BH, VHS-BI, VHS-BJ, VHS-BM, VHS-BN, VHS-BO, VHS-BP, VHS-BQ, VHS-BR, VHS-BS, VHS-BT, VHS-BU, VHS-BV, VHS-BW, VHS-BX, VHS-BY, VHS-BZ, VHS-CA, VHS-CB, VHS-CC, VHS-CD, VHS-CE, VHS-CF, VHS-CG, VHS-CH, VHS-CI, VHS-CJ, VHS-CM, VHS-CN, VHS-CO, VHS-CP, VHS-CQ, VHS-CR, VHS-CS, VHS-CT, VHS-CU, VHS-CV, VHS-CW, VHS-CX, VHS-CY, VHS-CZ, VHS-DA, VHS-DB, VHS-DC, VHS-DD, VHS-DE, VHS-DF, VHS-DG, VHS-DH, VHS-DI, VHS-DJ, VHS-DM, VHS-DN, VHS-DO, VHS-DP, VHS-DQ, VHS-DR, VHS-DS, VHS-DT, VHS-DU, VHS-DV, VHS-DW, VHS-DX, VHS-DY, VHS-DZ, VHS-EA, VHS-EB, VHS-EC, VHS-ED, VHS-EE, VHS-EF, VHS-EG, VHS-EH, VHS-EI, VHS-EJ, VHS-EM, VHS-EN, VHS-EO, VHS-EP, VHS-EQ, VHS-ER, VHS-ES, VHS-ET, VHS-EU, VHS-EV, VHS-EW, VHS-EX, VHS-EY, VHS-EZ, VHS-FA, VHS-FB, VHS-FC, VHS-FD, VHS-FE, VHS-FG, VHS-FH, VHS-FI, VHS-FJ, VHS-FM, VHS-FN, VHS-FO, VHS-FP, VHS-FQ, VHS-FR, VHS-FS, VHS-FT, VHS-FU, VHS-FV, VHS-FW, VHS-FX, VHS-FY, VHS-FZ, VHS-GA, VHS-GB, VHS-GC, VHS-GD, VHS-GE, VHS-GF, VHS-GG, VHS-GH, VHS-GI, VHS-GJ, VHS-GM, VHS-GN, VHS-GO, VHS-GP, VHS-GQ, VHS-GR, VHS-GS, VHS-GT, VHS-GU, VHS-GV, VHS-GW, VHS-GX, VHS-GY, VHS-GZ, VHS-HA, VHS-HB, VHS-HC, VHS-HD, VHS-HE, VHS-HF, VHS-HG, VHS-HI, VHS-HJ, VHS-HM, VHS-HN, VHS-HO, VHS-HP, VHS-HQ, VHS-HR, VHS-HS, VHS-HT, VHS-HU, VHS-HV, VHS-HW, VHS-HX, VHS-HY, VHS-HZ, VHS-IA, VHS-IB, VHS-IC, VHS-ID, VHS-IE, VHS-IF, VHS-IG, VHS-IH, VHS-II, VHS-IJ, VHS-IM, VHS-IN, VHS-IO, VHS-IP, VHS-IQ, VHS-IR, VHS-IS, VHS-IT, VHS-IU, VHS-IV, VHS-IW, VHS-IX, VHS-IY, VHS-IZ, VHS-JA, VHS-JB, VHS-JC, VHS-JD, VHS-JE, VHS-JF, VHS-JG, VHS-JH, VHS-JI, VHS-JJ, VHS-JM, VHS-JN, VHS-JO, VHS-JP, VHS-JQ, VHS-JR, VHS-JS, VHS-JT, VHS-JU, VHS-JV, VHS-JW, VHS-JX, VHS-JY, VHS-JZ, VHS-KA, VHS-KB, VHS-KC, VHS-KD, VHS-KE, VHS-KF, VHS-KG, VHS-KH, VHS-KI, VHS-KJ, VHS-KM, VHS-KN, VHS-KO, VHS-KP, VHS-KQ, VHS-KR, VHS-KS, VHS-KT, VHS-KU, VHS-KV, VHS-KW, VHS-KX, VHS-KY, VHS-KZ, VHS-LA, VHS-LB, VHS-LC, VHS-LD, VHS-LE, VHS-LF, VHS-LG, VHS-LH, VHS-LI, VHS-LJ, VHS-LM, VHS-LN, VHS-LO, VHS-LP, VHS-LQ, VHS-LR, VHS-LS, VHS-LT, VHS-LU, VHS-LV, VHS-LW, VHS-LX, VHS-LY, VHS-LZ, VHS-MA, VHS-MB, VHS-MC, VHS-MD, VHS-ME, VHS-MF, VHS-MG, VHS-MH, VHS-MI, VHS-MJ, VHS-MK, VHS-ML, VHS-MN, VHS-MO, VHS-MP, VHS-MQ, VHS-MR, VHS-MS, VHS-MT, VHS-MU, VHS-MV, VHS-MW, VHS-MX, VHS-MY, VHS-MZ, VHS-NA, VHS-NB, VHS-NC, VHS-ND, VHS-NE, VHS-NF, VHS-NG, VHS-NH, VHS-NI, VHS-NJ, VHS-NM, VHS-NN, VHS-NO, VHS-NP, VHS-NQ, VHS-NR, VHS-NS, VHS-NT, VHS-NU, VHS-NV, VHS-NW, VHS-NX, VHS-NY, VHS-NZ, VHS-OA, VHS-OB, VHS-OC, VHS-OD, VHS-OE, VHS-OF, VHS-OG, VHS-OH, VHS-OI, VHS-OJ, VHS-OK, VHS-OL, VHS-OM, VHS-ON, VHS-OO, VHS-OP, VHS-OQ, VHS-OR, VHS-OS, VHS-OT, VHS-OU, VHS-OV, VHS-OW, VHS-OX, VHS-OY, VHS-OZ, VHS-PA, VHS-PB, VHS-PC, VHS-PD, VHS-PE, VHS-PF, VHS-PG, VHS-PH, VHS-PI, VHS-PJ, VHS-PM, VHS-PN, VHS-PO, VHS-PP, VHS-PQ, VHS-PR, VHS-PS, VHS-PT, VHS-PU, VHS-PV, VHS-PW, VHS-PX, VHS-PY, VHS-PZ, VHS-QA, VHS-QB, VHS-QC, VHS-QD, VHS-QE, VHS-QF, VHS-QG, VHS-QH, VHS-QI, VHS-QJ, VHS-QM, VHS-QN, VHS-QO, VHS-QP, VHS-QQ, VHS-QR, VHS-QS, VHS-QT, VHS-QU, VHS-QV, VHS-QW, VHS-QX, VHS-QY, VHS-QZ, VHS-RA, VHS-RB, VHS-RC, VHS-RD, VHS-RE, VHS-RF, VHS-RG, VHS-RH, VHS-RI, VHS-RJ, VHS-RM, VHS-RN, VHS-RO, VHS-RP, VHS-RQ, VHS-RR, VHS-RS, VHS-RT, VHS-RU, VHS-RV, VHS-RW, VHS-RX, VHS-RY, VHS-RZ, VHS-SA, VHS-SB, VHS-SC, VHS-SD, VHS-SE, VHS-SF, VHS-SG, VHS-SH, VHS-SI, VHS-SJ, VHS-SM, VHS-SN, VHS-SO, VHS-SP, VHS-SQ, VHS-SR, VHS-SS, VHS-ST, VHS-SU, VHS-SV, VHS-SW, VHS-SX, VHS-SY, VHS-SZ, VHS-TA, VHS-TB, VHS-TC, VHS-TD, VHS-TE, VHS-TF, VHS-TG, VHS-TH, VHS-TI, VHS-TJ, VHS-TM, VHS-TN, VHS-TO, VHS-TP, VHS-TQ, VHS-TR, VHS-TS, VHS-TU, VHS-TV, VHS-TW, VHS-TX, VHS-TY, VHS-TZ, VHS-UA, VHS-UB, VHS-UC, VHS-UD, VHS-UE, VHS-UF, VHS-UG, VHS-UH, VHS-UI, VHS-UJ, VHS-UM, VHS-UN, VHS-UO, VHS-UP, VHS-UQ, VHS-UR, VHS-US, VHS-UT, VHS-UV, VHS-UW, VHS-UX, VHS-UY, VHS-UZ, VHS-VA, VHS-VB, VHS-VC, VHS-VD, VHS-VE, VHS-VF, VHS-VG, VHS-VH, VHS-VI, VHS-VJ, VHS-VM, VHS-VN, VHS-VO, VHS-VP, VHS-VQ, VHS-VR, VHS-VS, VHS-VT, VHS-VU, VHS-VW, VHS-VX, VHS-VY, VHS-VZ, VHS-WA, VHS-WB, VHS-WC, VHS-WD, VHS-WE, VHS-WF, VHS-WG, VHS-WH, VHS-WI, VHS-WJ, VHS-WM, VHS-WN, VHS-WO, VHS-WP, VHS-WQ, VHS-WR, VHS-WS, VHS-WT, VHS-WU, VHS-WV, VHS-WW, VHS-WX, VHS-WY, VHS-WZ, VHS-XA, VHS-XB, VHS-XC, VHS-XD, VHS-XE, VHS-XF, VHS-XG, VHS-XH, VHS-XI, VHS-XJ, VHS-XM, VHS-XN, VHS-XO, VHS-XP, VHS-XQ, VHS-XR, VHS-XS, VHS-XT, VHS-XU, VHS-XV, VHS-XW, VHS-XY, VHS-XZ, VHS-YA, VHS-YB, VHS-YC, VHS-YD, VHS-YE, VHS-YF, VHS-YG, VHS-YH, VHS-YI, VHS-YJ, VHS-YM, VHS-YN, VHS-YO, VHS-YP, VHS-YQ, VHS-YR, VHS-YS, VHS-YT, VHS-YU, VHS-YV, VHS-YW, VHS-YY, VHS-YZ, VHS-ZA, VHS-ZB, VHS-ZC, VHS-ZD, VHS-ZE, VHS-ZF, VHS-ZG, VHS-ZH, VHS-ZI, VHS-ZJ, VHS-ZM, VHS-ZN, VHS-ZO, VHS-ZP, VHS-ZQ, VHS-ZR, VHS-ZS, VHS-ZT, VHS-ZU, VHS-ZV, VHS-ZW, VHS-ZX, VHS-ZY, VHS-ZZ**

Rates: **1/2" VHS, MS, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ**

AUTOMATED SOUND STUDIOS
APPV
1500 Broadway, New York, NY 10036
(212) 869-8520
Owner: **Steve Friedman**, **Artie Brostein**
Manager: **Henry G. Lipp**

BRODY VIDEO PRODUCTIONS
VPF, OLVP, VPP/E, APPV
1400 Mill Creek Rd., Gladwyne, PA 19035
(215) 649-6200
Owner: **Brody Productions**

C & C STUDIOS
Audio/Video Specialties
VPF, OLVP, VPP/E, APPV
R D #1, Box 581 A, Glassboro, NJ 08028
(609) 881-7645
Owner: **Edward J. Lipp**
Manager: **Edward J. Lipp**

CHESTNUT SOUND AUDIO VIDEO PRODUCTIONS
VPF, OLVP, VPP/E, APPV
1824 Chestnut St., Philadelphia, PA 19103
(215) 568-5797
Owner: **John J. Lipp**
Manager: **John J. Lipp**

DIMENSION SOUND STUDIOS
APPV
368 Centre St., Jamaica Plain, MA 02130
(617) 522-3100
Owner: **Dimension Studios**
Manager: **Dimension Studios**

EASTERN VIDEO SYSTEMS, INC
VPF, OLVP, VPP/E, APPV
2141 P St N.W., Washington D.C. 20037
(202) 483-3800
Owner: **Tom Lipp**

EDITEL NEW YORK
APPV
222 E. 44th St., New York, NY 10017
(212) 867-4600
Manager: **David Lipp**, **Gene M. Lipp**, **Henry G. Lipp**

ESPN
VPP, VPP E
ESPN Plaza, Bristol, CN 06010
(203) 584-8477
Owner: Getty Oil Company
Manager: Carl Peter on Mir. Bonto Facilities Division
EQUIPMENT
Synchronizer: Newtek Synchro-Track
VTRs: JVC 7000, 7000, 7000, 7000
VCRs: Sony 1100
Switchers: Grass Valley 1000 ZB and 1000 ZB
Cameras: Hitachi KV70, Zoom HR 100
Audio Recorders: Ampex 4400
Audio Mixers: Quantar 2400, Newtek 4400
Other major equipment: 2400 min tape deck, 30, 70 min decks
Rates: Contact Carl Peter on Mir. Bonto Facilities Division at
ESPN

ESPN
OLVP
ESPN Plaza, Bristol, CN 06010
(203) 584-8477
Owner: Getty Oil Company
Manager: Carl Peter on Mir. Bonto Facilities Division
EQUIPMENT
Synchronizer: Quantar
VTRs: Sony 1100
Switchers: Grass Valley 1000 ZB and 1000 ZB
Cameras: Hitachi KV70, Zoom HR 100
Audio Recorders: Pioneer
Audio Mixers: Newtek 4400
Other major equipment: 2400 min tape deck, 30, 70 min decks
Rates: Contact Carl Peter on Mir. Bonto Facilities Division at
ESPN

FEDCO AUDIO LABS
APPV
310 Greenwood Ave East, Providence, RI 02916
(401) 272-3157
Manager: Jeff Korte

HI FIVE RECORDING STUDIOS
VPF, OLVP, VPP E, APPV
377 Park Ave. South, New York, NY 10016
(212) 684-3766
Owner: Moscov Klineman
Manager: Moscov Klineman



LE MOBILE
New York, NY

LE MOBILE
APPV
211 W 56th St Ste 20-6, New York, NY 10019
(212) 265-1979
Owner: David Rosen
Manager: David Rosen

LONG VIEW FARM
VPF, APPV
Stoddard Road, North Brookfield, MA 01535
(617) 867-7662 or (800) 225-9055
Owner: G. Meyer
Manager: Steve Meyer
EQUIPMENT
Synchronizer: Sony 1000 ZB
VCRs: Sony 1100
Audio Recorders: Ampex 4400
Audio Mixers: MCI



PLEASE NOTE:

In the following listings each facility's particular capabilities are indicated below its name using the following initials: VPF (Video Production Facility); OLVP (On Location Video Production); VPP/E (Video Post-Production/Editing); APPV (Audio Post-Production for Video).

Other major equipment: Sound Stage built for Rolling Stone Fully lit with overhead and elevated trolley ways for cameras. Automatic time motion cut 450.
Direction: Ideal for rock concert sweetening, film scoring etc. Luxury live-in accommodations and full support staff. Studio music and art services on premises.



LONG VIEW FARM
North Brookfield, MA



LONG VIEW FARM
North Brookfield, MA

MASTER SOUND PRODUCTIONS INC
VPF, OLVP, VPP E, APPV
921 Hempstead Tpke., Franklin Sq., NY 11010
(516) 354-3374
Owner: The Best Music Company
Manager: Mark Rosen

MATRIX VIDEO
VPF, OLVP, VPP E, APPV
727 Eleventh Ave., New York, NY 10019
(212) 265-8500
Owner: Ronald S. M. Matrix
Manager: Mark Rosen

JON MILLER PRODUCTION STUDIOS
VPF, OLVP, VPP E, APPV
7249 Airport Rd., Bath, PA 18014
(215) 837-7550
Owner: Jon K. Miller
Manager: Jon K. Miller

MINOT SOUND
APPV
19 South Broadway, White Plains, NY 10601
(212) 828-1216, (914) 428-8080
Owner: Ron Cerrito
Manager: Tom Cimilli

MODERN VIDEO PRODUCTIONS
VPP E
1818 Market St., Philadelphia, PA 19103
(215) 569-4100
Manager: Jean Massin III, Frederick Jim Bart, Wade

MULTIVISION, INC
APPV
161 Highland Ave., Needham, MA 02194
(617) 449-5830
Owner: Donald O'Sullivan, Jay Boert
Manager: Jay Boert

NATIONAL VIDEO CENTER/RECORDING STUDIOS, INC
VPF, OLVP, VPP E, APPV
460 W 42nd St., New York, NY 10036
(212) 279-2000
Owner: H. L. L. L. Kaufman

NEXUS PRODUCTIONS
VPP E, APPV
10 East 40th St., New York, NY 10016
(212) 679-2180
Owner: Alfred Muller, Grist, Bharatya
Manager: Jay S. L. L. Kaufman

PENNY LANE STUDIOS
APPV
1350 Ave. of the Americas, New York, NY 10019
(212) 687-4800
Owner: Harvey Flatt
Manager: Alan Varner
EQUIPMENT
Synchronizer: J. L. L. L. Kaufman
VCRs: JVC
Audio Recorders: M 79, 4 track Ampex A110, and 4 track
Audio Mixers: Tascam TSM 42, 4
Other major equipment: 10 min tape deck, 30, 70 min decks

PHANTASMAGORIA SOUND STUDIOS, INC
APPV
630 9th Ave., #801, New York, NY 10036
(212) 586-4890
Owner: Ron Rosen
Manager: Ron Rosen

PRECISION VIDEO SERVICES, INC
VPF, OLVP, VPP E, APPV
630 9th Ave., New York, NY 10019
(212) 489-8800
Manager: Ron Rosen

PROFESSIONAL SOUND FILM & VIDEO, INC
APPV
136 Arlington St., Boston, MA 02116
(617) 423-0007
Owner: Vincent R. Parla
Manager: John Parla

JBL Compact Monitors.



Refined.



And Redefined.

In 1967, the introduction of the first professional quality compact monitor created a small revolution in the recording and broadcast industries. Combining high power capacity, accuracy, and extended bandwidth, the loudspeaker was ideal for close monitoring, yet flexible enough to provide a practical alternative to full size monitors. That speaker was to evolve into the JBL 4311. And since its introduction, it has literally set the standard for compact monitors.

At JBL, we're proud of this heritage. So over the years we've worked to maintain it through design improvement and innovation. And now, JBL engineers have created a new generation of compact monitors—loudspeakers that range from the subtly refined to the totally redefined.

Our new 4312, for example, represents the next step in the evolution of the 4311. Improvements include a new high resolution dividing network for better transient response and a mirror-imaged design that provides enhanced stereo imaging. These refinements significantly improve the loudspeaker's performance, yet maintain the unique sound character that made it an industry standard. And best of all, the 4312 is still priced to fit comfortably in even modest budgets.

For those that require a more flexible or compact monitor, we've created the 4411 and 4401. These loudspeakers incorporate our most advanced component and design technologies. Both the 4401 and 4411 utilize newly developed transducers arranged in a tight cluster to provide outstanding coherency of sound for close monitoring. This design also minimizes off-axis variations in the far field. Additionally, the 4411s are mirror imaged for improved stereo perspective.

For maximum flexibility, the continuously variable levels controls on the 4411 are calibrated for both a flat direct-field response and a rising axial response that produces a flatter power response. And for ease of adjustment, each of the monitors' level controls are baffle mounted. Finally, the low frequency loading has been optimized for flat response when the speakers are placed away from room surfaces. Because of this, the 4401 and 4411 may be console mounted without the loss of low frequency response typical of other designs.

For additional technical data and a complete demonstration of the 4312, 4401, or 4411, contact your local JBL Professional Products dealer. And discover the next generation of compact monitors. From the refined to the redefined.



**Professional
Products
Division**

JBL/harman international

JBL Incorporated
8500 Balboa Boulevard, P.O. Box 2200
Northridge, California 91329 U.S.A.

Why buy two ordinary mixers when one extraordinary Ramsa will do?

The Ramsa WR-8112 and WR-8118 mixers embody a whole new concept from Ramsa: mixers that are not only high-performance multitrack recording mixers, but also high-performance sound reinforcement mixers.

This virtually unheard of versatility is possible because of innovative

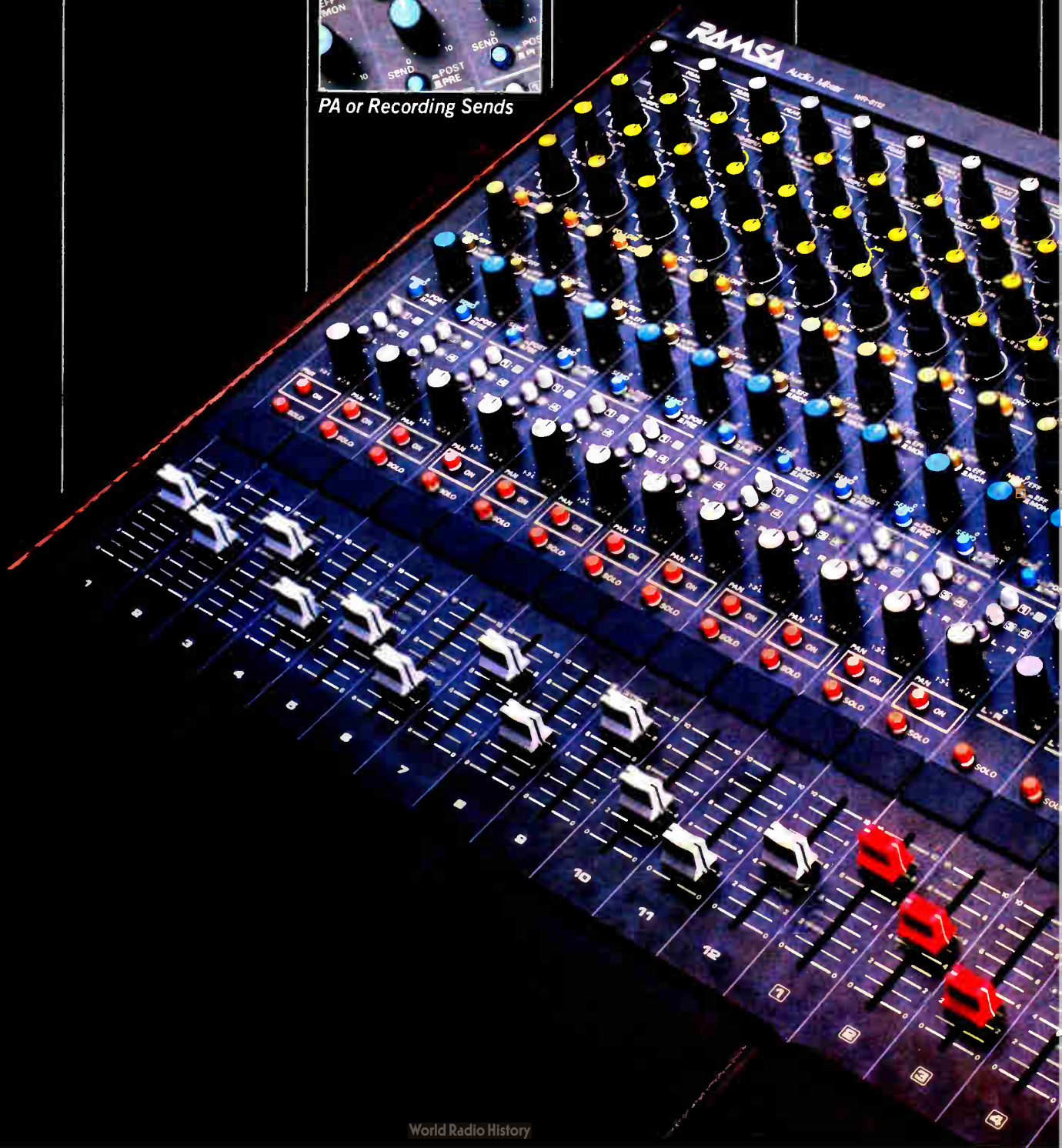


PA or Recording Sends

Ramsa engineering. One set of circuits performs as two. Functions like stereo tape monitoring are switchable to become stereo effects sends for PA.

PA monitor sends can be switched to effects sends for recording or mixdown. And that's just for starters.

The Ramsa WR-8112 and the WR-8118 give you the flexibility



RAMSA

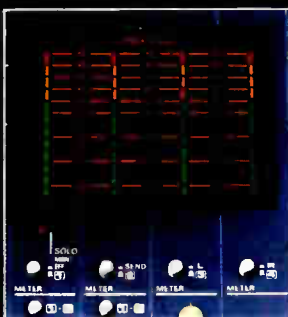
of switchable turnover frequencies for high and low EQ plus continuously variable frequency for the midrange.



Flexible Equalization

The metering of both units is flexible and accurate with four 12-point peak-reading LED meters. There are selectors for group outs 1 to 4, Left and Right master outs, mono master outs, monitor send and solo metering for any channel.

The group output levels can be internally connected for either -10dB or -4dB (nominal) to interface with either semiprofessional or professional equipment.



Versatile LED Metering

The only difference between the WR-8112 and the WR-8118 is the number of channels: 12 instead of 18. 12 channels are usually enough if your primary use is 4- or 8-track recording. But if you do a lot of live performing, you'll probably want the extra inputs provided by an 18 channel console.

So whether you're recording, gigging, doing A/V production or anything in between, why get two ordinary mixers when one extraordinary Ramsa will do. The WR-8112 and the WR-8118.

For more information, call (201) 348-7470.



WR-8112

Panasonic
PROFESSIONAL AUDIO SYSTEMS



RESOLUTION INC
Burlington, VT

RESOLUTION INC
VPF, OLVP, VPP/E, APPV
299 College St., Burlington, VT 05401
(802) 862-8881
Owner: Corporation
Manager: William F. ...

EQUIPMENT
Synchronizer: REX Studio
VCRs: 10 EVI 4000
Switchers: ISI 94 w/amp, per edit, remote
Cameras: Sony BVX-33
Audio Recorders: MCI 1114, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32
Audio Mixers: MCI 1114, 16, 18, 20, 22, 24, 26, 28, 30, 32
Other major equipment: ...

Rates: Hourly for time
Direction: ...



SCHARFF COMMUNICATIONS
New York, NY

SCHARFF COMMUNICATIONS
OLVP, APPV
1600 Broadway, Suite 503, New York, NY 10019
(212) 582-7360
Owner: ...
Manager: ...

EQUIPMENT
Synchronizer: Clock Plus
VCRs: Sony DCR-TR7, JVC ...
Audio Recorders: ...
Audio Mixers: ...
Other major equipment: ...

Rates: ...
Direction: ...



PLEASE NOTE:

In the following listings each facility's particular capabilities are indicated below its name using the following initials: VPF (Video Production Facility); OLVP (On Location Video Production); VPP/E (Video Post-Production/Editing); APPV (Audio Post-Production for Video).

... ..

HOWARD SCHWARTZ RECORDING INC
APPV
420 Lexington Ave., New York, NY 10170
(212) 687-4180
Owner: Howard Schwartz
Manager: ...

EQUIPMENT
Synchronizer: FOCUS MCF 100A
VTRs: NEC TT7000
VCRs: EVI 2000
Audio Recorders: MCI 1114, 14, 110B
Audio Mixers: MCI 1114, 16, 18, 20, 22, 24, 26, 28, 30, 32
Other major equipment: ...

SECRET SOUND STUDIO, INC
VPF, OLVP, VPP/E, APPV
147 West 24th St., New York, NY 10011
(212) 691-7674
Owner: ...
Manager: ...

SHEFFIELD AUDIO-VIDEO PRODUCTIONS
VPF, OLVP, VPP/E, APPV
13816 Sunny Brook Rd., Phoenix, MD 21131
(301) 628-7260
Owner: ...
Manager: ...

SOUNDMIXERS INC
APPV
1619 Broadway, 2nd Floor, New York, NY 10019
(212) 245-3100
Owner: ...
Manager: ...

SOUNDSCAPE RECORDING STUDIOS
APPV
756 Main St., Farmingdale, NY 11735
(516) 694-6036
Owner: ...

SOUNDTRACK
APPV
77 N. Washington St., Boston, MA 02114
(617) 367-0510
Owner: ...
Manager: ...

FREE ROUND-TRIP AIR TICKET TO SAN FRANCISCO

COURTESY OF
ALCON VIDEO/FILM PRODUCTIONS INC.

JUST BOOK A MINIMUM OF 6 HOURS 1" EDITING TIME (ONLY \$220/HR) AND WE'LL PURCHASE YOUR ROUND-TRIP AIR TICKET TO SAN FRANCISCO — WHEREVER IN THE WESTERN U.S. YOU'RE COMING FROM. WE'LL EVEN TRANSPORT YOU TO AND FROM THE AIRPORT... IT'S THAT SIMPLE.

- TT 7000 1" Type C VTRs (3) with Freeze Frame and Slo-Mo.
- Datatron Vanguard Computerized Editing
- Grass Valley 1600-1XN Switcher with E-MEM.
- NEC E-Flex Digital Video Effects.
- 3M D8800 Character Generator.
- Sound Workshop, Otari, Technics, BGW, MDM4s.

- Also:
- Comprehensive 3/4" Editing Suite.
 - 3/4", 1" Type C, 16 mm Production.
 - Mobile Audio Recording.

Call Nigel Paul for further details/bookings.
ALCON, 950 BATTERY ST., SAN FRANCISCO, CA 94111 (415) 397-0490-1-2.

ARDENT TELEPRODUCTIONS, INC.
VPF, OLVP, VPP E, APPV
 2000 Madison Ave., Memphis, TN 38104
 (901) 726-6553
Manager: Tom Tyler
EQUIPMENT
Synchronizer: Hi-Fi Media MCE
VTRs: Hi-Fi Two Track MCE
VCRs: VHS two track professional
Switchers: Grass Valley w/EMF
Cameras: Canon, EBC, Hi-Fi, two track professional
Audio Recorders: MCE, two track MCE, two track
Audio Mixers: MCE with multi New
Other major equipment: Shofram Flex DVE, Clavin IV
Rates: Call for rates
Direction: Call for information

ARTISAN RECORDERS, INC.
APPV
 1421 SW 12th Ave., Pompano Beach, FL 33060
 (305) 786-0660
Owner: Peter Lusk

AUDIOFONICS INC.
VPF, OLVP, VPP E, APPV
 1101 Downtown Blvd., Raleigh, NC 27603
 (919) 821-5614
Owner: Larry Kagan
Manager: Robert B. Blomquist
EQUIPMENT
Synchronizer: Hi-Fi two track
VTRs: Hi-Fi, VHS, Hi-Fi, Hi-Fi, Hi-Fi
VCRs: Hi-Fi, VHS, Hi-Fi, Hi-Fi, Hi-Fi
Switchers: ISI #4
Cameras: Hi-Fi, Hi-Fi, Hi-Fi
Audio Recorders: Hi-Fi, Hi-Fi, Hi-Fi
Audio Mixers: Sound Workshop, Hi-Fi, Hi-Fi
Other major equipment: Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi
Rates: Excellent prices, call for rates
Direction: Available for all types of production work
 personal, industry and commercial. We can provide
 full service with complete production services, including
 script development, location scouting, production design,
 production office, production office, production office

BULLET RECORDING, INC.
VPF, OLVP, APPV
 49 Music Square West, Nashville, TN 37203
 (615) 327-4621
Owner: Kelly Holland
Manager: Ted Bates
EQUIPMENT
Synchronizer: Axiom, Hi-Fi, Hi-Fi, Hi-Fi
VTRs: Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi
VCRs: Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi
Switchers: Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi
Cameras: Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi
Audio Mix: Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi
Other major equipment: Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi
Direction: Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi

CONTI STUDIO
APPV
 P O Box 968, Edgewater, FL 32032
 (904) 427-2480
Owner: Carl H. H. H.
Manager: Dick Chen

CREATIVE SOUND CONCEPTS
VPF, OLVP, VPP E, APPV
 1066 Briar Vista Terr N.E., Atlanta, GA 30324
 (404) 634-3382
Owner: Dennis Baxter
Manager: Stephen H. H.



PLEASE NOTE:

In the following listings each facility's particular capabilities are indicated below its name using the following initials: VPF (Video Production Facility); OLVP (On Location Video Production); VPP E (Video Post-Production Editing); APPV (Audio Post-Production for Video).

CRESCENDO RECORDERS
VPF, OLVP, VPP E, APPV
 125 Simpson St N.W., Atlanta, GA 30313
 (404) 223-0108
Owner: Bill Ray, Randy Hill
Manager: Robert Hill, Rick Hill, Mike Hill, Mike Hill
EQUIPMENT
Synchronizer: Axiom, Hi-Fi, Hi-Fi

VTRs: Hi-Fi, Hi-Fi
VCRs: Hi-Fi, Hi-Fi, Hi-Fi
Switchers: Hi-Fi, Hi-Fi, Hi-Fi
Cameras: Hi-Fi, Hi-Fi
Audio Recorders: Hi-Fi, Hi-Fi, Hi-Fi
Audio Mixers: Hi-Fi, Hi-Fi, Hi-Fi
Other major equipment: Hi-Fi, Hi-Fi, Hi-Fi
Rates: Hi-Fi, Hi-Fi, Hi-Fi
Direction: Hi-Fi, Hi-Fi, Hi-Fi

CRITERIA RECORDING STUDIOS
APPV
 1755 N.E. 149th St., Miami, FL 33181
 (305) 947-5611
Owner: Mike Friedman
Manager: Jack King

DOPPLER STUDIOS INC.
APPV
 1922 Piedmont Circle N.E., Atlanta, GA 30324
 (404) 873-6941
Owner: Bob Caldwell
Manager: Jim Allen

F & F PRODUCTION, INC.
VPF, OLVP, VPP E, APPV
 10393 Gandy Blvd., St. Petersburg, FL 33702
 (813) 576-7676
Owner: Frank F. F.
Manager: Jim Davis

FANTA PROFESSIONAL SERVICES
APPV
 1213 16th Ave S., Nashville, TN 37212
 (615) 327-1731
Owner: Robert L. H.

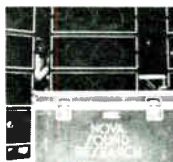
MUSIC & VIDEO at
the complex



THE COMPLEX VIDEO SERVICES - L.A.'s newest video facility equipped with - VIDEO AND FILM LIGHTING - FULL POWER - RIGGING GRID - LOUNGE AND DRESSING AREAS - CARPENTRY SHOP - FREE PARKING - SET UP CREWS - HOME OF CCR VIDEO (full capability) MOBILE RECORDING UNIT - and several other services geared to save production time, confusion and dollars.

NOVA SOUND - Sound reinforcement that can provide any combination of portable, high quality, MONITOR SYSTEMS - PLAYBACK SYSTEMS - LIVE STAGE P.A. SYSTEMS - MICROPHONES - STANDS AND BOOMS - and any MUSIC related sound equipment and mixers.

COMPLEX STUDIOS - Two 24 Track RECORDING STUDIOS equipped with GML 7901 RECORDING CONSOLES and STATE OF THE ART ELECTRONICS. Fully flexible for any combination of VIDEO - AUDIO recording, playback or synchronization needs.



the complex



2323 Corinth Street, Los Angeles, CA, 90064
 (213) 477-1938 • TOLL FREE 910-342-7581



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From coast to coast and in 43 foreign countries, audio, video, and music professionals read *Mix Magazine*! For the latest industry news, illuminating articles on hardware and production techniques, exclusive interviews with today's movers and innovators, as well as

the last word on the marriage of audio and video, *Mix* is your best source for the information you need to help you do your job in these competitive times.

Don't miss an issue — Subscribe today!

FLYING COLORS
VPF, VPP/E, APPV
 Webster Avenue, P.O. Box 2124, Muscle Shoals, AL 35662
 (205) 381-1455
 Owner: Lola Scribney
 Manager: Lola Scribney

LEE HAZEN'S RECORDING SERVICE
VPF, OLVP, VPP/E, APPV
 204 Shoreside Dr., Rt. 2, Hendersonville, TN 37075
 (615) 824-2311
 Owner: Lee Hazen
 Manager: Lee Hazen

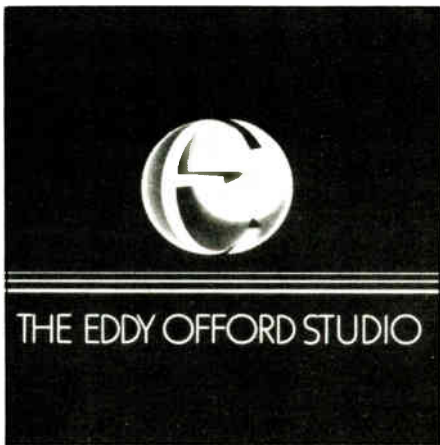
KINDER MUSIC/RKM SOUND STUDIOS
APPV
 1200 Spring Street, N.W., Atlanta, GA 30309
 (404) 874-3667
 Manager: Jeffrey J. Kinder

LIFE INTERNATIONAL PRODUCTIONS
VPF, OLVP, VPP/E, APPV
 9 S.E. Ninth Ave., Ft. Lauderdale, FL 33301
 (305) 524-5433
 Owner: AMI Corporation
 Manager: Gary Burris

LIVE OAK SOUND, INC.
APPV
 110 College Place, Norfolk, VA 23510
 (804) 627-5545
 Manager: Charles Jim Mizler

MORRISOUND RECORDING INC
APPV
 5120 N. Florida Ave., Tampa, FL 33603
 (813) 962-4197
 Owner: Morrisound Recording Inc.
 Manager: Thomas C. Morris

MOTION PICTURE LABORATORIES, INC
VPP/E
 781 S. Main, Memphis, TN 38101
 (901) 774-4944
 Manager: Elmer Baker



THE EDDY OFFORD STUDIO
 Atlanta, GA

THE EDDY OFFORD STUDIO
VPF
 1493 Jefferson Ave., P.O. Box 90903, Atlanta, GA 30364
 (404) 344-6568, (404) 766-5143
 Owner: Eddy Offord
 Manager: Vicky Viano
EQUIPMENT
 Audio Recorders: MCI 1114 4 track, MCI 1110 2 track
 Steellmaster 2 track
 Other major equipment: Sony 1000, 1001, 1002
 Rates: In-house
 Direction: Top Production, Inc., Production, Inc.

RKM SOUND STUDIOS
APPV
 1200 Spring St. N.W., Atlanta, GA 30309
 (404) 874-3667
 Owner: Kinder Music Corporation
 Manager: Jeff Kinder



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SHOE PRODUCTIONS, INC
VPF, OLVP, VPP/E, APPV
 P.O. Box 12025, Memphis, TN 38182
 (901) 458-4496
 Owner: Warren Warner
 Manager: Warren Warner

SOUNDSHOP RECORDING STUDIOS
APPV
 1307 Division St., Nashville, TN 37217
 (615) 244-4149
 Owner: Budby Kilian
 Manager: Tom Lick

SPECTRUM PRODUCTIONS
VPF, OLVP, VPP/E, APPV
 536 Hullman Rd., Birmingham, AL 35215
 (205) 833-6906
 Owner: H. Martin Assembly
 Manager: Kirk Ingle



STUDIO A PRODUCTIONS INC.
 Alexandria, LA

STUDIO A PRODUCTIONS, INC.
VPF, OLVP, VPP/E, APPV
 1123 Jackson St., Alexandria, LA 71301
 (318) 473-0779
 Owner: Dennis Murdock
 Manager: Dennis Murdock



TAKE ONE PRODUCTION GROUP
 Orlando, FL

TAKE ONE PRODUCTION GROUP
VPF, OLVP, VPP/E, APPV
 P.O. Box 3409, Longwood (Orlando), FL 32750
 (305) 869-1119
EQUIPMENT
 VTRs: Sony BVX1100A, RCA TR100A, C. Chroma
 VCRs: 4x an 1000 duplication VHS and Beta
 Switchers: Grass Valley 1600, 1700, WFM/M
 Cameras: RCA PK 4015 and 4014, Kodak, HI 791
 Audio Mixers: MCI 2 track automatic Neve 7x2 Tascam 16
 track
 Audio Recorders: Studer AM10 24 track Otari MTR 90 Otari
 MTR 90 JVC DASH digital
 Other major equipment: AVA graphic computer, Dayton IV
 CG 1000 16 bit time-slicing, independent audio and video file
 (240)
 Rates: Quoted on per project basis
 Direction: In-house with state-of-the-art facilities and over 25
 years of experience to know Take One Production Group delivers
 The key personnel in the music and music video business
 no wonder they find music video a source of pride and joy. Their
 creative staff are expected to put in your concept and work within
 your budget to make your fantasies a visible reality.

TELE-COLOR PRODUCTIONS, INC
VPF, OLVP, VPP/E
 150 South Gordon St., Alexandria, VA 22304
 (703) 823-2800
 Owner: Charles F. Bibby, President
EQUIPMENT
 Synchronizer: NEC
 VTRs: 5 RCA 1004 RCA and Ampex 2
 VCRs: 6 Sony 24
 Switchers: Grass Valley 1600, CTE 48
 Cameras: Haas SK 60, Thompson 101
 Audio Recorders: Ampex 440 14" and 11" Ampex 300
 Audio Mixers: J. Yamha 400, Quantar
 Other major equipment: NEC non-linear video effects, Mach 1 color,
 1200 and 1200 x 40 and 145 x 45 1/2 inch slide-worm retentive
 film cameras
 Rates: Available upon request
 Direction: Television commercials, programs and documentaries
 Remote live coverage of sports events, international affairs and
 the performing arts. Corporate and governmental communications
 films programs.

TREASURE ISLE RECORDERS
APPV
 2808 Azalea Place, Nashville, TN 37204
 (615) 327-2580
 Owner: Manner Trust
 Manager: Fred Vail, general manager

WISHBONE RECORDING STUDIO
APPV
 Webster Ave., P.O. Box 2631, Muscle Shoals, AL 35662
 (205) 381-1455
 Owner: Terry Woodford
 Manager: Terry Woodford

NORTH CENTRAL

AFTER DARK RECORDING STUDIO
VPF, OLVP, VPP/E, APPV
 5510 Pearl Rd., Parma, OH 44129
 (216) 845-5455
 Owner: Kirk Yano
 Manager: Vic Schenkley



16 Track from \$19,050.
24 Track from \$23,250.
Console Series 1600 \$19,950.

“Right on the Money, Again!”

At Harvey, buying a console and a 16 or 24 track recorder no longer has to be a big production.

If the industry set forth to design a multitrack console and recorder that would be ideal for “audio for video,” they would design the Soundcraft 1600 Console and 762 Series Recorders. These tools are cost effective, transparent sounding and easy to calibrate and maintain.

A fully professional compact system to meet your SMPTE lock up needs without driving your budget into “clipping.”

HARVEY

25 W. 45 TH ST., NEW YORK, N.Y. 10036 (212) 921-5920

AMBIENCE RECORDING INC.
VPF, OLVP, VPP/E, APPV
 27920 Orchard Lake Rd., Farmington Hills, MI 48018
 (313) 851-9766
 Owner: Jerry Silecchia
 Manager: Jerry Silecchia

ASTRO VIDEO
VPP/E
 61 W. Erie St., Chicago, IL 60010
 (312) 280-5520
 Owner: Electrographic Corp.
 Manager: Bob Patluck

AUDIOCRAFT
APPV
 915 W. 8th St., Cincinnati, OH 45203
 (513) 241-4304
 Owner: G.T. Herzog
 Manager: G.T. Herzog Jr.

CHICAGO RECORDING COMPANY
APPV
 528 N. Michigan Ave., Chicago, IL 60611
 (312) 822-9333
 Owner: Alan S. Kulsaka
 Manager: Hank Neuser
EQUIPMENT
 Synchronizer: HIX MCI Av. Lock
 VTRs: 1 Sony
 VCRs: 4 Sony
Audio Recorders: Neve MCI
Audio Mixers: Neve Cardas MCI Trident Sphero
Other major equipment: Compex auxiliary gear, EMT 251
 dental reverby mix down automation, 48 track capability
Rates: \$185/hr. \$210/day
Direction: Simply the best in the state audio for video production facility in the Midwest with the best engineers in the business.

CITY VIDEO PRODUCTION
VPF, OLVP, VPP/E, APPV
 1227 S. Harlem Ave., Berwyn, IL 60402
 (312) 484-8818
 Owner: Frank Caska
 Manager: Frank Caska

THE DISC LTD.
APPV
 14611 E. Nine Mile Rd., East Detroit, MI 48021
 (313) 779-1380
 Owner: Bill Dennis, Green Belly, Tom Swartz
 Manager: Green Belly
EQUIPMENT
 Synchronizer: HIX
 VTRs: Hitachi
 VCRs: Sony 45800
Audio Recorders: Ampex 4 track, 4M, 6 track and 12 track
 Scully 4 track
Audio Mixers: Automated Processors 42 in 24 cut w/ Allison
 Research Comp. post mix
Other major equipment: Large selection of outboard gear and
 special effects
Rates: Upon request
Direction: Prov. only a must only start with a solid record
 reputation, we have expanded our facilities for video post production
 in the. We have years of experience in music and commercial
 mixing and recording. After watching the video explosion over
 the past few years, we decided to make it a part of our operation.
 We are very service oriented and take pride helping our clients
 make their projects a success.

EDIT CHICAGO
VPF, OLVP, VPP/E, APPV
 160 E. Grand Ave., Chicago, IL 60611
 (312) 280-2201
 Owner: Tony Izzi
 Manager: Don Cunningham

ELECTRONIC FIELD PRODUCTIONS INC.
VPF, OLVP, VPP/E, APPV
 11 W. College, Suite K, Arlington Heights, IL 60004
 (312) 577-1811
 Manager: Bill Kloock

HIGH FIDELITY RECORDING, INC.
VPF, OLVP, VPP/E, APPV
 1059 Porter, Wichita, KN 67203
 (316) 262-6456
 Owner: Corporation
 Manager: James Stratton



PLEASE NOTE:

In the following listings each facility's particular capabilities are indicated below its name using the following initials: VPF (Video Production Facility); OLVP (On Location Video Production); VPP/E (Video Post-Production Editing); APPV (Audio Post-Production for Video).

HUBBARD STREET STUDIOS
VPF, OLVP, VPP/E, APPV
 11 East Hubbard St., Chicago, IL 60611
 (312) 670-0110
 Owner: Jim Poulson, Fred Boyneke
 Manager: Tom Poulson, Fred Boyneke



KARTES VIDEO COMMUNICATIONS
 Indianapolis, IN

KARTES VIDEO COMMUNICATIONS
VPF, OLVP, VPP/E, APPV
 10 E. 106th St., Indianapolis, IN 46280
 (317) 844-7403
 Owner: Jim Kartes
 Manager: Steve Katzentrauer
EQUIPMENT
 Synchronizer: EECO MGS 100A
 VTRs: (1) Ampex VPH 25 1" (1) Ampex AVH 2 2" (2) Ampex
 VPH 20 1"
 VCRs: (1) Sony 4 1/2" Hi-Matic
 Switchers: Ampex 41(2) video switcher, Vital 114-4A video
 switcher
 Cameras: Ampex BBC 20 (1) and BCC TK 20 (1)
Audio Recorders: Ampex ATR 124 2" 24 track, Ampex
 ATR 104 2" 4 track
Audio Mixers: Audiotechnics 60x24 audio console and two
 Stevens 24x24 audio consoles
Other major equipment: AIX (Ampex Dental Optics) Vital
 (continued on next page)

DECLASSIFIED

Rampant rumors about a highly advanced video production facility operating at a secret Salt Lake City location have been confirmed. The recent declassification of top secret information revealed that Salt Lake City, Utah, is indeed the site of one of the video production industry's best-kept secrets—**STS**.

With the recent revelation, many producers have begun to come forward with reports of their previously undisclosed forays into the heart of the STS production facility. Their video adventures include encounters with AVA, ADO, ESS-2, CMX, FDL, NEVE and other legendary video and audio capabilities. And their stories of location productions and suprisingly reasonable rates add to the STS mystique.

The entire dossier on the STS production facility is now available for the asking. Get the inside information today. Contact STS Client Services.



Skaggs Telecommunications Service

The International Center
 5181 Amelia Earhart Drive
 Salt Lake City, Utah 84116
 (801) 539-1427 • Toll Free 1-800-654-4870

COOKSOUND PRODUCTIONS, INC.

APPV
6626 Hornwood, Houston, TX 77074
(713) 772-1006
Owner: Shotaun Cooke
Manager: David Edney

DALLAS SOUND LAB

APPV
Service Center, Four Dallas Communications Complex,
Irving, TX 75039
(214) 471-1622

Owner: Russell Whitaker

Manager: J.P. Marshall

EQUIPMENT

Synchronizer: Q Lock (Audio Kinetics)

VCRs: IVC 8500

Audio Recorders: Otari MTR 90 MCI JH24 Otari 4 track Otari 2 track MCI 4 track MCI 2 track

Audio Mixers: MCI 536 w/automation

Other major equipment: Multi track magnetics 35 mm projector and dubbers film editing facilities computerized sound effects library

Rates: \$100 - \$200 per hour

Direction: Dallas Sound Lab will be opening in the spring of 83. The facility will consist of Studio A 48 track recorder in a studio with video/film interlock capable of 60-piece capacity orchestra scoring, video sweetening and album jingle production, with audio tie lines to the three sound stages at Las Colinas for live TV shows concerts etc. and Studio B a film mixing theatre for automatic dialogue replacement, Foley effects, screening and film mixing. Dallas Sound Lab is designed to meet the complete needs of film, tele, dealing with any aspect of audio for video or film production.

EDENWOOD RECORDING STUDIOS

APPV
7319-C Hines Place, Suite 201, Dallas, TX 75235
(214) 630-6196

Owner: Jerry W. Swafford

Manager: Dave Scott

EQUIPMENT

Synchronizer: HTX

VCRs: IVC 34"

Audio Recorders: MCI 16 track, Otari MTR 10

Audio Mixers: Tancent VCA

Other major equipment: SMPTE read open jam video display

Rates: Audio for video \$120/hr

Direction: Edenwood Recording Studios has been providing audio services to major advertising/broadcast agencies for the past ten years and has an audio post production for video for the past year. Edenwood can provide custom music or music from four music libraries plus many HFX libraries.

INERGI STUDIO

APPV
15825 Memorial, Houston, TX 77079
(713) 493-1533
Owner: Vince Kenfield
Manager: David Kealey

LAGUNA PRODUCTIONS

VPF, OLVP, VPP/E, APPV
3685 S. Highland #14, Las Vegas, NV 89103
(702) 871-1226

Owner: Douglas B. Momary

Manager: Douglas B. Momary

EQUIPMENT

Other major equipment: A complete 34" on line post production facility, as well as 34" and 1" on location shooting

Rates: \$110/hr plus tape stock editing. All other prices available upon request

Direction: Commercial spots Product promotions Special events promotions Network & syndicated programming

LUXURY AUDIO WORKSHOP, INC.

APPV
2570 E. Tropicana Ave., Las Vegas, NV 89121
(702) 451-6767
Manager: Lee Walters

MIDCOM, INC.

OLVP, APPV
2231 E. Division, Arlington, TX 76011
(817) 461-2211 metro

Owner: Mike Simpson

EQUIPMENT

Synchronizer: BTX Shadow/Cypher

Audio Recorders: MCI JH 24/24, Studer A810

Audio Mixers: Soundcraft Series 2400 24x24x2

Other major equipment: Lexicon 224X digital reverb, dbx 900 rack JBL 4440 hi radial monitors, White 1/2 octave equalizers, Lexicon model 1200B audio time compressor/expander

Rates: 24 track rate \$1800/10 hr day plus tape 2 track or video mix \$1200/hr day plus tape Travel rate \$1.45/mile beyond 50 mile radius



PLEASE NOTE:

In the following listings each facility's particular capabilities are indicated below its name using the following initials: VPF (Video Production Facility); OLVP (On Location Video Production); VPP/E (Video Post-Production/Editing); APPV (Audio Post-Production for Video).

Direction: Midcom's post production facility, located in a location audio for video. It is equipped with state-of-the-art gear. Midcom offers the latest remote truck in a new line to be found in the Southwest. Midcom's location audio for video allows the client to have sweetening and audio post production at the post facility of his choice.



MIDCOM, INC.
Arlington, TX



OMEGA AUDIO & PRODUCTIONS, INC
Dallas, TX

OMEGA AUDIO & PRODUCTIONS, INC.

APPV
8036 Aviation Place, Box 71, Dallas, TX 75235
(214) 350-9066

Owner: Paul A. Christensen

Manager: Russell Hearn

EQUIPMENT

Synchronizer: BTX 4600/4700

VTRs: RCA TH 200 (8)

VCRs: IVC CR6600

Switchers: Grass Valley

Cameras: RCA/CEI

Audio Recorders: Otari MTR 90 24 track Otari MTR 10 4 2/4 track

Audio Mixers: Amek M2500 36x24 w/automation

Other major equipment: Full Scamp rack Harmonizer DDL 1 digital delays UHF Little Dipper, Audicon plates, etc

Rates: Interlock structure \$125/hr

Direction: Co-located with Video Post and Transfer at Dallas Love Field. Recent video music specials with Johnny Cash, Bob Hope, Quarterflash, Carl Perkins, Jerry Jet, Walker, Joe Ely, Eddie Rabbit, Helen Reddy, PBS, etc. Omega Audio also has a fully equipped 24 track remote truck with full SMPTE interface.

SOUTHWEST TELEPRODUCTIONS INC.

(Subsidiary of NW Teleproductions)

VPF, OLVP, VPP/E, APPV

2649 Tarna Dr., Dallas, TX 75229

(214) 243-5719

Manager: Robert M. Dauber, exec producer

SPINDLETOP POST

VPF, OLVP, VPP/E, APPV
1328 Inwood, Dallas, TX 75247
(214) 634-7206

Manager: Jim Row, president

SUNDANCE PRODUCTIONS, INC.

VPF, OLVP, VPP/E, APPV

7141 Envoy Court, Dallas, TX 75247

(214) 688-0081

Owner: Rush Beasley

Manager: Lon Wilder

TELE IMAGE

VPF, OLVP, VPP/E, APPV

6305 N. O'Connor (Dallas Communications Complex)

#103, Irving, TX 75039

(214) 245-3561

Manager: Diane Barnard (general manager), Pat Caster (opera lions manager)

TELEMUSIC PRODUCTIONS

VPF, OLVP, VPP/E, APPV

3716 High St., Albuquerque, NM 87107

(505) 345-0552

Owner: John Cline, Dave Justice

Manager: John Cline, Dave Justice

UNITED AUDIO RECORDING

a.k.a. UAR Productions

VPF, OLVP, VPP/E, APPV

8535 Fairhaven, San Antonio, TX 78229

(512) 690-8883

Owner: Robert H. Bruce

EQUIPMENT

Synchronizer: SMPTE Video Media computer editing

VTRs: Ampex VPR 80 C format

VCRs: IVC

Switchers: 3M

Cameras: Ikegami

Audio Recorders: 3M M79 24 track Ampex ATR 100 2 tracks, Scully 4 2 and 1 track

Audio Mixers: SpectraSonic

Other major equipment: Lexicon reverb, Eventide Harmonizer Super Prime Time UHF racks Time Alon monitor system

Rates: (Package gets discount) Hourly audio only, includes all instruments \$65 Video only in studio \$700 Video only location \$1500/day

Direction: The company will pioneer MTV production in Texas. We've been involved with the development of SMPTE usage in film and video postproduction since 1974 using techniques that are just now becoming popular in Hollywood, namely Time Code editing for film and film sweetening. Two new recording stages as of January 1983 with over 10,000 sq ft of additional space.

WESTWOOD RECORDING STUDIOS

APPV
964 West Grant Rd., Tucson, AZ 85705
(602) 622-8012

Manager: William Cashman

NORTHWEST

ALCON VIDEO/FILM PRODUCTIONS INC.
VPF, OLVP, VPP/E, APPV
 950 Battery, San Francisco, CA 94111
 (415) 397-0490
 Owner: Stephen Gamble
 Manager: Jayne Ford

AUDIO PRODUCTION STUDIO
APPV
 7404 San Lake Rd., Anchorage, AK 99502
 (907) 243-4115
 Owner: Creative Productions, Inc.
 Manager: Bruce Graham

AUDIO VIDEO RESOURCES
VPF, OLVP, VPP/E, APPV
 60 Broadway, San Francisco, CA 94111
 (415) 781-2603
 Manager: Roger Stout, President

B.A.V.C.
VPF, OLVP, VPP/E
 1111 17th St., San Francisco, CA 94107
 (415) 861-3280
 Manager: Don Armons, Facility Manager

BAYSHORE STUDIOS
APPV
 871-F Industrial Rd., San Carlos, CA 94070
 (415) 591-3503
 Owner: Keith Hutschek
 Manager: Keith Hutschek

BECH-TECH
VPF, OLVP, VPP/E, APPV
 Claremont Hotel, 41 Tunnel Rd., Berkeley, CA 94705
 (415) 548-4054
 Owner: Steve Ford

ROBERT BERKE RECORDING
APPV
 San Francisco, CA
 (415) 661-6316
 Owner: Robert Berke
 Manager: Max F...



BODACIOUS AUDIO
 Sausalito, CA

BODACIOUS AUDIO
APPV
 301 Harbor Drive, Sausalito, CA 94965
 (415) 331-7559
 Owner: Herb Pallant, David Haynes, Roger Wong
 Manager: Herb Pallant

BONNEVILLE PRODUCTIONS
VPF, OLVP, VPP/E, APPV
 130 Social Hall Ave., Salt Lake City, UT 84111
 (801) 237-2400
 Owner: Bonneville International Corp.
 Manager: David Matheson



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CAMRAC STUDIOS
VPF, OLVP, VPP/E, APPV
 1775 Kuenzli St., Reno, NV 89502
 (702) 323-0965
 Owner: Camara Corp.
 Manager: Jim Mitchell

CATALYST PRODUCTIONS
VPF, OLVP, VPP/E, APPV
 1782 University Ave., Berkeley, CA 94703
 (415) 848-7606
 Manager: Charles Al. Sutherland, Joseph Beatrix

CINE RENT WEST
VPF, VPP/E, APPV
 155 Fell St., San Francisco, CA 94102
 (415) 431-5490
 Manager: Greg Strazelle, President



DNA PRODUCTIONS
 Seattle, WA

DNA PRODUCTIONS
VPF, APPV
 4034 N.E. 195th St., Seattle, WA 98155
 (206) 364-5333
 Owner: David and Ann Thompson
 Manager: David Thompson
EQUIPMENT
 Synchronizer: SMITH Professional RTX Stereo and Stereo
 troller
 VCRs: JVC CR-82000 and JVC CR-2000
 Switchers: Available
 Cameras: Available

Audio Recorders: Transformerless MTH 902 24 track MTH 1022 and 4 track with 24 track
Audio Mixers: Transformerless Sound Workshop series 40 fully automatic 30 in x 32 out
Other major equipment: Eveready Harmonizer H449 Time Squeeze Nova Beam 10 screen video monitor Lock in Super Prime Time or 224X digital reworder/processor DeltaLab Filetrons Complete complement of electronic and musical equipment
Rates: \$450 Video \$125 Audio



EUREKA TELEPRODUCTION CENTER
 San Carlos, CA

EUREKA TELEPRODUCTION CENTER
VPF, OLVP, VPP/E, APPV
 1250 San Carlos Ave., San Carlos, CA 94070
 (415) 591-0156
 Manager: Kenneth M. Cox
EQUIPMENT
 Synchronizer: RTX
 VTR: Hi 8, Hi 8i
 VCRs: 4" Sony Panasonic VHS
 Switchers: Grass Valley
 Cameras: Ikegami
Audio Recorders: All formats, Mono, 2, 4 track, MCI
Audio Mixers: 24 Harris
Other major equipment: CMX 4 X 4 mixing system, Quantel digital video effects, Chyron graphics, complete assortment of audio processing units and microphones

FANTASY STUDIOS
APPV
 10th & Parker St., Berkeley, CA 94710
 (415) 549-2500
 Owner: Fantasy Records
 Manager: Nino Bonardieri
EQUIPMENT
 Synchronizer: G. Lock
 VCRs: HVH RCK
Audio Recorders: 4 track, 8 track, 16 track & 24 track
Audio Mixers: Nova H108, Quad M
Other major equipment: Large inventory of outboard gear
Rates: Call for information

GOLDEN BAY VIDEO
VPP/E, APPV
 61 Camino Alto, Suite 108, Mill Valley, CA 94941
 (415) 381-2566
 Owner: Victor Mistry, J. Lee Busch
 Manager: Victor Mistry

HARBOR SOUND
APPV
 301 Harbor Drive, Sausalito, CA 94965
 (415) 332-0983
 Manager: Nancy Evans

HOT TRACKS RECORDING
APPV
 2217A The Alameda, Santa Clara, CA 95050
 (408) 554-1117
 Owner: Phil Hansen, Dan Hansen
 Manager: Phil Hansen

JACOBS VIDEO SERVICES
VPF, OLVP, VPP/E
 2046 Fourth St., San Rafael, CA 94901
 (415) 459-2313
 Owner: Tom Jacobs
 Manager: Tom Jacobs

VTRs: Sony BVH 1100A (4X) 2000 (4X) 1180 (1X) 800 (4X)
Sony Beta Cam VVW 10 (2X) Ampex AVF 2 (2X)

VCRs: Panasonic, Sony

Switchers: Grass Valley 1600 7K w/E MFM A & B encoded chroma keyers (2X) analog porcelaine generator keyers (4X) quad split down stream keyer Mark II DVE 2 channel unit Grass Valley 300 4A w/E MFM A & B (2 BHC) and encoded chroma keyers, quad split analog borderline generator keyers (4X) Mark II DVE 2 channel unit

Cameras: Ikegami ITC H2 B & W (4X) Ikegami ITC 450 color
Audio Recorders: MCI JH 110B w/1/2" track and 1/2" 4 track heads MCI JH 110B 8 track w/a telecine III MCI JH 24W B track, 16 track and 24 track heads

Audio Mixers: MCI JH600 18 channel parametric EQs VCA and wild UCA faders broadcast option, MCI JH 500 D 18 channel plasma display metering Spectra V 16 broadcast option

Other major equipment: Chyron IV UREI 88.4 Time Alcan monitors, UREI 1178 compressor/limiters, Lexicon 224 digital reverb Eventide Time Squeeze system, Dolby noise reduction max noise reduction 902, Desser 903 compressor, 98.4 noise gate

Direction: On-line video post production, with emphasis on facility control. Digital video effects, interlocked sound sweetening, animates/photomates, Duplication and trafficking services. Client list includes: Alton & Dorward, Cunningham & Walsh, Dailey & Assoc., FCB/Honor T, Walter Thompson, Kelbaum McCann Erickson, Onley & Matner, Young & Rubicam, Atari, Bank of America, Beventel, Equitec, Foremost McKesson, Kaiser Pacific Telephone, Standard Oil, Tandem Computers, Wells Fargo Bank

REALTIME VIDEO

VPF, OLVP, VPP/E, APPV

9 Calhoun Terrace, San Francisco, CA 94133

(415) 982-8493

Owner: Will Hoover

RUSSIAN HILL RECORDING

APPV

1520 Pacific Ave., San Francisco, CA 94109

(415) 474-4520

Owner: Jack Leahy, Bob Shotland

Manager: Bob Shotland, Gen. Mgr. Paul Henshaw,

Studio Mgr.

EQUIPMENT

Synchronizer: A-K Q Lock 310

VCRs: JVC BR50 14, Sony BR50 14, Beta

Audio Recorders: MCI JH24, JH14, JH14, JH10B, JH10B 4, JH10 mono

Audio Mixers: Helios 52x/4, Neotek 28x/4 full board comp

Other major equipment: Dolby A noise reduction M, 4 H 10 video projection in studio, Sony 25 17 4 monitors

Rates: Rate sheet on request

Direction: Full facilities for post audio for video, scoring, sweetening, electronic ADT, TV specials 1982, Grizoid, Charlie Brown (CBS), Nova (PBS), You Asked for It (NBC), Feature films: Never Cry Wolf (Disney), Eddie Macdon's Run (Universal), Dour De Dew, (Ind) and many others

SAN FRANCISCO PRODUCTION GROUP

(formerly SKIDMARKS)

VPF, OLVP, VPP/E, APPV

550 Bryant St., San Francisco, CA 94107

(415) 495-5595

Owner: SFPK

Manager: Joel Skidmore

DAWN SHIFREEN VIDEO

OLVP

6927 Fairmont Ave., El Cerrito, CA 94530

(415) 526-9566

Owner: Dawn Shifreen

Manager: Dawn Shifreen

RANDALL SCHILLER PRODUCTIONS

APPV

1207 5th Ave., San Francisco, CA 94122

(415) 661-7553

Owner: Randall Schiller

Manager: Randall Schiller

SEA-WEST RECORDING STUDIOS/HAWAII

APPV

P.O. Box 30186, Honolulu, HI 96820

(808) 293-1800

Manager: Donna Alexa

SHOTWELL IMAGE GROUP

VPF, OLVP, VPP/E, APPV

307 Shotwell St., San Francisco, CA 94110

(415) 621-7131



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SKAGGS TELECOMMUNICATIONS SERVICE

VPF, OLVP, VPP/E, APPV

5181 Amelia Earhart, Salt Lake City, UT 84116

(801) 539 1427

Owner: Don Skaggs

Manager: Don Skaggs



THE SOUND SERVICE
San Francisco, CA

THE SOUND SERVICE

VPP/E, APPV

860 Second St., San Francisco, CA 94107

(415) 433-3674

Owner: David Dobkin, Steven Buckley

Manager: David Dobkin

EQUIPMENT

Synchronizer: A-K Q Lock 310

VCRs: JVC BR50 14, Sony BR50 14, Beta system

Audio Recorders: Ampex MM 100 16 track, 8 track, MCI 4 track, MCI 24 track, Telecine, Ampex 44 16

Audio Mixers: Quantum

Other major equipment: EMI 1178 reverb, max noise reduction, noise reduction

Rates: Pre-production session 1 hour \$55/hr. On-line production \$40/hr. 24 hour video editing 1 hour available

Direction: Our experience providing audio for visual media enables us to offer fully featured and an SFX track for video production from our extensive in-house libraries. In business since 1979, we feel that our video services are a logical extension of our commitment to offer full audio services under one roof. Being video clients include: Vector, Synbox, SOHIO, On-Line Computer, KQED, KTVU, Espresso, Fraktura, Sause Films and Stanzel Fraktura. We meet and work with clients on a daily basis.

SPECTRUM STUDIOS, INC.

APPV

905 S.W. Alder, Portland, OR 97205

(503) 248-0248

Owner: Mike Carter, Lancey McGill

Manager: Mike Carter

SPEED OF LIGHT

VPF, OLVP, VPP/E, APPV

2430 Jones St., San Francisco, CA 94133

(415) 441-7806

Owner: Lou Casabianca, Joe Van Wagon

Manager: Joe Van Wagon

EQUIPMENT

VTRs: Panasonic

VCRs: Sony field unit

Switchers: 4M

Cameras: Starj

Audio Recorders: TEAC 4 track

Audio Mixers: TEAC 8 channel

Other major equipment: Syntron synthesizer, Apple computer, computer animation

Rates: Upon request

Direction: Creative direction and scripting. Special emphasis on music video production. Live location recording. Film or video. Special effects and animation. Can assist in marketing and distribution of program material.

TELEIMATION PROD/DENVER

VPF, OLVP, VPP/E

7700 E. Iliff, Denver, CO 80231

(303) 751-6000

Owner: H. Terry Hoffman

Manager: Michael Innes

TELEIMATION PRODUCTIONS, INC.

VPF, OLVP, VPP/E, APPV

1200 Stewart St., Seattle, WA 98101

(206) 623-5934

Manager: Brian Crawford

"THE PLANT"/SAUSALITO RECORD PLANT

APPV

2200 Bridgeway, Sausalito, CA 94965

(415) 332-6100

Owner: Laurie Newman

Manager: Terry Deisano

3RD RAIL MEDIA

APPV

55 Sutter St., San Francisco, CA 94104

(415) 821-3623

Owner: Dan Wagner, Carol Holland

Manager: Siri Aarons

Direction: 3rd Rail Media is a production company devoted exclusively to the creation of music video promos, employing innovative production techniques inside affordable packages. 3RM uses a pool of talented media professionals who bring together their varied skills to sculpt a sensual and engaging broadcast product. 3RM also offers a distribution assistance service to enable non-affiliated musical acts equal access to the airwaves and clubs where music video is shown.

TOTAL VIDEO

VPF, OLVP, VPP/E, APPV

220 E. Grand, Ste. B, South San Francisco, CA 94080

(415) 583-8236

Owner: Terry Klunker

Manager: Terry Klunker

TRES VIRGOS STUDIOS

APPV

1925 Francisco Blvd., San Rafael, CA 94901

(415) 456-7666

Owner: Holm Yeaker, Jerry Jacoby, Allen Bico, Mike Stevens

Manager: Christa Cravo

TRIPLE AAA VIDEO

VPF, OLVP, VPP/E, APPV

609 Sherman Way, Coeur D'Alene, Idaho 83814

(208) 667-6822, 772-4827

Owner: Mike Schettler

Manager: Mike Schettler

VARITEL

VPF, OLVP, VPP/E, APPV

350 Townsend St., San Francisco, CA 94107

(415) 495-0910

Manager: Mike Cunningham, Gen. Mgr. Jack Schneider, Exec. Prod.

VERSATILE VIDEO INC
VPE, OLVP, VPPE

151 Gibraltar Court, Sunnyvale, CA 94086
(408) 734-5550

Manager: Contact Debbie Whinn, Brian Garcia
EQUIPMENT

VTRs: Ampex 1 and 2

VCRs: Sony BVU 110, BVU 600K, Panasonic AU700K

Switchers: Ampex Computermac, Boss Duobatch in line

Cameras: Phillips 1DK 5, 2bs, Kodak Hi 7s

Audio Recorders: Ampex Otari

Audio Mixers: Yamaha Shure

Other major equipment: Rank Cintel Flying Spot Scanner
Chyron IV, Quantel 5 remote tracks, 2 studios, 60cm, 40cm
edit bays

Rates: Please send for rate cards

Direction: Space shuttle launch, ABC's Home A Home, Infomercials, Vantage, Parade Store, YAH! Legions, Los Angeles, Street Music, Parol, Earth, Wind & Fire concert, City Light, Paul Mason Jazz Festival, Kinney Productions, Split Enz, concert, Max, movie, The Tubes, M.I.M. Project, John Kay, KTFH

VIA VIDEO INC

VPE

5155 Old Ironsides Dr., Santa Clara, CA 95050
(408) 980-8009

Manager: Jason Danielson, Director of Production Services
EQUIPMENT

VTRs: 5850s (Sony)

Other major equipment: Three Via Video System One computer, graphics machines, 4 frame, 4 studio editing

Rates: \$150/hr

Direction: Character animation, motion graphics, magazine illustration, packaging, test material, picture, special effects

VIDEO ARTS

VPE, OLVP, VPPE

185 Berry, Bldg. 3, Ste. 265, San Francisco, CA 94107
(415) 546-0331

Owner: Kim Salyer, President

Manager: Ed Riedel

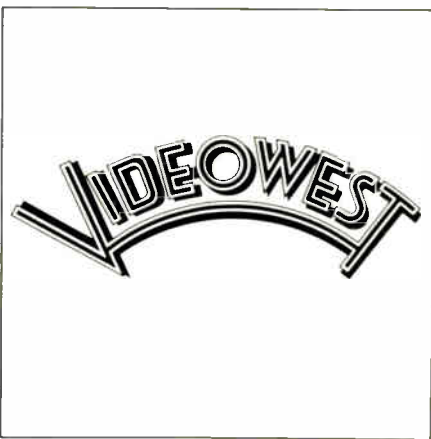
VIDEOWEST PRODUCTIONS

VPE, OLVP, VPPE, APPV

735 Harrison, San Francisco, CA 94107
(415) 957-9080

Owner: Eugene Florn, President

Manager: Wes Derman, Tech. Operations, V.I.P. Film Assoc.
Tech. Operations Manager



VIDEOWEST PRODUCTIONS
San Francisco, CA

SOUTHERN CALIFORNIA

AMERICAN MANDALA VIDEO PRODUCTIONS

VPE, OLVP, VPPE, APPV

74-755 San Cristoval Circle, Palm Desert, CA 92260
(619) 568-1938

Owner: John and Nick Mandala

Manager: Jennifer Porter

EQUIPMENT

VTRs: JVC CR820001, CP550001, CR440001

VCRs: Sony VP1800 and VHS and Beta VCR

Switchers: JVC editing system w/RM48U

Cameras: Hitachi SK 80

Audio Recorders: Soundcraft 24 track, Ampex ATR 100 2 track
Revox portable 2 track



PLEASE NOTE:

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Audio Mixers: Quantel 4x5, Yamaha, portable and studio system

Other major equipment: Full 4 track studio, video studio, walkies

Rates: On request

Direction: Near Hollywood, great location, perfect shooting environment, great water, etc.

ASTIN ZAPPIA

VPPE, APPV

3501 Cahuenga Blvd. West, Los Angeles, CA 90068
(213) 876-8008

Owner: Eric Astin, Manager: Zappia

Manager: Bill Silvers

AUDIO VIDEO CRAFT

VPE, OLVP, VPPE, APPV

7710 Melrose Ave., Hollywood, CA 90046
(213) 655-3511

Owner: Dan O'Donoghue

Manager: Andrew G. Galt

BEST AUDIO

APPV

5422 Fair Ave., N Hollywood, CA 91601
(213) 763-2378

Owner: John G. Jones

Manager: Bill Harris

BLUTH VIDEO SYSTEMS

APPV

2660 W. Olive Ave., Burbank, CA 91505
(213) 840-8060

Owner: Joseph Bluth, President

Manager: Joseph Bluth

BRITANNIA SCORING SERVICE

APPV

3249 Cahuenga Blvd. West, Hollywood, CA 90068
(213) 851-1244

Owner: Curtin Mills

Manager: Jess Ventura

EQUIPMENT

Synchronizer: RTI, 4 track

VCRs: Sony BVU 110

Audio Recorders: MCI, 4 track, MCI 4 track

Audio Mixers: MCI, 4 track, 4 track

Other major equipment: JVC, 40cm, 60cm, 40cm, 60cm, 40cm, 60cm, 40cm, 60cm

Rates: \$210/hr, 1st day, \$145/hr, 2nd day

Direction: TV, 40cm, 60cm, 40cm, 60cm, 40cm, 60cm, 40cm, 60cm

Equipment: Sony, Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi, Hi-Fi

Special: TV, 40cm, 60cm, 40cm, 60cm, 40cm, 60cm, 40cm, 60cm

Machine: 70 Arv, 70 Arv, 70 Arv, 70 Arv, 70 Arv, 70 Arv, 70 Arv, 70 Arv

THE BURBANK STUDIOS

VPE, OLVP, VPPE, APPV

4000 Warner Blvd., Burbank, CA 91522
(213) 954-6000

Manager: Director Prod. Serv. Ron Stein, Mar. Post Prod. Tom McCormack

CANYON RECORDERS

VPE, OLVP, VPPE, APPV

11941 Wilshire Blvd., Los Angeles, CA 90025
(213) 479-4466 and 478-0401

Owner: Ed Leiver

Direction: If you need it, it's here. We've got lots of most things, and at least one of everything else. (not to mention the best coffee in town.) — Ed Leiver

CINETRONICS

VPE, OLVP, VPPE, APPV

The Bradbury Building, 304 S Broadway, Ste. #510, Los Angeles, CA 90013
(213) 617-0976

Owner: Humberto Rivera, Heather Howell, Howard Mend

Manager: Humberto Rivera

EQUIPMENT

Synchronizer: Video Editor, 40cm, 60cm, 104 Super 8k with 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

VTRs: Sony BVU 110, 110, 110, 110, 110, 110, 110, 110

VCRs: JVC, 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

Switchers: Crosspoint, 4 track, 4 track, 4 track, 4 track, 4 track, 4 track, 4 track, 4 track

Cameras: 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

Audio Recorders: Otari, 8 track

Audio Mixers: Sony, MCI

Other major equipment: All 4 track, 4 track, 4 track, 4 track, 4 track, 4 track, 4 track, 4 track

Rates: Cable, 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

Direction: Production, New, 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

Equipment: 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

Other major equipment: 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

Direction: 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

Equipment: 40cm, 60cm, 104cm, 104cm, 104cm, 104cm, 104cm, 104cm

COMPACT VIDEO SERVICES, INC.

VPE, OLVP, VPPE, APPV

2813 W. Alameda Ave., Burbank, CA 91505
(213) 840-7000

Owner: Wendel, R. Sall, President

Manager: Steve Terry, Gen. Mgr.

EQUIPMENT

Synchronizer: FFCO, MOS

VTRs: Ampex VPR 2F, AVH 1, AVH 2, Ampex Quad

VCRs: BVU 110

Switchers: Grass Valley 1600, Grass Valley 400 w/E.MEM and MK II digital video effects

Cameras: Hitachi SK 70

Audio Recorders: Ampex MM 1200, 24 track

Audio Mixers: API, Harrison PP 1, Audiotronics

Other major equipment: Custom computerized editing, Chyron character generators, Mach One editing, 625 PAL, editing, Foley stage, sound effects prelay room, Rank Cintel Flying Spot Scanner

Direction: Compact is a complete full service facility for any film or TV production and post production needs. Satellite broadcast and services are available for special events, teleconferencing or international broadcasting. Call for rates and package prices.

THE COMPLEX

VPE, OLVP, VPPE, APPV

2323 Corinth St., Los Angeles, CA 90064
(213) 477-1938, TWX 910-342-7581

Owner: Complex, Inc.

Manager: Harry Grossman

CREATIVE MEDIA

VPE, OLVP, VPPE, APPV

7271 Garden Grove Blvd., Ste. E, Garden Grove, CA 92641
(714) 892-9469

Owner: Tim Keenan

Manager: Steve Grimm, Chief Engineer/Video

DALTON RECORDERS

VPE, OLVP, VPPE, APPV

3015 Ocean Park Blvd., Santa Monica, CA 90405
(213) 450-2288

Owner: Media Masters, Inc.

Manager: M. Harris

(continued on next page)

DSR PRODUCTIONS
OLVP, VPP/E, APPV
 607 N. Ave. 64, Los Angeles, CA 90042
 (213) 258-6741

Owner: Val Webster
 Manager: Manellon Urtin

EQUIPMENT

Synchronizer: RTX Show
 VTRs: Sony
 VCRs: Sony
 Cameras: BRC
 Audio Recorders: 4M, Ampex, Sony
 Audio Mixers: MCI

Other major equipment: Sony digital color film; fully meeting room; projection facility.
Rates: Call for rates. We offer a complete budget for your project.

Direction: DSR Productions is a leader in Digital Sound Recording as a one-stop media service for video, film, motion picture and film. Our major clients include production companies, agencies and corporations. We are especially effective in creating dramatic effects in live film.

EFX SYSTEMS

APPV
 919 N. Victory Blvd., Burbank, CA 91502
 (213) 842-3954

Owner: George Johnson
 Manager: Robert LaPorte

EQUIPMENT

Synchronizer: Ampex ECS 100, Atom Smith 605, RTX 4600
 VCRs: JVC R200, Sony 5850 and 5600
Audio Recorders: Ampex 104 24 track, MCI JH10 2 track, Scully 280 24 track, Ampex 44 24 track, (2) MCI JH100 24 track, Scully 280 24 track, 3M M798 16 track, Stovon & Brendel 16 track
Audio Mixers: B&B 1624 (2) Buma K-18, Amek 2500 fully automated

Other major equipment: Full line color, synthesizer and digital oscillator. 96 and 480 lines and Lexicon Super Prime Time 6 reverb and Ursa Major for Transfer 15mm vinyl 22 compressors, 58 equalizers and vintage tube.

Rates: Based on request.
Direction: We specialize in total audio production for film and television productions. We fully independent facilities that can also function in tandem allow simultaneous music production, mixing and special audio effects. Our modern production techniques and equipment allow our people to consistently come in on time and on budget. The facility was designed to serve the independent production company, but our state-of-the-art facilities and studios network, multiple forms and services, labels. Call for our latest media list.

EXCALIBUR VIDEO SYSTEMS, INC

VPF, OLVP, VPP/E, APPV
 4015 Wilshire Blvd., Los Angeles, CA 90010
 (213) 384-5175

Manager: Jack M. Cook, vice president

HITSVILLE RECORDING STUDIOS

APPV
 7317 Romaine St., Los Angeles, CA 90046
 (213) 850-1510

Owner: Malcolm Roberts

Manager: Guy Costa

EQUIPMENT

Synchronizer: Aca, Kinetix
 VTRs: Sony BVU800, J850, JVC 6500
 VCRs: Panasonic, Sony
 Switchers: misc.
 Cameras: Leica and Leica

Audio Recorders: ATH 4M, Teletoken

Audio Mixers: Neve 807, Neve 110

Other major equipment: 16 35mm interlock Telecine TRB 016 and 35

Rates: Variable on request for film.
Direction: Hitsville studios is designed to handle all aspects of video and film production from recording through dubbing, transfer and playback.

HORIZONTAL EDITING STUDIOS

Audio/Video Products, Inc.
APPV
 2625 W. Olive Ave., Burbank, CA 91505
 (213) 841-6750

Owner: William Carlquist

Manager: Neal Osbren

IMAGE TRANSFORM

VPP/E, APPV
 4142 Lankershim Blvd., N. Hollywood, CA 91602
 (213) 985-7566

Owner: Compact Video Systems

Manager: Tom Mina



PLEASE NOTE:

In the following listings each facility's particular capabilities are indicated below its name using the following initials: VPF (Video Production Facility); OLVP (On Location Video Production); VPP/E (Video Post-Production/Editing); APPV (Audio Post-Production for Video).

LAGUNA SOUND STAGE

VPF
 2147 Laguna Canyon Rd., Laguna Beach, CA 92651
 (714) 497-5530

Owner: Dennis Keany, Don Whitatch

Manager: Michael Camp

LION'S GATE FILMS

VPP/E, APPV
 1861 South Bundy Dr., Los Angeles, CA 90025
 (213) 820-7751

Owner: Robert Chester

Manager: Hal Hoffman



MAGNOLIA SOUND
 N. Hollywood, CA

MAGNOLIA SOUND

(A Division of Enactron Studios)
APPV
 5102 Vineland Ave., N. Hollywood, CA 91601
 (213) 761-0511

Owner: Brian Ahern

Manager: Stuart Taylor

EQUIPMENT

Synchronizer: Q Lock 410
 VCRs: JVC CH62001 with 19" monitor
Audio Recorders: Otari MTR90, MTR10, Stephens, MCI, Ampex
Audio Mixers: Syner 40x24 with Allison 45K cut in line
Other major equipment: We are state-of-the-art in the facility.
Rates: Call for information.
Direction: Recent credits include Embassy Television's "Sallywax", Johnny Oliver and John Woods production; film music services and scoring at 20th Century Fox. "Whisper a Trace", Jack Nitzsche's composition and production.

MASTER DIGITAL
VPF, OLVP, VPP/E, APPV
 202 Main St., Venice, CA 90291
 (213) 399-7764

Owner: Roger Pryor

KEN MILLER ASSOCIATES

VPF, OLVP, VPP/E, APPV
 2323 Corinth Ave., Los Angeles, CA 90064
 (213) 478-0129

Owner: Ken Miller Associates

Manager: Ken Miller Associates

MOTION PICTURE RECORDING INC

VPF, VPP/E, APPV
 7060 Hollywood Blvd., Hollywood, CA 90028
 (213) 467-2193

Owner: Garry Ulmer

Manager: Alexis Joseph

MUSIC LAB, INC

VPF, OLVP, VPP/E, APPV
 1831 Hyperion Ave., Hollywood, CA 90027
 (213) 666-3003

Owner: Chaba Mehe

Manager: Axel Schmell

MUSICIANS CONTACT SERVICE

VPF, OLVP, VPP/E, APPV
 6605 Sunset Blvd., Hollywood, CA 90028
 (213) 467-2193

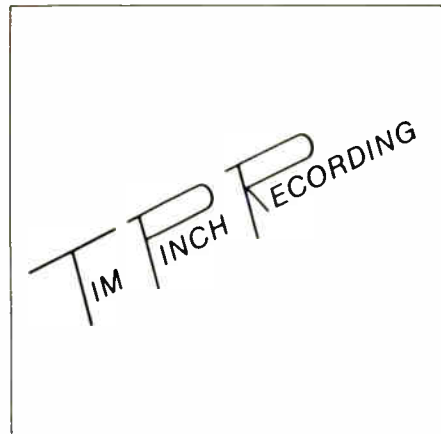
Owner: Sterling Hunt

Manager: Tony Niekirk

PARAMOUNT RECORDING STUDIOS

APPV
 6245 Santa Monica Blvd., Hollywood, CA 90038
 (213) 461-3717

Manager: Don Schlegel



TIM PINCH RECORDING
 Glendale, CA

TIM PINCH RECORDING

APPV
 6600 San Fernando Rd., Glendale, CA 91201
 (213) 507-9537

Owner: Tim Pinch

Manager: Rex Olson

EQUIPMENT

Audio Recorders: Ampex 1,000 24 track, Ampex 440 C 4 track, Ampex 440 B 2 track

Audio Mixers: Amek 28x24 console, Spectra Sound 28x24 console modified specifically for remote

Other major equipment: Fully equipped 24 track remote truck in a complete 24 track studio

Rates: Call for rates

Direction: Specializing in live music productions from remote recording to final studio mix. Merle Haggard, Alabama at Anaheim Stadium — Rosanne Cash, Garth Brooks at the Rose Bowl — M. D. Davis Christmas special, America in Music Awards — Jackson and the Forum 60/60s on TV special, America, Alice Cooper and Tom Johnston at the country club, Juice Newton, Mel Tillis, Frankie Beverly and the Meanings, Missing Persons, Men at Work, etc.

THE POST GROUP

VPP/E
 6335 Homewood Ave., Hollywood, CA 90028
 (213) 462-2300

Manager: John Williams, G.M. Meryl Lappiman, V.P. marketing



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EQUIPMENT

Synchronizer: CMX 440X computer editing
VTRs: Sony BVH 1000, 1100, 1100A, Ampex VPR2, Ampex 2"
VCRs: Sony BVU 800, BVU 820 1/2" M format
Switchers: Grass Valley 1600, 400 CDI
Cameras: B & W matte, color graphics
Audio Recorders: Ampex
Audio Mixers: Quantum
Other major equipment: Digital effects (Ampex digital optics) ADO Quantex Aurora computer graphics and animation, film to tape, Rank Cintel film to tape transfer
Rates: Please send or call for rate card
Direction: The Post Group is a major videotape post production facility serving music, commercial, network, cable and industrial/educational video users. We have the first ADO, the first Aurora on the West Coast. We also have the first broadcast 1/2" M format editing system. We edit in 1", 2", 3/4" or 1/2" formats with all equipment computer controlled and assignable. Audio facilities are in the planning stage and will be extensive.



THE POST GROUP
Hollywood, CA

POST SOUND

APPV
 8230 Beverly Blvd., Los Angeles, CA 90048
 (213) 655-2014
Owner: Phil Seretti & Partners
Manager: Iana Vujovich

EQUIPMENT

Synchronizer: Adams Smith custom
VTRs: Ampex VPR2 1" C format
VCRs: Sony BVU 800
Audio Recorders: Otari MTR 90 II 24/16 track, Otari MTR 10-4 and 2 track, Tomcat Cartridge decks
Audio Mixers: Anek automated console 46x24x6
Other major equipment: dbx limiters, Defessers, noise gates

noise reduction Dynaflex and Burwen noise reduction, Orban graphic EQ, Lexicon digital echo, Publison Harmonizer
Rates: Available on a per job basis dependent on project
Direction: Barbara Walters' specials, Perry Como specials, FaerieTale Theatre series, Heal People series and specials, Kent State TV movie, Magic or Miracle special, numerous commercials and industrials. Specializing in stereo programming for dramatics and TV specials.

PRIME TIME POST

VPF, OLVP, VPP/E, APPV
 6410 Santa Monica Blvd., Los Angeles, CA 90038
 (213) 464-7151
Owner: Jerry Berah
Manager: Jerry Berah

RECORD PLANT, INC

APPV
 8456 West 3rd St., Los Angeles, CA 90048
 (213) 653-0240
Owner: Christopher Stone
Manager: Nick Smeronon

ROCK SOLID PRODUCTIONS

VPF, VPP/E
 1907 W. Burbank Blvd., Burbank, CA 91506
 (213) 841-8220
Owner: David Grubin, Geordrey Leighton
Manager: David Grubin

SOUND MASTER



RECORDING STUDIOS®

SOUND MASTER AUDIO VIDEO STUDIOS
 N Hollywood, CA

SOUND MASTER AUDIO VIDEO STUDIOS

VPF, OLVP, VPP/E, APPV
 10747 Magnolia Blvd., N. Hollywood, CA 91601
 (213) 650-8000
Owner: Brian and Barbara Ingoldshy
Manager: Barbara Ingoldshy

EQUIPMENT

Synchronizer: Audio Kinetics
VTRs: Ampex 1"
VCRs: (R) JVC 8200 w/RM88U and VE90 editors
Switchers: Cross Point Latch 6112
Cameras: Ikegami HL332, JVC KY2000, JVC KY2900
Audio Recorders: MCI JH 16/24 track, Revox 1/2 track MCI JH 110/2 and 4 track
Audio Mixers: Quad Eight Coronado 40 in x 46 out, automated
Other major equipment: Two Microtime Time Base Correctors, Freeze Frame, Buhl Multiplexer, character generator, and a full array of special effects
Rates: Upon request
Direction: Sound Master houses a complete video production facility with a 24 track fully equipped automated recording studio with disk mastering facilities to take your project from beginning to end. Sound Master also rents a fully equipped sound truck for live sound reinforcement. Our aim is to provide you with technical sophistication as well as personal attention.

STUDIO WEST

APPV
 5042 Ruffner, San Diego, CA 92111
 (619) 277-4714
Owner: LeRoy Carroll, David Johnson
Manager: Dan Milner

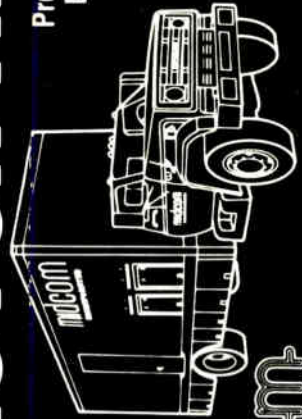
EQUIPMENT

Synchronizer: B7X Shadow
VCRs: Sony U-Matic
Audio Recorders: Synchronized SMPTE for 24 track Stephens & 4 track MCI
Audio Mixers: MCI 500 (modified)

(continued on next page)

AUDIO FOR VIDEO

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Walkie-Talkie &
Wireless Rental



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Recording Facility
SMPTE Time Code
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Arlington, Texas 76011

(817) 461-2211 metro

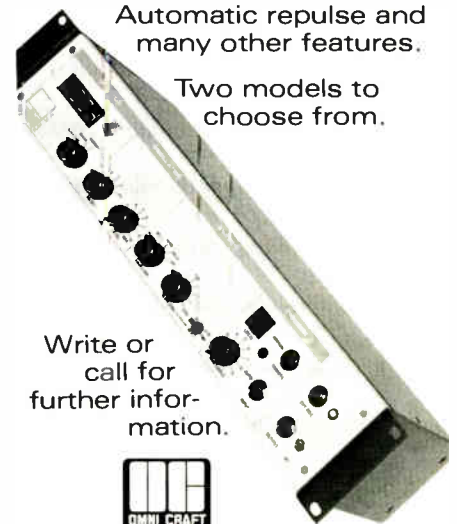
Circle #030 on Reader Service Card

STONE GENERATORS

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Zero cross detection,
Automatic repulse and
many other features.

Two models to
choose from.



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call for
further infor-
mation.



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

Circle #031 on Reader Service Card

Other major equipment: Gray SMPTE code readers, character generators and code regenerators
Rates: Video interlock 24 track \$105/hr. Video interlock 4 track \$50/hr.
Direction: 32 "Clio" and "TBA" nominations, 2 first place CLIO statues, video interlock post production. Music clients: Budweiser, Michelob, Michelob Light, Horwywell, Glass Plus, Buster Brown Shoes, and Sanyo

SUNSET SOUND RECORDERS
APPV
 6650 Sunset Blvd., Hollywood, CA 90028
 (213) 469-1186
 Owner: S. Camarata
 Manager: Warren Salyer

TAJ SOUNDWORDS
VPP/E, APPV
 8207 W. Third St., Los Angeles, CA 90048
 (213) 655-2775
 Owner: Timothy E. Sadler, John B. Roesch, Allan H. Goodman
 Manager: Lesley Emerson Boss

TECHNICOLOR - VIDTRONICS DIVISION
AUDIO & VIDEO EDITING ONLY
 855 N. Cahuenga Blvd. Hollywood, CA 90038
 (213) 856-8200
 Manager: Burton Lippman



TRI-LOGIC PRODUCTIONS, INC.
 Santa Monica, CA

TRI-LOGIC PRODUCTIONS, INC.
VFP, OLVP, VPP/E, APPV
 1454 5th St., Santa Monica, CA 90401
 (213) 451-5451
 Owner: Tri Logic Productions Inc.
 Manager: Jay Payne, Virginia Barreto

VIDCOM
OLVP, VPP/E
 2426 Townsgate Rd., Westlake, CA 91361
 (213) 991-1974
 Owner: Frank Colecia
 Manager: Robin Green
EQUIPMENT
VTRs: VPR III, BVH 500s
VCRs: BVU 100s, BVU 800s
Switchers: Grass Valley 1600IL, Panasonic
Cameras: HI 79s, studio conversion kit
Audio Recorders: Nagra
Audio Mixers: Yamaha, PM 430, portable Shure mixers
Other major equipment: 4 to 1 edit CMX control
Rates: Vary depending on package. Please call for estimates.
Direction: All broadcast specials, rock and roll commercials

VIDEO TRANSITIONS
AVPP/E, APPV
 910 N. Citrus Ave., Hollywood, CA 90038
 (213) 465-3333
 Owner: Bernard Maduti
 Manager: Michael Levy

VIDEOTECH
OLVP
 P.O. Box 467, Calabasas, CA 91302
 (213) 703-5077
 Owner: Steven Richardson, Bory O'Brien



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THE VILLAGE RECORDER
VFP, VPP/E, APPV
 1616 Butler Ave., Los Angeles, CA 90025
 (213) 478-8227
 Manager: Kathy Kinoy

WEBBER SOUND
VPP/E
 1095 N. Main, Orange, CA 92667
 (714) 953-5082, (213) 763-2503
 Manager: Bill Egan

WESTERN VIDEO SYSTEMS
VFP, OLVP, VPP/E
 8050 Ronson Rd., San Diego, CA 92111
 (619) 292-0337
 Owner: Robert E. Sumner
 Manager: Bill Day

OUTSIDE U.S.

CANADA

CARLETON PRODUCTIONS, LTD.
APPV
 1500 Merival Rd., Ottawa, Ontario K2E6Z5
 (613) 224-1313
 Owner: Standard Broadcast
 Manager: Wayne Harkness, president, producer
EQUIPMENT
VTRs: (4) 1 Ampex
Switchers: Ampex, Doral Optics
Cameras: Eclair, DLR5-10
Audio Mixers: Studer, Boveox 30, interlock 4 out, 24x24 Ward
 hook interlock
Other major equipment: Graphics, Green 4
Rates: Upon request
Direction: ABC, NBC, CBS and CTV, Global, Warner-Amex, PBS, ESPN, 17 segments produced every 5 days for worldwide mutual remote productions, 30 seconds, news, special events

THE LITTLE MOUNTAIN SOUND STUDIOS
APPV
 201 West 7th Ave., Vancouver, British Columbia, V5Y1L9
 (604) 873-4711
 Owner: NW Radio Ltd.
 Manager: Bill Brock
EQUIPMENT
Synchronizer: RTX Speed w
VCRs: JVC 4000
Audio Recorders: Studer A80 24 track, Studer A80 B track, 4 track, 2 track

Audio Mixers: Rupert Neve
Rates: \$200 (Canadian) per hour
Direction: Studio accommodation for up to an 80 piece orchestra, 22 ft ceilings, U.S. and Canadian motion picture scores, TV specials and advertising jingles. Large SFX and music library

NORTHWEST COMMUNICATIONS LTD.
VFP, OLVP
 5381 48th Ave., Delta, British Columbia V4K 1W7
 (604) 946-1146
 Owner: Mr. W. S. Thomas, President
 Manager: Mr. John Thomas, Vice-President and Gen. Mgr.

LE STUDIO
VFP, OLVP, VPP/E, APPV
 201 Perry, Morin Heights, Quebec J0R-1H0
 (514) 266-2419
 Owner: André Perry
 Manager: Yvel Brandois

WATER STREET SOUND & FILMWORKS INC
APPV
 Penthouse, 342 Water St., Vancouver, British Columbia V6B 1B6
 (604) 689-4333
 Owner: George McNeill
 Manager: George McNeill

ENGLAND

POST PRODUCTION AUDIO/VIDEOSONICS
APPV
 115-123 Bayham St., London NW1 0AT, London, England
 01-2677200/482-2855
 Owner: Dennis Weinrodt
 Manager: Dennis Weinrodt

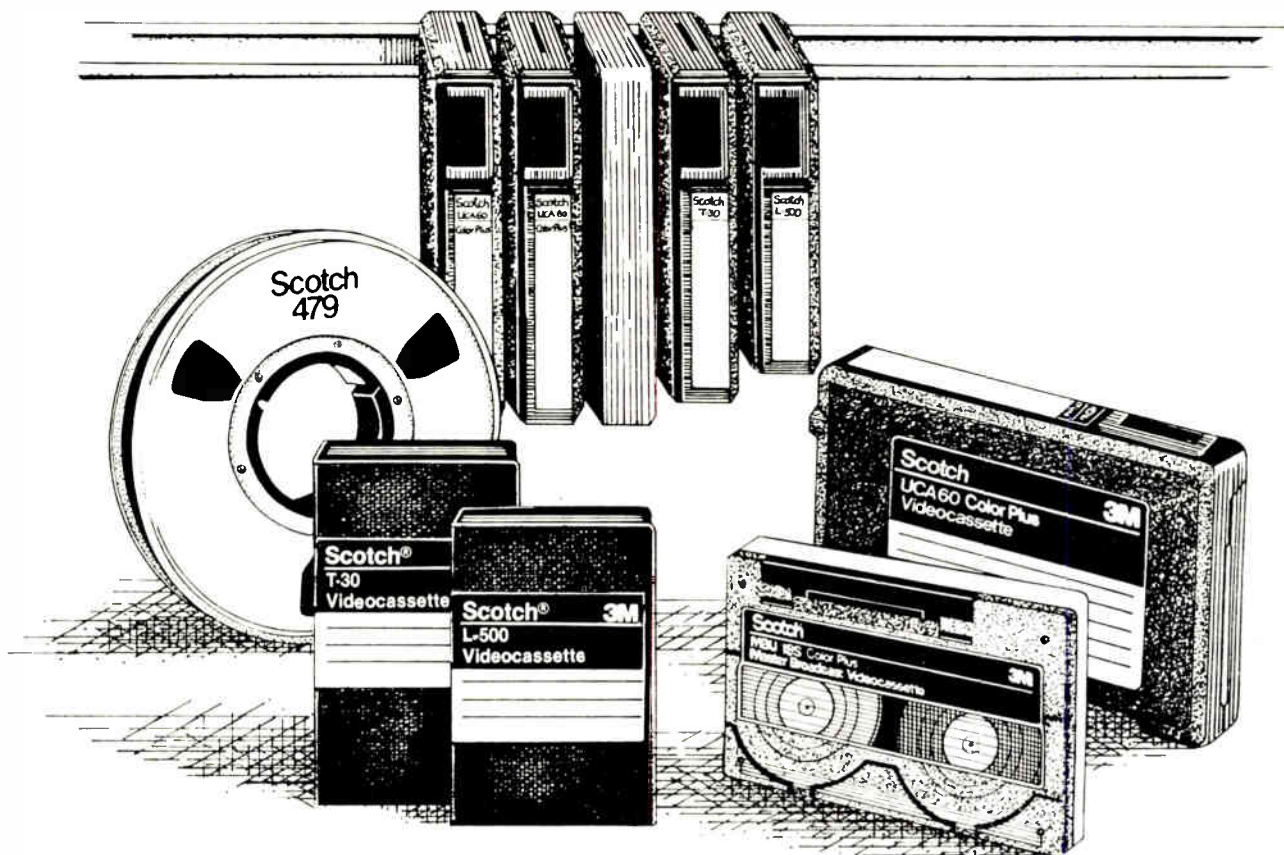
PUERTO RICO

CRESCENDO AUDIO PRODUCTIONS, INC.
OLVP, APPV
 #707 Calle Constitucion, Puerto Nuevo, Puerto Rico 00920
 (809) 792-1970
 Owner: Brooke E. Cardwell-Adler
 Manager: Mays Acunian
EQUIPMENT
Synchronizer: MCI Time Code
VCRs: BVU 200
Audio Recorders: MCI 24 track, MCI 2 track, MCI 4 track
Audio Mixers: MCI 52MB, Spectra Sonar 1024
Other major equipment: Advent large screen and Sony Trinitron monitors
Rates: \$165/hr.
Direction: Complete recording facilities, 24 track locked to VHS tape, 4 track non-speed film mixing, multiple re-leasement, all forms of pre- or post-production, audio included on location 24 track recording



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 Puerto Nuevo, Puerto Rico

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- MBU Videocassettes (3/4-Inch)
- One-Inch Video Tape

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World Radio History

L I G H T I N G for V I D E O A Forum

by Mia Amato

Recording firms getting into video often stumble unexpectedly on the fact that video involves not just shooting but *lighting*. Lighting for video means more than just a SunGun gaffer-taped to a microphone stand – although many first productions often wind up looking as if they were lit that way.

high. The studio itself is only about 50 feet by 50 feet.

It's an electronic dimming system by Kliegl. The newest state of the art, however, is digital dimmers. At Bullet the wiring circuitry is such that they could very easily expand to a digital system in the future.

WHAT WAS YOUR LIGHTING PLAN FOR "THE BOBBY BARE SHOW?"

It's an interview show about songwriters, and the concept was that the segments be shot in a recording studio, with some interviews and some performance.

In the studio the band was placed in a very tight circle. I lit at a very sharp angle downwards, because I wanted to keep light off the walls. We wanted to give an intimate feeling.

The interview area was right in the control room, beside the audio board. We put a couch in and three cameras. There's a two-shot of Bobby and the guest over Bobby's shoulder, and a reverse shot of Bobby looking in-



(Left) Bobby Bare with Belamy Brothers (right) and their producer (center). Note camera in doorway to right on arm of "Baby Boom" for tight shot of Bobby in interview area of control room.

(Below) Wide shot of studio with Bobby Bare and Lacy J. Dalton. Note 2" pipe rigged for hanger with one killowatt instruments just right of center.

Clark Tucker is a freelance lighting designer working with *Bullet Recording* in Nashville; an audio studio fully equipped for television production. Bullet's studio has been used for the taping of video promos, TV pilots, and recently, for segments of "The Bobby Bare Show" which airs on The Nashville Network, a cable channel featuring C&W entertainment.

WHAT DOES BULLET HAVE IN THE WAY OF LIGHTING EQUIPMENT?

I helped design the lighting plan for the studios and we built a grid system with a very high trim. There is a balcony in the main studio that was intended to be a camera position. We wanted the grid high enough so that with a wide angle lens that camera could capture all of a very tall cyc, which is about 23 feet





“It’s a glamorous business, isn’t it?”

It’s glamorous, all right.

If you like all night sessions. Recording and re-recording dozens of times. Trying to please yourself and everybody else in the studio.

At dbx, we think it’s a very difficult job that demands patience, talent, and the very best equipment you can get your hands on.

Which is why we’ve spent the past 12 years constantly advancing the art of signal processing. We’re always solving a problem. To make your job easier. To make the music sound better.

Our latest example is the dbx 610 Autographic™ Computerized Room Equalizer that automatically equalizes a listening location to a flat or user-determined frequency response. In less than 15 seconds.

There are many more examples.

Like the 900 Series modular signal processing system that contains those functions you use most. It includes a de-esser that operates independent of the input level so you

can control an “s” whether it’s shouted or whispered. A 3-band parametric equalizer with both reciprocal boost/cut and “infinite notch” on each band. A new flanger with the highest frequency sweep ratio and lowest noise you’ve ever heard. To name just a few.

Then, of course, there’s dbx tape noise reduction. It rivals the sound of digital recording, both in tape noise elimination and dynamic range.

So after you’ve put in all those hours in the studio, the tape you end up with will sound as close to perfect as you can make it.

And that, after all, is why you’re in this business.

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Or write dbx, Incorporated, Professional Products Division, 71 Chapel Street, Box 100C, Newton, MA 02195.
Tel. (617) 964-3210.
Telex: 92-2522.

Autographic is a trademark of dbx, Inc.

dbx® Professional
Signal
Processing

was manual, because there wasn't enough time between bands to program cues. The lights had to be manually shut off and turned on for the different cues, which meant five extra people just to handle the lights.

WHAT KINDS OF LIGHTS DID YOU USE?

Our studio has HMI lights and some Mole-Richardsons. The HMI lights give a sharper shadow, and a blue look. The gels are Rosco plastic.

USING COLORED GELS, HOW DID YOU MAINTAIN HIGH ENOUGH LIGHT LEVELS FOR VIDEO?

We used a stronger light, and ran our video gain up. Instead of 1K we'd use 2K.

DESCRIBE YOUR AESTHETIC USE OF COLOR.

For a moody song I go to softer hues, a little lavender, reds which are more towards the pink side. And some blues. For the punk acts we went with hard oranges and bright greens.

YOU MENTIONED SOME SPECIAL EFFECTS

On one blue set we used dry ice for a low-lying fog that drifted around. On another set we filled the room with smoke and sent lights in from the side - shafts of light, almost a laser look. We used a bee smoker, which uses charcoal and has a soft, dense smoke.

...

Showco was formed as one of the first sound reinforcement and staging companies in the late sixties, when rock groups began the practice of leasing such equipment for tours, instead of relying on local supply. Showco in 1973 became one of the first companies to offer lighting leasing as well. Tom Littrell has worked as a lighting designer for the company on tours for such clients as Diana Ross, ZZ Top, and Genesis.

We asked Tom to describe Showco's new computer-controlled stage lighting system Vari-lite, which allows for motorized lamp movement as well as color changes to any of 60 hues within a tenth of a second.

CAN YOU BRIEFLY DESCRIBE HOW THE VARI-LITE SYSTEM WORKS, AND ITS ADVANTAGES IN TOURING?

The system involves a brand new type of lighting instrument and the control system for it. The lighting instrument itself has five functions: it pans, tilts, changes color, changes intensity, and changes its beam size. The controller uses digital technology which allows you to manually address any of the lights to adjust any of those five functions. You can also adjust any group of lights to create a scene, from a full lit

stage to a single mike cue. Then you can store up to 255 scenes in a computer memory. Once you've put together your show, all you do is put the system up, plug it in, and push a few buttons to call up the scenes you created; that includes even the lamp movements.

The lamp does not use gels and the color mechanism is permanent and does not deteriorate or require replacement. Each lamp can project any of eight beams from a soft-edged pattern to a pin spot. A mechanical dimming system is used, and the lamp dims evenly. Time from full off to on and vice versa is under half a second.

ONCE YOU'VE SET UP A LIGHT CUE PROGRAM FOR A TOUR, HOW EASY IS IT TO ACCOMMODATE THE EXTRA LIGHT LEVELS WHICH WOULD BE NEEDED FOR A VIDEO SHOOT?

It depends. The memory stores up to 255 scenes. If you're not using all of those, you could program a change of colors which will suit the video and store it in an unused cue. But if you had to change some of the program cues, it's a very simple process to change it back the way it was for the next day.

IS IT POSSIBLE TO CHANGE THE COLORS OF THE LAMPS YET STILL RETAIN A CONSTANT COLOR TEMPERATURE IN THE RANGE NECESSARY FOR TV LIGHTING?

Well, the lights use an arc lamp - General Electric Mark 350, and run 5600° Kelvin. Most concert performers think that's a little too hot - they like about 3200°. Of course with television, the higher the temperature the better.

HOW OFTEN DO THE LAMPS HAVE TO BE REPLACED?

Well, it's a short-life bulb. That's one of the tradeoffs of using an extremely bright, extremely hot point source. We are in the process of working on an incandescent version, which would last longer. . . . Over the course of a month or two-month tour, we pack a spare for every light.

WHAT WOULD YOU SAY IS THE GREATEST ADVANTAGE OF THE VARI-LITE IN CUING A LIVE SHOW FOR TELEVISION?

It's very handy to be able to control not only the colors but the positions of lamps without leaving the console. During the taping of The Who shows, the stage lighting was augmented by some heavy duty TV lights, so there was no problem there on the stage. But the video people also wanted lighting on the crowd. It was possible for our technicians who were with the tour to push a couple of buttons and in fifteen seconds put lights wherever they wanted over any part of the crowd. Nobody climbed a truss. Nobody had to get on top of the rig. When the director wanted the lighting there, we were able to give it to him on a few seconds' notice. ■

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• **MUSIC VIDEO** •

• **FOR A** •

• **COMPUTER BASED** •

• **DIGITAL SYNTHESIZER** •

by Lou CasaBianca and
Joe Van Witsen

Palo Alto-based Syntauri Corporation is the developer of the alphaSyntauri digital synthesizer. The keyboard synthesizer can produce a series of pre-programmed or customized sounds. It can be used for orchestration and polyphonic transcription with the ability to serve as a 16 track digital recording system. Syntauri has developed proprietary software which runs on an Apple II-Plus. This unique software is the heart of this music computer synthesizer.

Syntauri Corporation selected Speed of Light Communications of San Francisco to develop and produce an informative series of music videos to demonstrate and promote the capabilities of the alphaSyntauri music system. The decision was made to use 35mm slides and original computer animation integrated with broadcast video. The audio would be dbx stereo with original music composed by Don Preston, former keyboardist for Frank Zappa and the Mothers of Invention.

Two videos totalling 15 minutes in length were produced and directed by Lou CasaBianca of Speed of Light with Ellen Lapham, president of Syntauri Corporation, as executive producer. Script and production coordination were managed by Ilana Wiedhopf for Syntauri and Carole Berkson for Speed of Light. Speed of Light's Joe Van Witsen was director of

photography and editor.

The process of videotaping a computer synthesizer presented several technical challenges: lighting the product to create interest and appeal; recording the signal of the computer's video display; and maintaining master quality audio on 3/4" videotape without recording audio separately using SMPTE interlock.

Speed of Light chose Eureka Teleproduction Center in San Carlos, California, as the location to shoot all the studio segments. The main studio's computer-controlled 128 channel lighting grid by Berkey/Colortran was invaluable due to the number and variety of setups which had to be shot within a limited number of studio hours. The keyboards were shot on a translucent plexiglass seamless lit from below with rich blues and highlighted from the grid above with pink and gold. The lighting technician could easily adjust the balance of highlights and background glow with a wireless handheld computer remote command while watching the adjacent Trinitron monitor for accuracy. Other setups included on-camera performers, groups of children, and Syntauri corporate personnel. Two product setups were lit in separate parts of the studio which allowed an assembly line approach. While one segment was being shot—a group of kids in a classroom setup using the Alpha's music teaching programs—the other unit was being lit for a single performer to operate and explain the product's 16 track recording features, and having different software loaded into it for the

next segment.

The taping was accomplished with three isolated 3/4" machines. Two Panasonic 9600 3/4" mastering decks were fed by two Sharp XC-700 broadcast minicams. This allowed closeups to be shot in sync but assembled into the program later. The third deck was a Sony 4800 portable which was used to record the video display of the Apple Computer. When the budget and the number of setups were considered, it was decided not to totally tie up one of the cameras to shoot a CRT display for two days.

It is extremely hard to get a good picture of a data display by shooting even the best CRT with the highest resolution camera. A moiré pattern is created between the CRT raster and the camera raster which can only be reduced by carefully aligning the two. The CRT's curved screen also reflects every light in the room and dulling spray makes the characters less visible.

When the Apple Computer's video signal is recorded on videotape, it plays back black and white and jittery. This is because the Apple uses an inexpensive non NTSC standard signal which will fool most video monitors and TV sets into thinking they are receiving NTSC sync, so they display a stable, color picture. But the Apple's signal on the Videotek waveform monitor had too few horizontal lines and the color reference burst was way too fat for the VTR to lock on to. An Adwar Apple processing board was installed into the Apples controlling the Alphas. This converts the Apple signal to a form that is close enough to the NTSC standard so that fussy VTR frame

—Page 70



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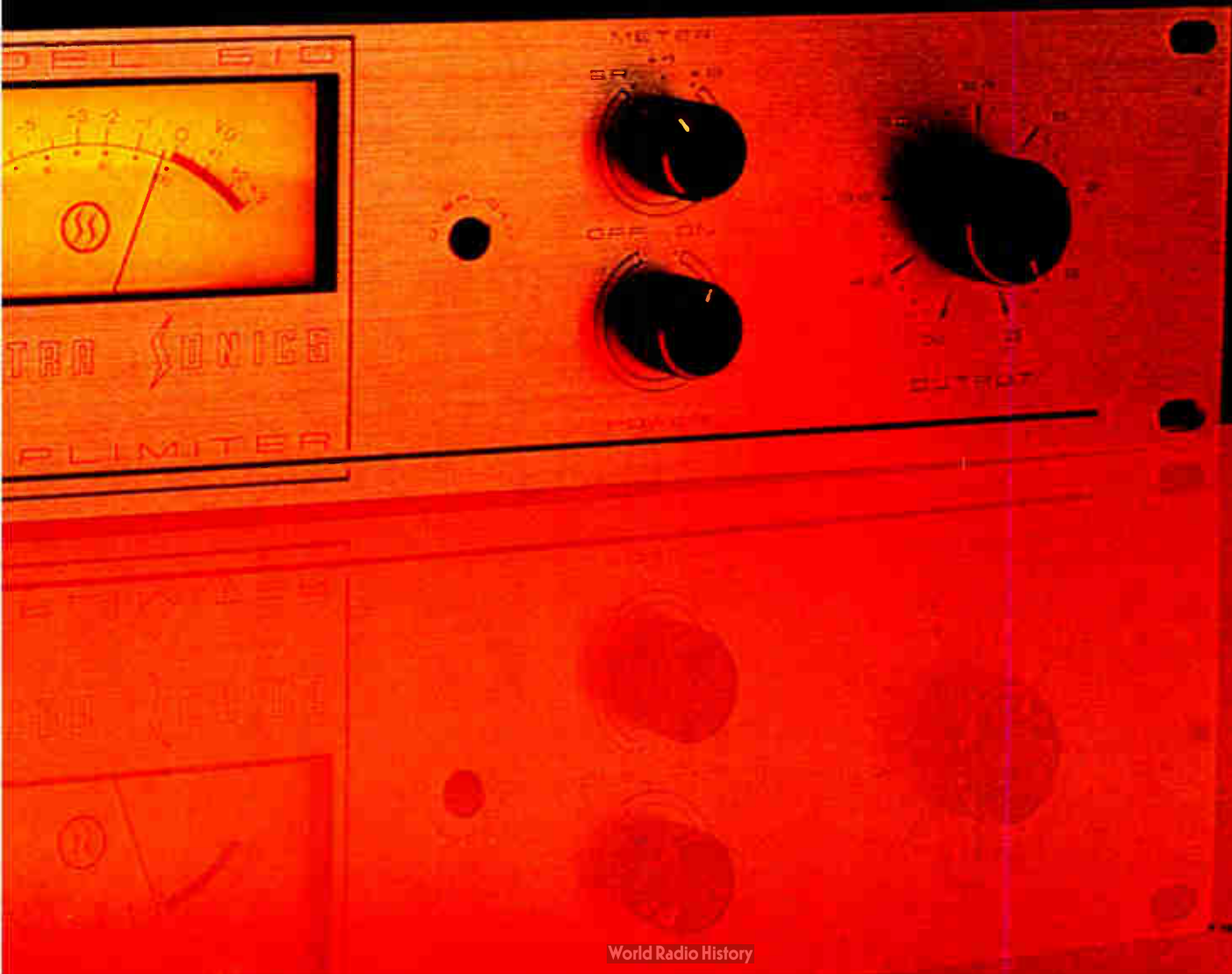
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—from Page 66

servos will lock up to it and reproduce a fully stable color picture, even when edited down several generations. This boards sells for around \$300 and is well worth it if you need to record video from the Apple. The signal is not fully NTSC spec, though. Lately a more sophisticated version has been introduced by Adwar which produces perfect NTSC specs and in conjunction with a time base corrector can be synced into a full production system, allowing the Apple's image to be dissolved, wiped, keyed, etc., with other video sources.



Another challenge arose while assembling the audio package for the shoot. The signal to noise ratio and dynamic range of 3/4" video are severely limited and would not reproduce the sound of the instrument accurately, especially after editing down a generation and then duplicating for distribution. One option was to record the audio separately on a SMPTE interlocked ATR. This would require additional equipment and manpower to operate it, and additional costs of SMPTE audio interlock during post production. A dbx 208 noise reduction system was employed instead, during all phases of production and post production. This increased the VTR's signal to noise ratio and dynamic range by 30 dB on the stereo audio channels. Two Sony ECM-30 condenser lavalier mikes were fed into a Tascam 5 mixer along with the signal directly out of the AlphaSyntauri. The mixer output was then fed to the dbx 208 (which has 8 channels of simultaneous dbx encode and decode). The dbx encoded signal was fed to all three VTR stereo audio inputs.

During post production, the dbx encoded master tapes were decoded through the 208, then fed into a Tascam 3 mixer along with other audio source material from a Tascam 40-4 (which was also dbx decoded). The output of the Tascam 3 mixer was fed to two other channels of the dbx 208 to encode it onto the edit recorder. The edit recorder's playback signal was sent back to the dbx for decoding of the second generation edit master.

The quality of the edit master playback was again perfectly clean. Even subsequent tests taking the signal down four or more generations did not noticeably alter the audio characteristics. By using dbx, the tape hiss, time code buzz, and control track flutter were well below the noise floor.

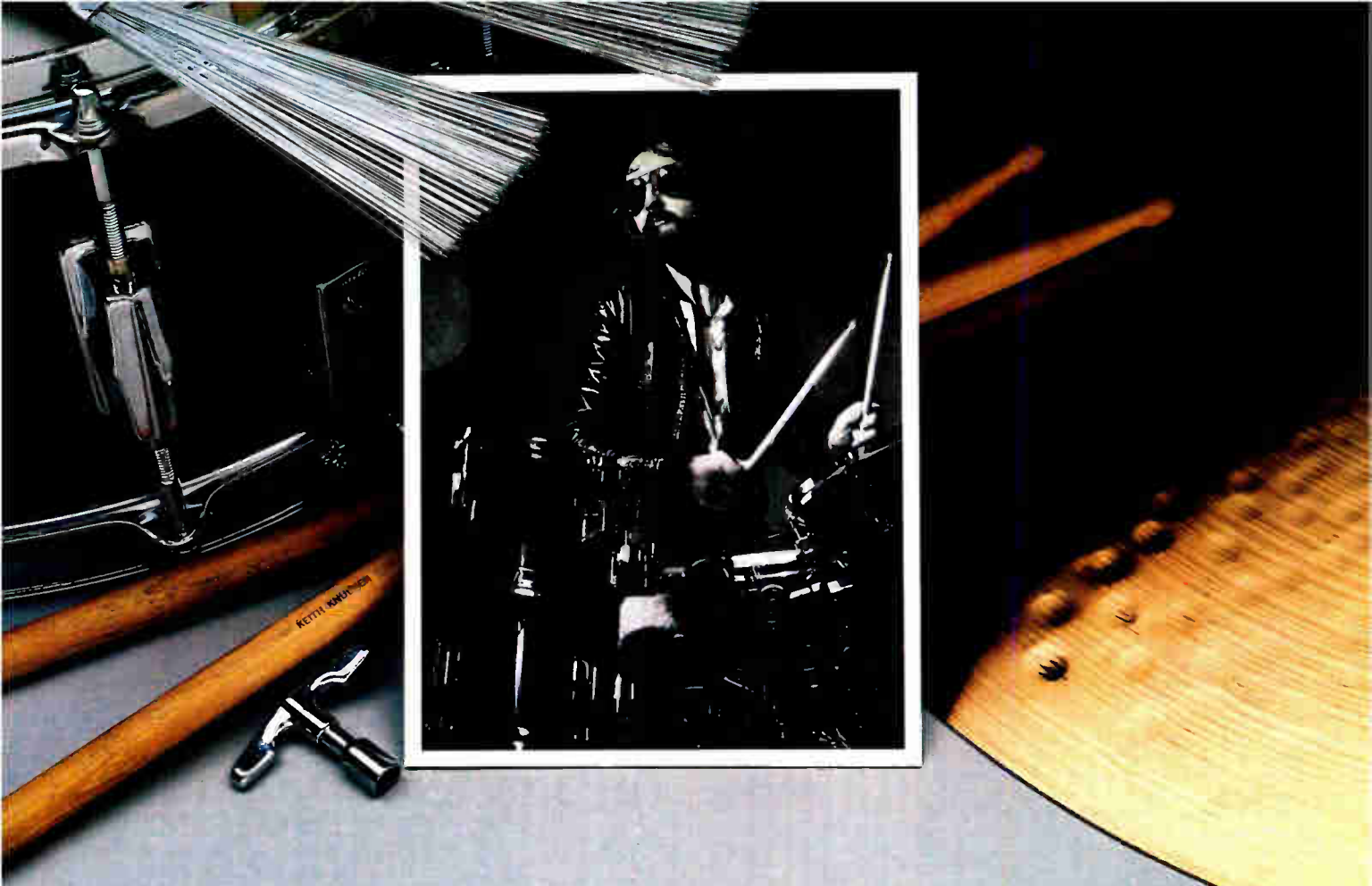
However, during post production some complications were encountered

using dbx which have been reported to the dbx engineering people. First, dbx encoded signals can only be understood if they are played forward at normal speed. Any change of tape speed or direction causes the compander in the dbx to grossly mistrack the dynamics of the signal, rendering the audio totally unintelligible. One can't even tell where sounds start or stop, it is such a garbled blur. In shuttling to find the audio edit points, the dbx would have to be switched out, then switched back in each time to make an edit. A dbx encoded signal can be played back undecoded in all speeds and directions for locating points and is totally intelligible, although tinny and compressed sounding. This created a new studio discipline of remembering to switch the dbx on and off at the right time over and over for several days. It has been suggested to the dbx engineers that for dbx to be practically incorporated into a video post production environment, an automatic monitor switching system be devised to allow the dbx to be bypassed during search and shuttle, then automatically switched back in during an edit. This would eliminate the need to remember to manually switch back and forth each time.



Another complication with the dbx occurred at the actual point of the audio edit on tape. The Panasonic 9600 audio circuit, upon executing an audio edit, will ramp the bias signal up for the first three frames of the edit. This works to eliminate any punch in noise and serves to blend the old audio and new audio at the assembly point, eliminating a gap or dropout effect. Without dbx this technique does a fine job of producing a clean audio edit electronically. However, the dbx interprets this ramp in bias signal as program material and turns the volume up full momentarily at the edit pointing, causing a rushing noise at the edit point. This problem was eliminated by going back to those audio edits where the dynamics mistracked and making a single frame spot erasure. This effectively eliminated dbx mistracking at the audio edits. dbx engineering suggests using the new dbx type 2 units for noise reduction directly onto video, claiming the newer units will not mistrack at an edit point.

With the aid of a computer controlled lighting system, an NTSC Apple conversion system and dbx noise reduction, the technical limitations of 3/4" teleproduction are being expanded, we are happy to say. ■



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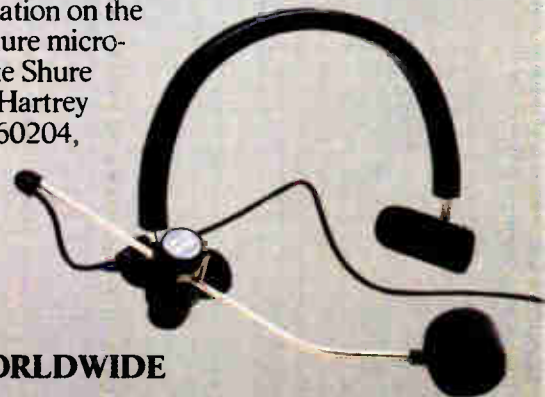
The Headset Mic is available in two versions. The standard SM10A (microphone only) and the SM12A which features a receiver for use as a monitor.

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INTERFACE

A Starter Kit For Video

by Neal Weinstock

Please imagine you, like me, are surrounded by four projection videoscreens, four matching hi-fi's, each blaring a different cable rock

channel. Yours truly is doing another one of those product evaluation stories, for the consumer press, to explain the hardware; the hardware begins to explain the song you're about to hear.

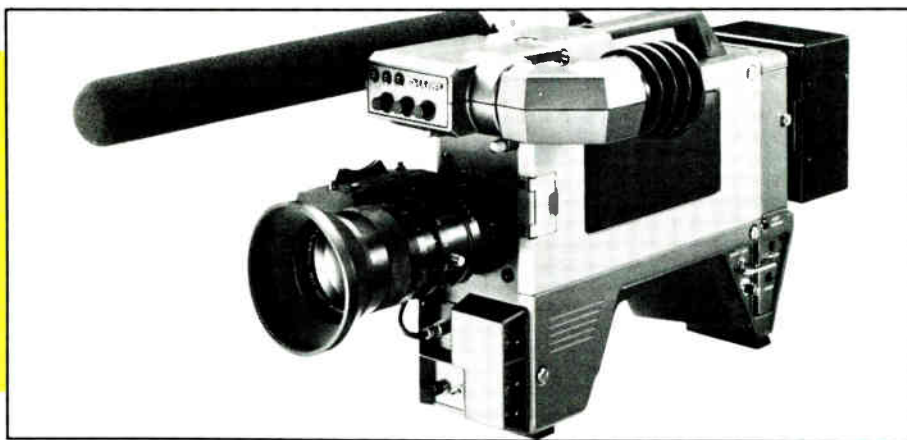
Let's begin slowly, above my personal sensurround. MTV is to my left, a USA concert to my right, a New Jersey access Rasta band dead ahead, the CBGB access program, on tape, bringing up the rear. If the walls of my living room hold up long enough, we'll try to relate the sentient parts of the experience.

One. The MTV video cuts are the slickest, natch. The problem is that the music involved involves the most bubblegum per second, and the video tends to match. Consequently it tunes in and out: to use a cable industry word, it churns this sub-

focus. Three is the count of apparent burn-ins. Four are the band members, with five giant hand-rolleds burning. The interviewer smokes, too. So does the camera-person, most likely. TV sure didn't used to be like this. Anyway, they're great musicians, they're talking now about how they've sneaked into the country, and damn the technology, this is what fascinates me most out of four screens. It's real.

The USA concert is, to be charitable, by a well-known group that oughtn't to be. The video is as prosaic as the music.

TV CBGB we leave for last and are only least involved with because I've seen it before. Actually, it is the most involving, if judged equally, of all four walls. Video responsibility often gets turned over here to some of the more crafty artsies (often they're



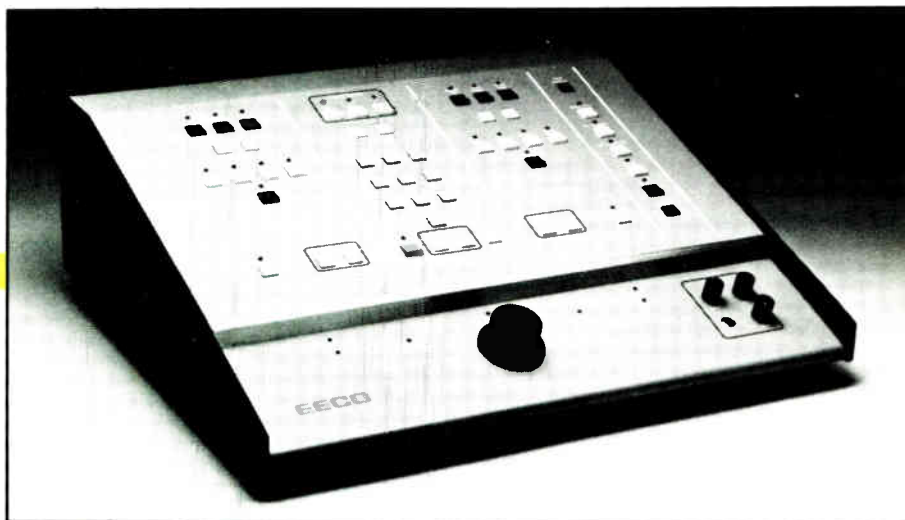
Sharp's XC-800

Slick solarization and computer gizmos of MTV notwithstanding, I find my attention drawn to the badly shot Rastamen. One is for the number of camera angles used. Two is for the number of feet the picture is out of

not so good, but the world's not perfect, guys) who perform miracles with Betamax for no pay.

The point of all this seems to be that having the V-2 will not necessarily win you WW II; you gotta have heart. Thinking of starting out on the yellow brick road of video? You'll need a camera and a recorder. Some of the best of the CBGB tapes are done with just that. Half-inch. Vidicon camera. Of course, selling it is a different matter.

But just try playing around with it before you try to even think of trying to sell visual products of your fevered brain. For those with the resources for a more than minimum setup, take one from each column of this Chinese menu: a camera; two 1/2" recorders; an edit controller; two color monitors; a basic, three light, color balanced lighting kit. If you are lucky enough already to have a personal computer, or are contemplating one for other uses, another menu selection would be some program for titling and graphics. If you're really beginning to get in,



EECO IVES-1 Intelligent Video Editing System

secondary purchases that should not be far behind are a second camera, third VCR, sync generator, and some rudimentary video amplification and correction hardware.

A mere nonce past and I would have specified that all those VCRs be at least of 3/4" format, but this ace reporter has recently worked with some VHS stuff that rates about equal. At this stage, U-matic (3/4"), which has been the industrial standard for several years, looks to be a format on the way out. Surely this will happen slowly, but with 1" broadcast standard machines coming down in price and 1/2" home video coming up to broadcastability (I never thought I'd be saying that), U-matic is seeing the writing on the wall.

Likewise, there is finally a consumer-type camera that captures an image with sufficient resolution to be broadcast - only one, the Hitachi VK-C2000 (with an excellent VHS recorder it sells for \$2,700), the first video camera without a tube, but with an MOS chip. However, the Hitachi camera, as with all home video cameras, is only usable in single camera setup - it cannot be synced externally with anything else. Therefore, it barely misses being

adaptable to future growth into a two-camera studio. (Still, there are so many interesting things about this new MOS imaging technology!) See its product description below, if you will.

If you can't afford the best Barco color monitor (and who can?) there are many equivalent to each other several notches below its quality. Go for an edit controller that works equally with U-matic, VHS, or Beta, and that will record time code. At least one of your VCRs should be able to record in any combination of two audio channels, and accept low impedance, wild audio inputs (not to mention synced audio, of course). Light kits are available and fairly equivalent from Lowel, Berkey and others. Graphics programs are presently available for Apples and the Atari 800, to my knowledge, among all microcomputers.

Enough of the shopping lists. The other hardware you need begins to be apparent once you start.

camera that has a CRT viewfinder, accepts standard lenses, has automatic white balance, needs only 100 lux to produce an image with 360 horizontal lines at center, and *more* at edge; is capable of subtle and true color rendition and sharpness even in underlit reads; produces true blacks and true whites; that will not under any circumstances produce a burn-in or after-image even by aiming it indefinitely at the sun; needs so little maintenance that equipment rental houses charge less for it than its sale price would warrant; needs so little power it runs for hours off a standard VHS battery pack; produces a broadcastable image that's been used, often, by NBC; sells for only \$2,000. Now imagine that you are not merely imagining. This is the first video camera with a metal-oxide semiconductor imaging device.

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CRT (4" diagonal), VT680M. In stand-alone configuration, the 6800 weighs only eleven pounds.

EECO IVES-1

The new EECO Intelligent Video Editing System 1 does most of what an editing controller ought to do, but that few accomplish. It economizes with only one joy-pot to control both slave and recorder, but makes up for that with auto-dub, a one-button direct dub command, a one-button SMPTE time code encode

command, an internal audio mixer, split audio/video edit capability, and programmable pre-roll and post-roll times.

EECO PGT-560

Without a portable SMPTE time-code encoder, you can forget about electronic field production (or any other production) with any small format video recorder. The PGT-560 performs the necessary job well, weighs in at only one pound, and operates for 1000 hours off a 9 volt

radio battery. Time code is also displayed externally via LCD.

Sony BVP 110

One of the most versatile of a new generation of film-style EFP cameras, the Sony BVP-110 uses their Trinicon improvement on a Saticon tube pickup for 400 line horizontal resolution. It operates off of either internal or external sync, for use alone, film-style, or in multi-camera setup. Comes with four built-in filters, for 32, 52, and 6800° K, and 5200° with 1/4 neutral density. It weighs only six and a half pounds and consumes only 11 watts of 12 volt DC power. Of particular interest are the three digital memory white balance settings. Comes with shotgun mike, CRT finder, shoulder harness and carrying case, but not with a lens, for \$8,900.

Matthews Cam-Remote

A small, but very handy addition to the new generation of motion control is this electronic pan and tilt tripod head, which can be completely operated via remote control. Features control wheels, joystick, or fluid head sensors that are adjustable to any film or video speed.

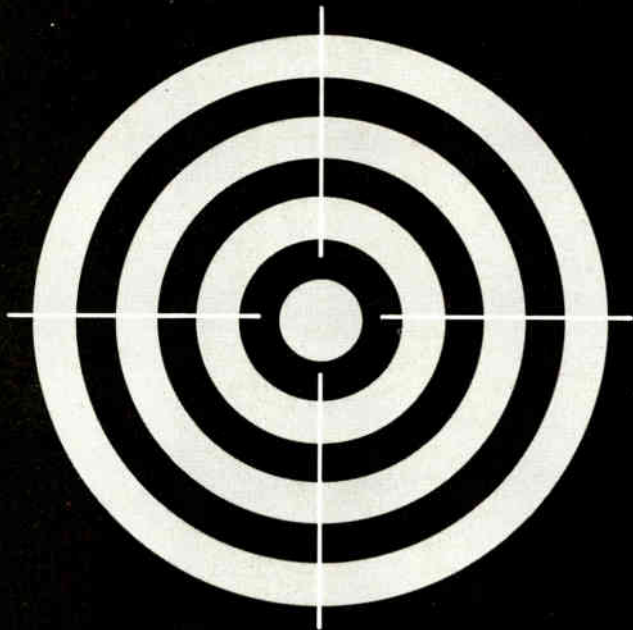
Cascade Graphics Development, Cascade II

The Cascade II is an assembled business and design graphics systems, which includes an Apple II Plus, display terminal, graphics tablet, printer, hard and floppy disk for \$23,000. If that sounds like a lot, this package also includes Cascade's graphic design software in disk form. All displayed images are monochromatic, and limited to an Apple's resolution (280 by 192). One of the first of the new micro based generation of graphics terminals, any user must surely develop their own programs for video design.

Ithaca Intersystems Graphos

The Graphos is another terminal designed for business and industrial design. It will interface with a micro but prefers to deal with a mini-computer through an S-100 bus. The screen has the ability to be divided, in any way, into up to 16 sub-screens, or windows. Each of these can be independently removed, redisplayed, scrolled, zoomed, or panned. Text and graphics can be combined in each, too. The full color palette includes 32,768 selections, any 16 of which can be used in each of those 16 windows, for a total of 256 on screen. Menu permits easy choice of colors, hues, lightness, saturation, and of type fonts. Resolution is 640 by 480 pixels, in a 30 fps raster display. \$8,000. ■

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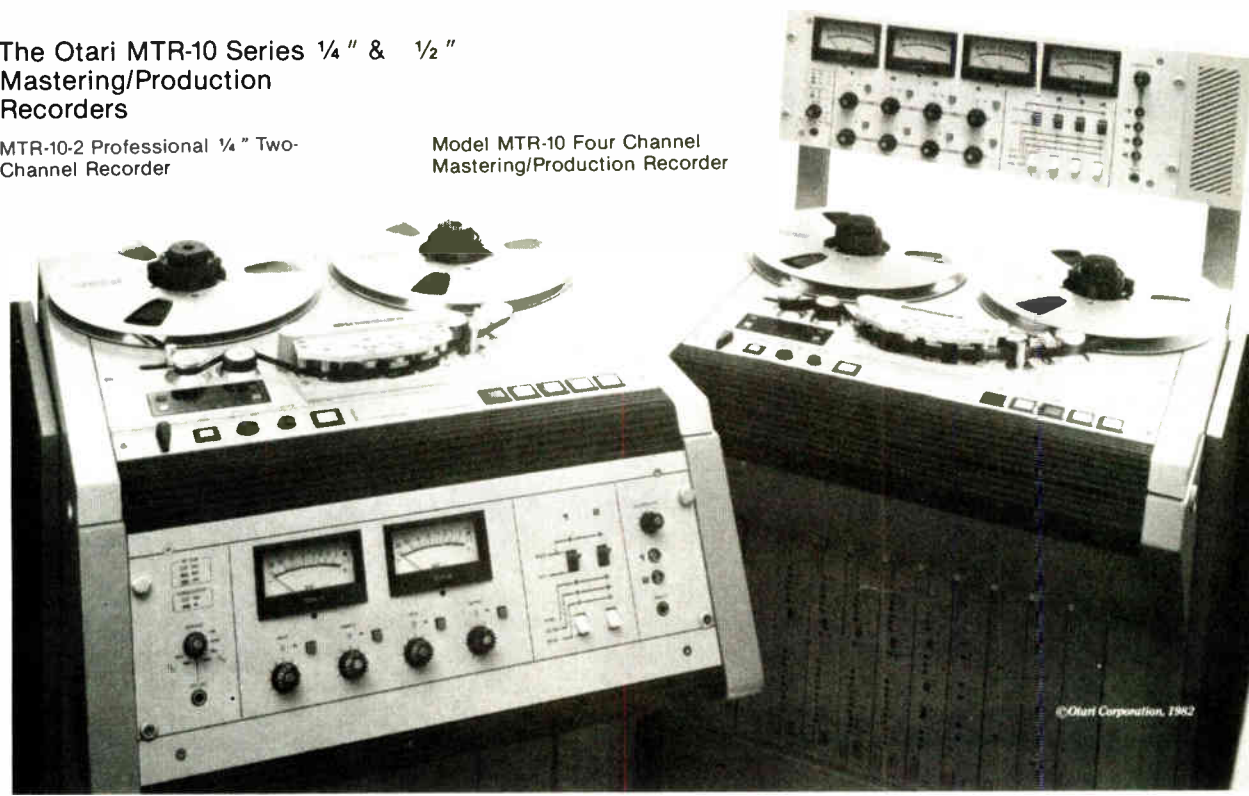
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LUNCHING WITH BONZAI

Andrew Gold Refining the Midas Touch



Left to right: Brock Walsh, Jim Isaacson (engineer), Andrew Gold

by Mr. Bonzai

Red-haired and bearded, Andrew Gold is a surprisingly robust figure to meet after hearing the graceful touch he has given to the music scene over the past decade and a half. He's the guy who played the solo in Linda Ronstadt's "You're No Good," the striking result of a long and experimental night in the studio with Peter Asher and Val Garay. His ability to play guitar, piano, synthesizers, drums, etc., etc., has prompted Linda Ronstadt, Karla Bonoff, Nicolette Larsen, Art Garfunkel, Maria Muldaur, 10CC, and a number of other artists to play around with him in the studio. He's toured with most of them and has recently been seen on stage with James Taylor.

"I played a lot of percussion with James," he reflected. "It was a lot of fun, and I grew to have an immense respect for him. He's an amazing performer."

This lunching came about after I gave a call to Warren Salyer, manager of Sunset Sound in Hollywood.

"Warren, it's Mr. Bonzai. Who do you have haunting those legendary chambers?"

"Well," he informed me, "we've got Bobby La Kind producing a Japanese artist: E. Yazawa - Bobby played percussion with The Doobie Brothers. Al Schmitt is mixing Brenda Russell. And Andrew Gold is in Studio II."

'Andrew Gold!' I thought. This could be very interesting. I had met Andrew once long ago in London, 1967. He was living with some friends

at the time, the Villiers family, and had a duo with Charles Villiers.

"Villiers and Gold - very imaginative name," he remembered. "We wrote a bunch of songs and got a contract with Polydor. They put out our record, but when I say they put out our record, I mean they sort of put it outside the office door."

Since Linda Ronstadt has figured heavily in Andrew's prominence, I asked how they had first met.

"I met Linda, and Kenny Edwards and Bobby Kimball of The Stone Poneys when I was fifteen. They played at our school, Palisades High. I remember my girlfriend was peeved because I thought Linda was real cute and kept staring at her. When I heard Kenny's guitar I thought he was amazing. He still is, but at the time I'd

never heard anything like it."

Andrew's history teacher, Mr. Waldman, married a long-time high school chum, Wendy Steiner, when she graduated.

"My whole school life was spent with Wendy Waldman. I started playing music with Kenny and Wendy, and Karla Bonoff, who was living with Kenny. That was the nucleus of the band we formed called Bryndle. We spelled it with a 'y' because we were going to be just like The Byrds. We moved into a house in Topanga Canyon and thought if The Band could do it, so could we. Everybody was a hippy. We made one record for A&M with two producers who had never produced before: Chad Stewart of Chad and Jeremy, and Chuck Plotkin, our manager. Chuck is now working with Brock Walsh producing Bette Midler, and he's done a lot of work with Bruce Springsteen. I wrote very few songs in those days - I was just the guy gettin' stoned and playing guitar."

Bryndle disbanded and Andrew took a job as an assistant engineer at A&M. "It basically consisted of sweeping up and putting away cables, but occasionally I would sneak off to the mixing room and get a protection copy of a multi-track tape, and mix. I thought, 'Wow! I'm making such great mixes.' Of course, I would put every effect I could on everything, but it was my first introduction to professional recording. I am a person who continually twiddles knobs. I've always been interested in sound and I've had enough experience to know my way around the studio pretty well."

After his English period with Villiers and Gold, Andrew returned to the States and formed another band with Kenny Edwards called The Rangers. They opened for Linda Ronstadt at a few benefit concerts for George McGovern. "She wasn't very famous at the time, but of course she knew Kenny from The Stone Poneys. She had seen me on stage and had heard a demo that I had done. A while later she called me up, out of the blue, and told me she wanted me in a touring band that she was forming. I said, 'Great!' even though I didn't really know much about country music. Anyway, I got the job and after about a month, Kenny joined the band. A few months later we started working on "Heart Like a Wheel." We didn't necessarily want the people in the touring band to play on the album because they kept changing. I ended up playing a lot of instruments on the album. Much of the time it was just Val, Peter, and myself in the studio. It was only the second time I had worked professionally. It was one of



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Peter Asher's first times as producer and Val Garay's first gig as first engineer. In fact, David Hassinger recorded the basic tracks for "You're No Good," and then Val was promoted to first engineer. We didn't know exactly what we were doing, but it was great because we didn't have any set guidelines."

The famous guitar in "You're No Good" was the playful result of some chance occurrences in the studio. "We had left this big hole for some kind of solo and I didn't know what it was going to be. I started playing this lick that I had done a couple of times on stage and then I added to that and it worked. We put on layers and layers of sound and we used this strange EMT delay unit with a disk, but the disk was warped. It was supposed to be an echo unit but it had a slight chorus effect, too. It was an interesting effect and it helped us out. Then we doubled millions of guitars and that pretty much says it."

"You've played on most of Linda's albums, haven't you?" I asked.

"I didn't play much on *Simple Dreams*, although I sang a few things. I didn't play on "Livin' in the U.S.A." but I sang on "Poor Pitiful Me." The liner notes say 'background vocals by Kenny Edwards and Larry Hagler,' but I was Larry Hagler. He was actually a strange fan of Linda's in Lubbock, Texas, who had thrown his student ID card on our tour bus. We found it about a week later and started joking and calling each other Larry Hagler, and thought it would be fun for him when he read the liner notes."

Andrew's ability with a number of instruments, and his talents as a composer, have led him into arranging for the artists he has worked with, and from there it led to producing Rita Coolidge, Karla Bonoff, Nicolette Larson, 10CC, and presently Brock Walsh. Andrew also has four solo albums to his credit, all impeccably recorded.

"I've worked with some great engineers - Val Garay, Greg Ladanyi, Jim Nipar. I recently worked with a great engineer, Keith Besser, in England at Strawberry North and South on the 10CC album. Jim Isaacson is engineer on this album. I worked with him on Nicolette's album - he's very talented."

Realizing that we had almost consumed an entire bottle of Beaujolais, a slice of Brie, a dozen oysters and a Granny Smith apple, I abruptly informed Andrew that it was time for the real interview to begin.

HOW WOULD YOU RANK YOURSELF IN
THE GUITAR HALL OF FAME?

Well, technically, I'm not that

great. I am not able to play real fast, but I think my melodic sense is excellent. Some things that I play, I am impressed with. Some things that I don't particularly care for, other people like. It's hard for me to tell, because I'm always thinking I could be better. There are people like Steve Lukather, who can play rings around me. He can not only play with amazing proficiency, but he also has good taste. There are others who play continual fast notes that mean nothing. I would say that there is something slightly unique about my playing and that's my foothold in the guitarists' Hall of Fame.

CAN YOU DRAW AN ANALOGY BETWEEN
YOUR MUSIC AND A PARTICULAR
PAINTER?

I think of myself more as a cartoonist. I like to think of my music like those old Warner Bros. cartoons. I think of music as very visual. I'm very interested in creating a textural world that you can almost see. I'm more of a cartoonist, but a good cartoonist. I could maybe say Chagall, or Picasso, but that's too pretentious. I can't say that.

HOW WOULD YOU COMPARE YOUR
MUSIC TO A PARTICULAR TYPE OF CAR?

Probably a Jaguar XKE. I love those cars. They don't often work well, but they sure look good.

WHAT SCARES YOU?

Dying scares me.

DO ANY PEOPLE SCARE YOU?

Well, I saw a couple of guys walking on Sunset Boulevard last night that scared me.

IS THERE ANYONE IN THE WORLD YOU
WOULD LIKE TO MEET?

Leonard Bernstein. He wrote my favorite musical, "West Side Story." It's the most amazing music I've ever heard in my life . . . along with some Gershwin, some Beethoven, and a few others. . . but West Side Story is astounding.

WHO IS YOUR BEST MUSICAL FRIEND?

Brock. We have a close musical kinship and a friendship. And Kenny Edwards, too.

WHO ELSE IS PLAYING ON THIS BROCK
WALSH ALBUM YOU'RE PRODUCING?

Let's see, we've had Steve Lukather, and Beau Siegal is playing all the drums. We've also got a great guitarist named Dennis Herring, and Bill Elliot is playing piano. It's going to be a great album - very cinematic.

ARE YOU A SPIDER OR A FLY?

A fly, because I enjoy the idea of flying. I dream about it all the time.

ARE YOU A HAMBURGER OR A HOTDOG?

A hamburger, definitely.

ARE YOU A SUN OR A MOON?

A sun.

ARE YOU AN ARROW OR A BOW?

This is like a Rorschach test. I want to say an arrow, but I think I'm a bow.

WHEN YOU STAR IN THAT BIG FILM, WHO WILL BE YOUR LEADING LADY?

I hope it's Meryl Streep... or Katherine Hepburn.

WHAT TYPE OF FILM WOULD YOU MOST LIKE TO SCORE?

A science fiction story, or a horror story - I could use special effects and get strange.

WHAT IS YOUR FAVORITE NEW GUITAR GADGET?

They haven't made the gadget I want. If you made it, you would not only become one of the more advantaged musicians, but you would also win the Nobel Prize. I want a gadget that would make the guitar sound authentically doubletracked. With a doubletracked sound I want some of the second signal to come before the one that I play. You would have to invent a time machine. When you doubletrack, sometimes the second track is a little ahead. You can do the random pitch thing that gets a little under at odd times or a little above, but you can't have it come before the part that you play. You can do it with tape, but you can't do it live.

WHAT DO YOU THINK ABOUT ROCK VIDEOS?

A lot of them are very boring. How many times can you get excited about some guy with long hair doing a lead guitar with a scrunched-up face? Some of them are really good. I like Devo's "Peek-a-boo." There are two kinds. Of the ones that capture a live performance, there's one by Prince, "1999," that I think is fabulous. It's mainly just Prince and his band, but the director picked good shots. I think Peter Gabriel's "Shock the Monkey" is unbelievable - made up like a monkey, with midgets all over his back. The whole thing has a fever.

WHAT WAS THE MOST TOUCHING OR PROFOUND REACTION YOU EVER GOT TO ONE OF YOUR SONGS?

I played a song called "Still You Linger On" for Nicolette when we were together. She... cried. I was

astounded.

YOU WERE MARRIED TO HER, WEREN'T YOU?

No. The press thought I was. We were engaged and we called it off. We're great friends now.

WHO IS YOUR BIGGEST MUSICAL INFLUENCE?

The Beatles, without a shadow of a doubt.

WHEN DO YOU INVENT SONGS?

When I feel like a kid and it's a rainy day. I'd be doing arts and crafts and to me music is like having a canvas and painting, or working with

Play-Doh. It's a feeling of warm creativity. Make a toy. To this day, I like writing songs when it's raining.

DO YOU HAVE ANY DISTINGUISHING IDIOSYNCRASIES?

If I feel creative, it's hard for me to speak. I get very un verbal. If I really have a good idea, I push everybody away and go to the faders. It's hard for me to describe it; I just have to do it. (I also twirl my moustache a lot.) But if I have to interrupt what I'm doing to form it into words - it's easier for me to show it. That's probably why I've ended up playing all these instruments. If I have to speak about it, I have to think about it. ■



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by Ken Pohlmann
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Tape Reverberation Systems

The tape reverberation system is the oldest method of artificial reverberation still in use today. An early forerunner, a simple looping device, was patented by Shreiber in 1934. Another system patented in

heads, and finally an erase head. The delayed signals from the playback heads are combined to create the effect of a reflection series. The system contains a number of serious limitations. The density of reflections is limited by physical head spacing; higher tape speed increases density, at the cost of shortened overall delay duration. Also, any increase in tape speed necessitates a decrease in feedback level to prevent oscillation and added coloration.

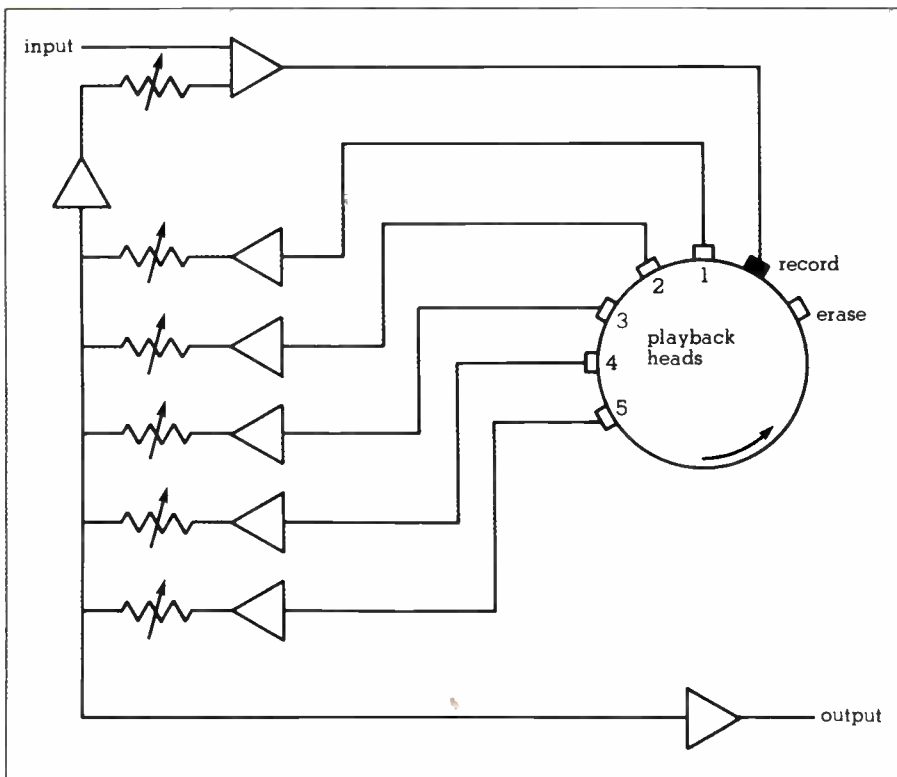


Fig. 1: Tape reverberation system

1938 by Goldsmith used multiple record heads and a wire recorder. In 1941 Wolf perfected a system with erase and record heads, and sixteen playback heads, using magnetic steel ribbon. Output from each head was adjusted to match a preselected decay curve. The system was adapted to plastic recording tape after World War II.

The essential tape system, shown in Fig. 1, consists of a continuous loop of tape following a path past a record head, multiple playback

To overcome the limitation of a small number of successive playback heads, and the resulting low density of reflections, a multi-track device, such as shown in Fig. 2, can be used for a more complex reflection series. Recording heads A, B, and C record program material on their corresponding tracks while playback heads D, E, F, and G reproduce the recorded signals from the three tracks simultaneously; this simulates the effect of a much greater number of heads. A combination of these two systems, using multiple track, multiple playback heads, could accomplish a reasonably good artificial reverberation.

As with any loop system, comb filter colorations can easily occur. If the spacing between playback heads corresponds to a recorded wavelength or a multiple of shorter wavelengths, those frequencies will always be played in phase between the two heads, thus providing an amplitude boost. Similarly, recording head spacing will cause signals on different tracks to arrive in phase at all the playback heads. Also, the use of feedback to yield longer reverberation times creates the same chance for coloration.

Spring Reverberation Systems

The spring reverberation technique is perhaps the most widely used due to its inclusion in many inexpensive units. The many different spring system designs tremendously vary the effectiveness of this technique - ranging from twangy to sublime. The only similarity between many of these units is the use of a spring as the elas-

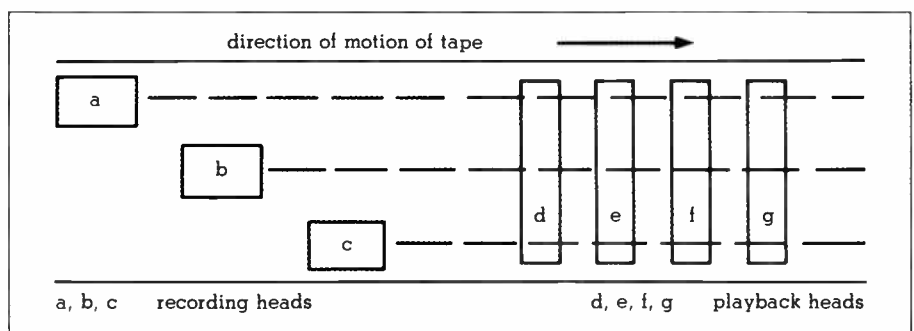


Fig. 2: Multi-track reverberation system



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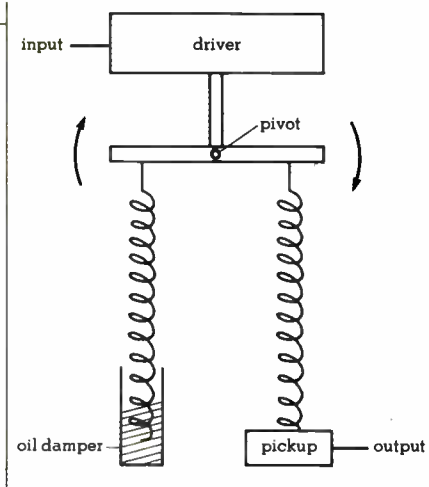
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Fig. 3: Spring reverberation unit with oil to damp vibrations

tic medium simulating a reverberated acoustic signal. One design utilizes two vertically hung springs as shown in Fig. 3; both springs are connected to a driving transducer but one is connected to a pick-up and the other is encased in a tube filled with oil. The pick-up converts the compressing and stretching motion of the spring into electrical energy. Time delays are created by the propagation velocity of



the waves in the springs and by the multiple reflections which occur when the waves strike the oil, and when a wave crosses a spring endpoint. The oil is used to damp oscillations in the unit; the height of the oil in the tube determines the reverberation decay time.

The use of torsional transmission lines as spring reverberators fulfill recording studio requirements. The input signal enters both ends of the spring through a moving coil system, and is picked up by identical means after reverberation. Each spring end is connected to a magnetic rod which is free to rotate about its own axis. A magnetic field is created on one end of the rod by the input signal moving coil. This magnetic field causes the rod to rotate and create a twisting motion in the spring. The transmission properties of the resulting torsional vibrations are determined by the mass and compliance per unit length. The mass depends on the third power of the mean wire diameter; compliance depends on the fourth power of wire diameter. The propagation velocity of the twist along the spring length varies with the thickness of the spring wire, the number of turns per length, and the overall length of the spring. A good statistical diffusion of the reverberated signal is achieved by varying the spring wire surface with etching to vary wire diameter, and by deforming irregularly-distributed individual turns.

Torsional transmission lines form a reciprocal transmission system; it is the irregularities in the line which create the effect of reverberation. In other words, if an ideal line were used, the reflections would all be in phase at the output and would be cancelled by the out of phase nature of the dual moving coil design. In the case of the reverberation device, however, the transmission properties of the spring are statistically changed to produce irregular and statistically frequency-independent reflections at the output. Thus the wire etching, deformations, and mismatching at discontinuities actually cause the torsional motion to be induced into the pick-up as a reverberated signal. Furthermore, at each discontinuity, part of the signal is reflected back through the spring so that extensive time differentials are established.

The AKG BX-20E dual spring unit utilizes many of the above-described design features and is probably one of the most widely used professional spring reverberation systems. A block diagram illustrating its principle elements is shown in Fig. 4. The method it uses to vary decay time is representatively ingenious. Motional feedback is controlled by attenuation

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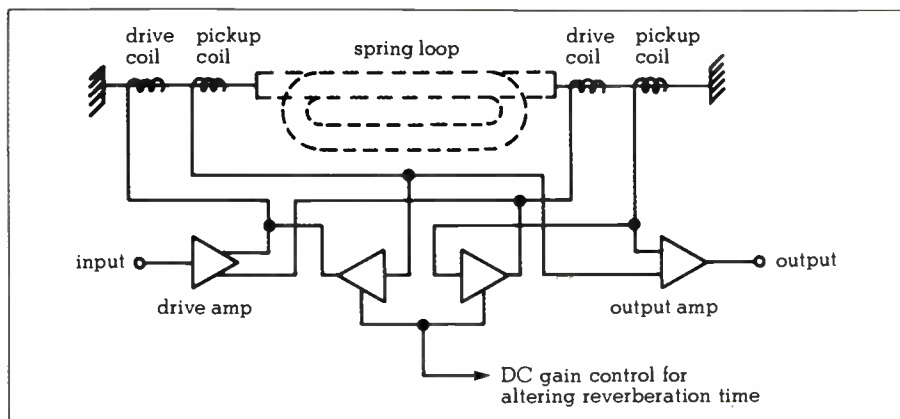
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Fig. 4: AKG-BX20 spring reverberation unit block diagram



amplifiers at the moving coils. The input signal is fed to one half of the moving coil, picked up at the other half, and fed back into the first half after a 180° phase shift. By varying the amplification at that reintroduction, friction at the spring end can be controlled, thus controlling decay time. A D.C. control voltage allows for easy remote control from the console. The BX-20E has been replaced by the 25E, a torsional transmission line device with a 25% longer spring in 2/3 the space, with an optional digital delay line.

Plate Reverberation Systems

The most widely used artificial reverberation device in professional studios today is the reverberation plate. The two dimensional metal plate design was originated and patented by EMT. The reverberation plate device consists of a steel plate protectively suspended from a steel frame within a wooden cabinet, with a driver transducer and pick-up transducer attached to the plate. The driver element may be a dynamic transducer or

a piezo electric (ceramic) driver transducer. The driver element is driven by the audio signal and sets the plate in transverse motion; these waves reach the plate edges where they are reflected back across the plate to other edges. The contact pick-up senses the plate motion and produces an audio signal which simulates a reverberant field.

A plate design hinges on several critical variables, such as plate dimensions and material. The plate size to thickness ratio must be carefully matched to keep the eigentone density constant. Kuhl has shown that reverberation free from subjectively noticeable resonances must have a density of resonance frequencies greater than three per Hertz in the midfrequency range. A smaller size plate is desirable, but the resulting plate might be too thin, with a resulting loss in high frequency decay time due to air pressure damping against the plate. A new EMT plate, the 240, uses a special gold alloy for the plate material to insure sufficient resonances per Hertz. Following the electrolytic deposition which creates the plate, a diffusion process is carried out to precisely control the inter-crystalline thermal



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conductivity damping which influences high frequency reverberation times.

Because the impedance of the transducers appear in parallel with the mechanical transverse wave impedance of the plate, the mass of the transducers must be kept very small. In the case of the EMT-240, with a piezo electric driver, the active element of the unit consists of a thin disk of lead zirconate-titanate which is glued directly to the plate; a mass of 5 grams is glued to the other side of the disk. Within the frequency response of the system, the inertia impedance becomes much larger than the transverse wave input of the plate so that the counter-mass can be dynamically considered as stationary. The pick-up transducer presents more complications. It must possess a high sensitivity because the transverse waves on the plate have amplitudes of only $\frac{1}{10}$ micron in the low frequency range, resulting in a peak velocity of approximately .0063 cm/sec or an available mechanical input power to the transducer of less than .01 microwatt. On the other hand, mass must be kept small since the mass impedances determine the frequency response of the entire reverberation system.

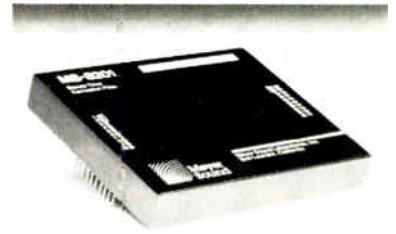
The most popular current artificial reverberation device is the

EMT-140 plate. This rectangular steel plate is 3' high and 6' wide, with a thickness of $\frac{1}{64}$ inch. It is suspended under tension in an enclosed frame approximately 1' thick by 4' high by 8' long. The stereo version of this unit has one driver element and two dynamic pick-up transducers. These transducers are spaced at different distances from the driver and on opposite sides of it. The decay time of the EMT-140 is variable from 1 to 4 seconds. It is adjusted by moving a porous damping membrane closer or farther away in relation to the plate. This membrane decreases the delay time by damping the vibration of air molecules set in motion by the plate. This plate must be isolated acoustically and tensioned properly for best performance.

Among the latest in plate reverb systems is the EMT-240 unit which uses a 12" square piece of gold alloy foil. It has many advantages over the 140, most notably its size reduction ($\frac{1}{5}$ of the EMT-140). It also has a lower degree of sensitivity to physical shock and is free from the retensioning and calibration requirements of the 140. The first reflection of the 240 is delayed three times longer than that of the 140, and the reflections are more densely spaced, resulting in less frequency coloration. ■

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An Equipment Review of Analog Reverb & Delay Devices

by George Petersen

AKG BX-25E

The new AKG BX-25E is based on the patented Torsional Transmission Line principle used in all AKG reverbs. The unit, which replaces the BX-20E, has been improved by increasing the overall spring length by 25%, while reducing the unit's size by one-third. This studio/portable, two-channel system features independent decay-time adjustment (via remote control), high and low frequency equalization, input/output level controls, and dry/reverb signal mixing. The BX-25E's control module can be

(continued on page 86)



AKG BX-25E

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*Please note schedule change - was previously November

removed from the main housing and remotely located via an optional 30' cable. Another option is the M-250 Digital Delay Module which can be ordered with the unit or can be retrofitted at a later time. The BX-25E (standard version) is priced at \$5,500.

B.A.E. LP-140

The LP-140 from B.A.E., Inc. is a full sized professional plate reverberation system. An earlier version of the plate was introduced over eight years ago, and B.A.E. acquired the manufacturing rights to the device, and added electronic improvements, yielding the LP-140. This extremely quiet system (-71 dBm, A weighted, input shorted) gives a bright, smooth response. Each unit is pre-tensioned at the factory, and can be shipped by truck or plane, and will be ready for use on arrival with no adjustments required.

effects. The unit, in pedal or rack mount versions, has a wide range of options available, including multi-layer chorusing (Chorus/Echo II), control voltage, stereo capability, sweep control, and several input/output configurations. Time delay extension modules can also be added, with each module adding up to 250 ms to the unit's basic 2-250 ms delay range.

DOD SPECTRUM R-895

The Spectrum R-895 is a full function analog delay unit with up to 350 milliseconds of delay. The Spectrum features switching for flanging, chorusing and doubling, at a full bandwidth of 15 kHz. The sweep rate of the Spectrum is 10 to 1 for flanging and chorusing effects. The Spectrum is housed in a rugged steel chassis with a black anodized aluminum front panel with easy to read control settings. Suggested list is \$399.



DOD Spectrum R-895



Biamp MR/140

BIAMP MR/140

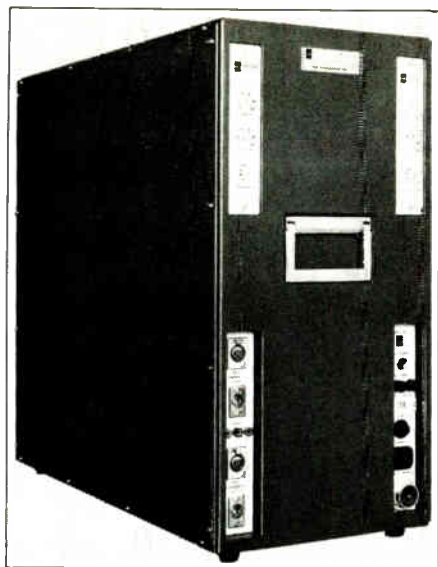
The Biamp MR/140 is a single channel, rack mounted spring reverb system designed for recording, live sound, and broadcast/production applications. The unit features an automatic hard input limiter, an Accutronics three spring tank, four-band equalization, reverberation balance/mix control, and transformerless balanced, or unbalanced outputs. The Biamp MR/140 is priced at \$329.

EMT 240

The EMT 240, distributed by Gotham Audio Corp., utilizes a gold alloy foil sheet rather than a plate to achieve its reverberation effects. The unit's relatively compact size (25 1/2" x 12" x 25") and extensive insulation/suspension systems are well suited for remote recording applications where vibration is a constant problem. Due to the foil's light weight, a special piezo electric (ceramic) driver transducer is employed, while the pickup transducer uses a moving coil system. The EMT 240 uses the same remote control elements and connecting plugs as the large EMT 140 studio plates, for maximum versatility and compatibility.

CASTLE CHORUS/ECHO I

The Castle Chorus/Echo I is an analog delay device capable of creating chorusing, doubling, pitch shift vibrato, slapback and long echo



EMT 240

FOSTEX 3180

The Fostex Model 3180 two channel reverberation unit is a three spring per channel system. The unit

limiter, independent reverb and dry mix controls, and both front and back panel inputs/outputs. The Fostex 3180 is priced at \$400.

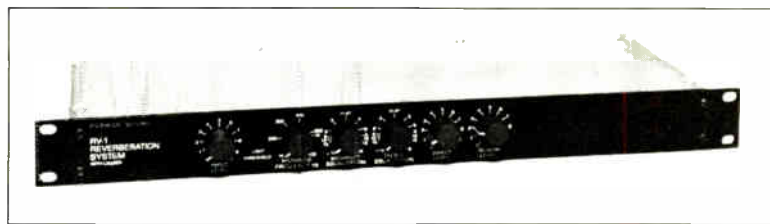


Fostex 3180

features a delay matrix (24 ms minimum) which delays the signal before the spring transducer and simulates the first reflection found in natural reverberation. The 3180 also features LED overload indicators, a built-in

FURMAN RV-1

The Furman Sound RV-1 Reverberation System is a compact rack-mount device which uses a shock mounted, triple Accutronics 16 inch spring assembly. This single-channel unit's fast attack peak limiter eliminates the spurious pops and boings which arise when large amplitude signals overdrive the spring's input transducer. Front panel controls allow for quasi-parametric midrange equalization, treble shelving, input adjustment, and separate pots for dry and reverb level outputs. The RV-1 is priced at \$315.



Furman RV-1

(continued on page 130)

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BOOK REVIEW

Critical Listening

CRITICAL LISTENING

An Audio Training Course

F. Alton Everest

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One can read numerous books and articles on distortion, frequency response irregularities, and components of sound quality, but the best way to understand these audio subtleties is to listen. F. Alton Everest has combined his audio engineering expertise with his extensive teaching background to create a guide to Critical Listening, ten self-study lessons employing five cassettes.

Although a critical listening course on cassette may seem like a self-cancelling phrase to some, every effort has been made to minimize the usual sound quality limitations of pre-recorded cassettes. High coercivity chromium dioxide tape has been used to improve the frequency response and signal-to-noise ratio, and crosstalk has been eliminated by avoiding adjacent tracks. The remaining limitations depend on the quality of the equipment on which these tapes are played.

In the accompanying manual, Mr. Everest has chosen to use what he calls the "Talk-Tech" approach. Each page is divided in two, one side stating the text of the cassette course and the other side illustrating the technical principles being considered. As with building blocks, an opportunity to listen, learn, and practice the different audio principles at each stage of the game makes the total task much less overwhelming.

Starting with the basics, the audio student fine tunes his hearing by estimating frequencies, sound level changes, frequency band limitations,

and frequency response irregularities. Each of these lessons has a section for self testing and evaluation. When these fundamentals have become familiar, the student is exposed to the components determining sound quality. Examples on tape include differently shaped sound waves, fundamentals, harmonics, overtones, and differences in tones of musical instruments due to harmonic content.

Various types of distortion are then discussed, what causes them and how to recognize them. Examples on tape include non-linear distortion, symmetrical and unsymmetrical signal clipping, measurement of total harmonic distortion at varying percentages, and "wow" and "flutter" distortion.

The next three lessons deal with reverberation effects, signal versus noise, and voice colorations. The relative levels and various factors are manipulated in each of these areas. The opportunity for the student to study these effects, isolated and side by side, is extremely valuable and can save long hours of hands-on frustration.

The final lesson combines all the concepts of the first nine lessons. It demands that the student listen and discern all combinations of intentional and unintentional faults. It simulates real-life situations where complexity is the norm and the ability to recognize nuances in sounds is a necessity.

Anyone called upon to evaluate critically the quality of music and speech signals or anyone with an interest in high fidelity should learn this material. This audio training course will never eliminate the long hard road toward becoming a critical listener, but it should help the student travel that road quite a bit faster.

—Craig Wingate

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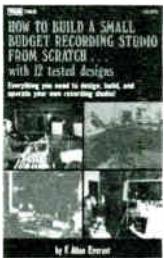


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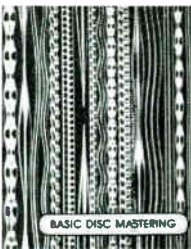
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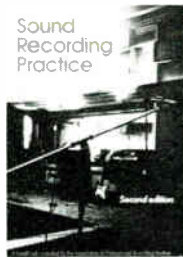
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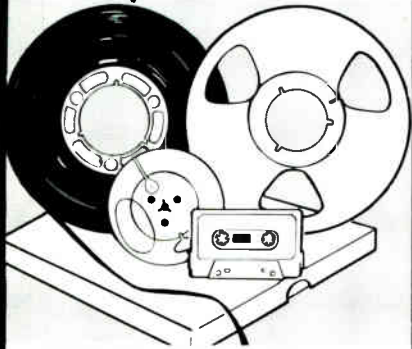
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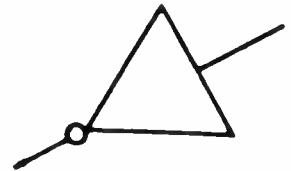
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Part 8



PROGRAMMING

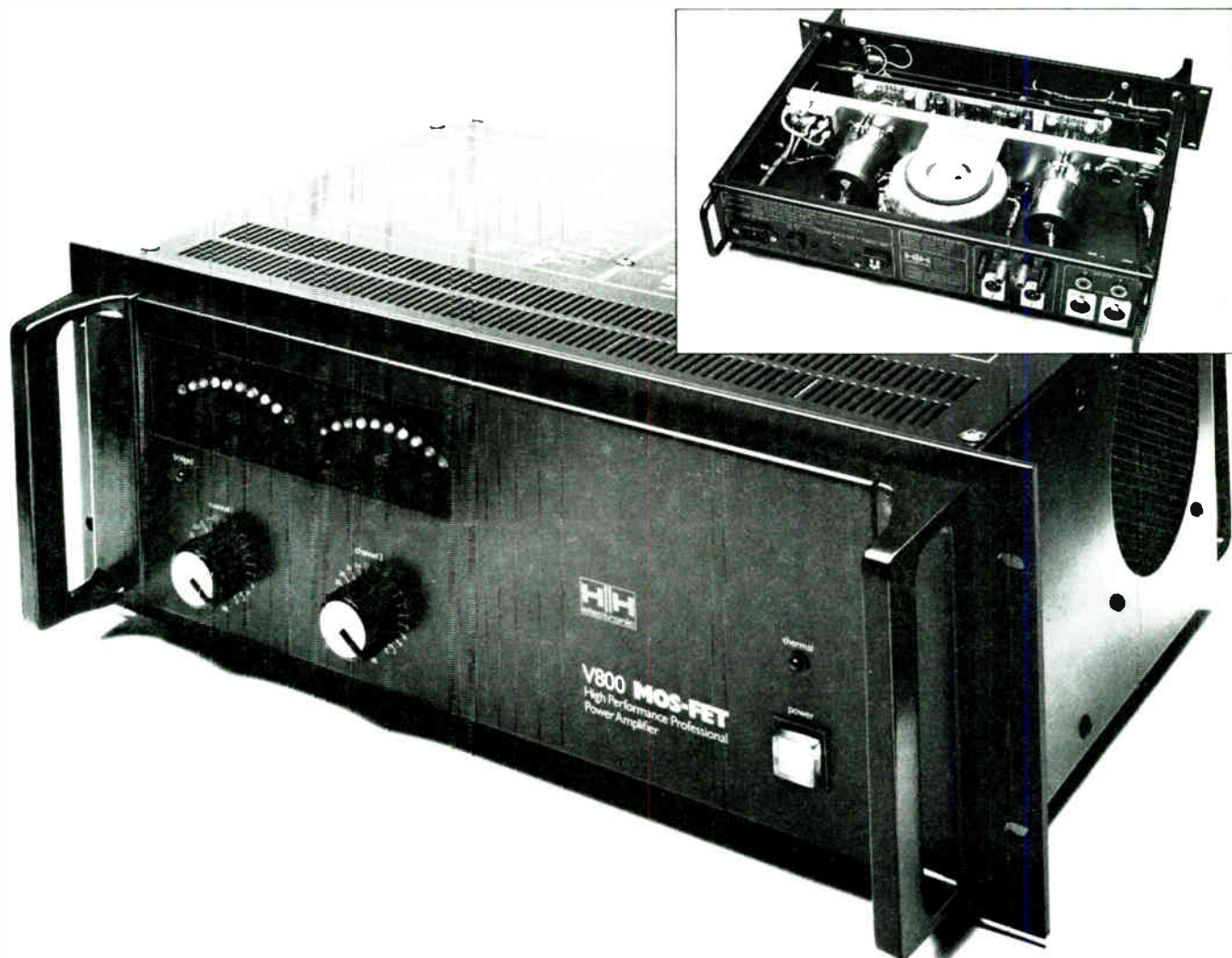


by Ken Pohlmann

Hitherto in these discussions I have taken a hardware-prejudiced view of the digital scene. Since I'm a hardware engineer, the prejudice, if not excusable, is at least understandable. There is a great temptation to think of computers in terms of their circuits and disparage their somewhat intangible and thus somehow highly suspect programming. Anyone who has trouble-shooted a logic board that was hit by lightning, stepped on a legs-up chip in his bare feet, or brushed elbows with a CRT anode knows that it takes a real man to work with hardware. Thus you'll have to sympathize with us hardware types for sometimes characterizing software people as being wimps. It's a bad point of view, especially when working on microcomputer design and applications, because a real merging of hardware and software expertise is required to work with these systems. In fact, the best microcomputer engineers are equally talented in both fields.

Last month I discussed a few of the architectural aspects of microcomputers. As was pointed out, a microprocessor constitutes the heart of a processing system, but a completely operational system requires subsystems to support the microprocessor, and thus form a complete microcomputer. A microcomputer is thus a system, whereas a microprocessor is a component subsystem. Of course, none of the hardware is useful until it is inspired by software properly distributed through the system. Thus to complete our understanding of digital systems, the question of software—programmability—must be considered.

Although a hard-wired, dedicated digital technology would be feasible, it would be sorely handicapped. It is the notion of using general purpose digital hardware operated under the control of selected instructions, which permits the great virtue of the digital technique and accounts for its emerging dominance over the analog world.



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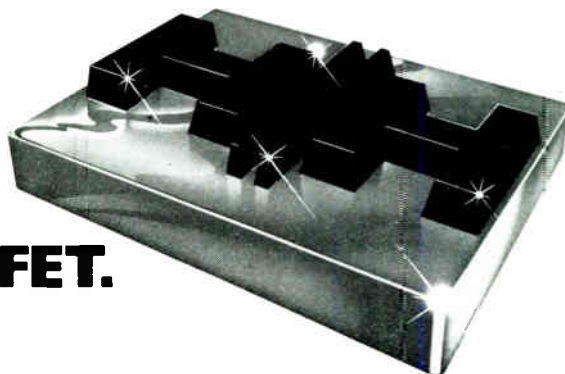
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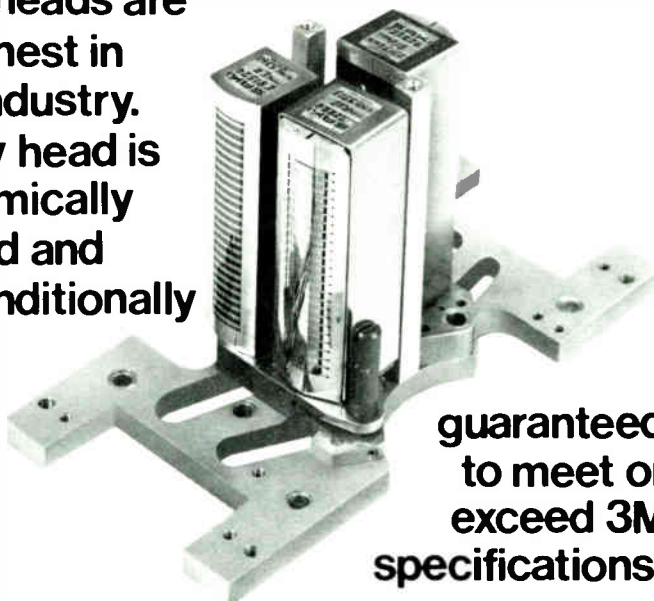
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In essence, programmability increases utility tremendously, and digital hardware can be efficiently programmed, whereas analog hardware cannot. Look at it this way: consider all of the electronics applications waiting for solutions - would you rather build a special analog (or digital) circuit for each task, or mass-produce a general circuit and uniquely instruct it? Even the most hardcore anti-technologist, violently opposed to the mass-produced idiom inherent in our modern society, must concede that a general purpose programmable method is the most efficient way to go. Because of their wide variety of applications, these systems can be built in large quantities for an extremely low relative cost. And the old fashioned idea of personalized, custom attention to a problem? Don't despair - in fact, the general system's programmability has brought previously unheard of opportunity to specifically configure the solution to the problem. Through programmability the benefits of mass production and customization have been miraculously melded.

Software is thus the instruction that tells the computer how to accomplish its tasks; programming is the process of creating that software. As a hardware engineer I shudder to think this, but the hardware is present merely to support the software; in other words, it is the software which is animated and enlightened, which assists, instructs, and entertains us. Hardware is the body but software is the spirit. In the future that analogy might be even more appropriate because work is being done on organic computers that would reproduce themselves in test tubes. But molecular electronics is a few years off. Meanwhile let's examine some of the fundamental nomenclature of programming.

The most elementary kind of programming is microprogramming. This occurs at the machine level and all instructions must be coded in binary digits. In other words, the Control Unit itself is being instructed. Although great speed and efficiency is an advantage, tremendous labor is a serious disadvantage for most applications. A more reasonable approach uses macroinstructions which execute specific series of microinstructions contained in the CU. Although some mainframe computers execute macrocode but have no assembly language, in microprocessor systems the collective set of macroinstructions forms the assembly language instruction set. This is the most elementary means of programming for microprocessors; there is access to the CPU via the assembler, but not to the CU directly.

Before we proceed further with a description of assembly lan-

guage, we have to pause to define some vocabulary. Any type of programming above microcode uses the computer itself to help simplify the programmer's task. The computer is thus asked to convert from a language more natural to the human programmer to the machine's own machine language. Thus we need a program to accomplish that conversion, and depending on the circumstances, that converter is called an assembler, a compiler, or interpreter. In use, these programs are read into the machine first, then the executable program follows. Three more vocabulary words: the language which the programmer writes is called a programming language, and his program is called a source program; the translated program is called an object program.

Now to continue with assembly language: a sequence of instructions constitutes a software program. The CU decodes (translates) the instructions sequentially into machine code and performs the specified register transfers or transformations. Operations such as data transfer, accumulator logic, branching and jumping, stack and flag control, and arithmetic comprise the menu which is the instruction set. The instruction set for different microprocessors is different and that results in troublesome incompatibility, but the overall concept of assembly language programming is identical between them. The 8085A, as we have noted, contains 74 instructions, which provide for 246 distinct operations. As an example of an 8085A assembly program, here is a program which examines a byte, compares it to a previously held value in the B register, and turns on one of two bits (perhaps connected to LEDs) on port 1; bit 0 is set if the input is less than the reference, and bit 1 is set if it is greater than or equal to the reference.

```
TEST:  INPORT1
      CMP B
      JC LES
      MVI A,02H
      JMP BIT
LES:   MVI A, 01H
BIT:   OUTPORT1
```

The first thing to note about assembly language is its conciseness. The program took less time to write than it took me to describe it. Secondly, it is self-documenting; the mnemonic codes (INPORT, CMP, JC, etc.) provide a clue to the programmer as to the function of the instruction. Thirdly, symbolic referencing is used to specify addresses. For example, JC LES tells the program to jump to LES, a location a few lines down. That means that no matter where the program is stored in memory, it will always jump to the correct line. If we had to actually specify an absolute address, such as 0A2E, we would have to

rewrite the program if we moved it to a different part of memory. Fourthly, data is similarly represented as a code, and the assembler is left with the task of converting it to binary. Fifthly, most assemblers conveniently list both the source program and object program, which aids in the modification of the program. Sixthly, good assemblers provide extensive error detection to alert the programmer to mistakes in the use of mnemonics, variables, etc. Finally, assembly programs can be linked together by means of subroutines in which a main program calls module programs. Thus, assembly language constitutes an extremely efficient and powerful programming method. For speed of execution and conciseness, it is unbeatable.

On the other hand, programs which make use of a compiler to do their translations, called compiler languages, or higher level languages, are easier to learn and use. Their more straightforward formats are more familiar to humans and their structures expedite the creation of very large, complicated programs. Higher level languages also remove the user from the nature of the machine itself and permit the use of essentially identical programming skills on completely different

hardware systems. As higher level languages evolve, they are expected to become more and more conversational until that goal is literally achieved with computers that recognize spoken human commands, and respond with their own synthesized voices. That sophistication is paid for with relatively slow compilation and execution times as well as inefficiency in memory size usage, which necessitates higher-powered hardware.

Many compiler languages have been evolved, and more are introduced every year as the computer revolution diversifies its dialect. Perhaps the first widely successful language was Fortran, a scientific language implemented on most commercial computers with memory size sufficient for the Fortran compiler. The language has been updated many times, and retains its utility to the programming community. A similar language is Basic, which is perhaps the unofficial standard of the consumer programmer. PL/I is a language which offers simplicity for algebraic equations and clear formats for reading in data and writing results. New conceptual programming structures have produced new languages; for example, Pascal is a structured language which utilizes a few simple flow struc-

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tures which can be nested and iterated repeatedly to obtain the desired result. Other languages include Algol, Cobol, Mad, APL, Lisp, ADA, Forth, variations on these, and a host of others.

As an example of the use of a higher level language, let's choose Basic to solve a simple problem. Suppose that we have to find the roots of a quadratic equation, using the familiar formulas:

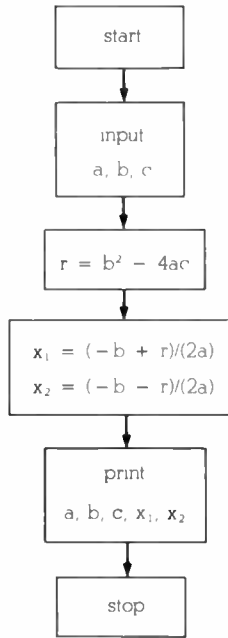
$$x_1 = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

$$x_2 = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$$

Before we begin to write code, let's make sure we understand how the program for the solution of the problem should go:

1. Substitute values for a, b, and c into the formulas.
2. Calculate the value for $\sqrt{b^2 - 4ac}$.
3. Calculate values for x_1 and x_2 .
4. Print a, b, c, x_1 and x_2 .
- 5 Stop.

Just to make sure we have it all straight, we might want to present the program visually in the form of a flowchart:



The only thing left is to put the code into the machine and stand by for our solution:

```

10 REM CALCULATE QUADRATIC ROOTS
20 PRINT "Enter values for A, B, and C"
30 INPUT A, B, C
40 LET R=(B^2-4*A*C)^.5
  
```

```

50 LET X1=(-B+R)/(2*A)
60 LET X2=(-B-R)/(2*A)
70 PRINT "A="; A, "B="; B, "C="; C
80 PRINT "X1="; X1, "X2="; X2
90 END
  
```

The beauty of a language like Basic is its inherent intelligibility; even without knowing the language, a novice could equate its code with the problem on hand. By the same token, the language is easy to learn, and easy to apply to the situation. And after all, that's what computers are all about - to make our work a little easier. Or to enable us to do more work.

This discussion brings us to the end of phase one. We have covered many of the important topics which I feel are essential to the understanding of digital technology. And thus we are ready for phase two - specific discussions of how digital technology is being applied to the art of audio. See you next month. ■

References:

Thomas Bartee, *Digital Computer Fundamentals*
 Kenneth Short, *Microprocessors and Programmed Logic*
 Byron Gottfried, *Programming with Basic*

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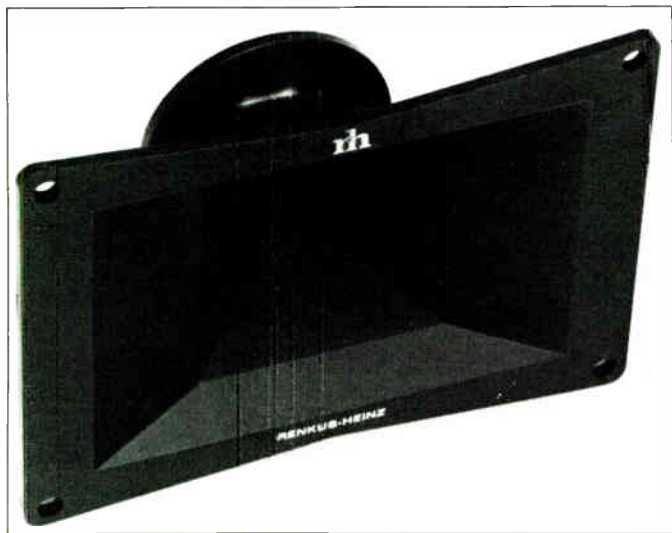
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PREVIEW



RENKUS-HEINZ CBH 800/820

Renkus-Heinz has expanded their constant bandwidth horn line with two 800 Hz models, CBH 800 and CBH 820, having 1" and 2" throats, respectively. Their computer optimized design has resulted in compact horns with low distortion, smooth response, and constant coverage in both horizontal and vertical planes. The front flange is large enough to permit front servicing of most one and two inch drivers, and the unit's convenient size allows mounting in almost any speaker enclosure. Shown above is the CBH 1600.

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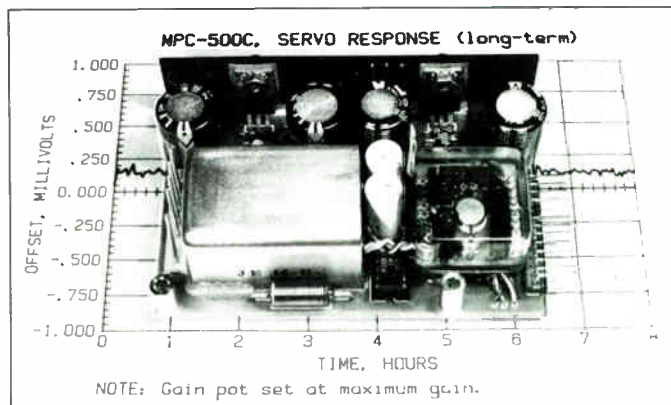
NEOTEK PRODUCTION CONSOLES

Neotek Corporation has expanded its console line with the Series I Production console for broadcast applications.

The Production consoles are available with any number of input channels, including a version with four-band parametric equalizer and a stereo line input module, and with four or eight subgroups. Logic signals from the input modules and special Penny & Giles faders provide start signals from the channel-on switch or fader lift. Active microphone input channels allow control room and/or studio muting, and a headphone/small speaker overpress cue function is provided in addition to the standard solo. Other standard features include a dozen balanced stereo monitor lines;

peak and VU metering; oscillator, slate, and talkback functions.

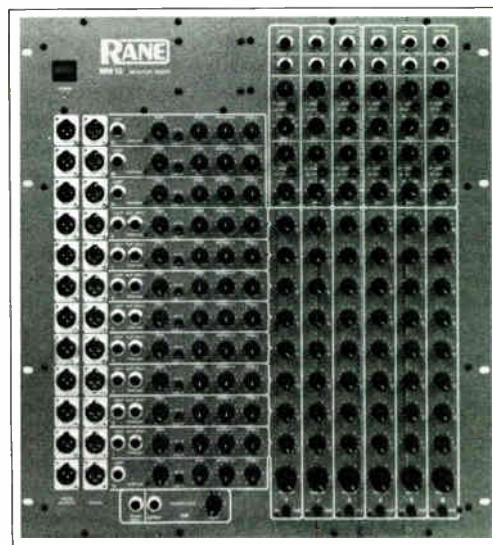
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JOHN HARDY MIKE PREAMP CARD

The MPC-500C microphone preamp card from the Hardy Company is a direct, plug-in replacement card designed for MCI series 500C consoles. The MPC-500C provides improved performance over the stock cards. These preamp cards feature the 990 discrete op-amp, a Jensen JE 16-B input transformer, on-card power supply regulation, and special servo circuits which eliminate all coupling and gain-pot capacitors. The MPC-500C is priced at \$195 in single quantities.

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RANE MM12 MONITOR MIXER

The MM 12 is a rack mounted, 12-input/6-output monitor console featuring three-way input EQ, mike output patching, two-stage parametric output EQ, stacking inputs, send/receive loops, submixing and much more. The MM 12 utilizes state-of-the-art circuitry packaged into a compact 21" x 19" x 2 1/4" chassis, and an optional road case is available. The suggested list price for the MM 12 is \$1,299.

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BGW 7000B PROLINE POWER AMPLIFIER

The new Proline Model 7000B replaces the Model 7000 and features several design improvements: a new chassis design incorporating a separate power supply compartment, electronic short circuit protection, and a two-

—Page 98

A silver AKG C460B condenser microphone is shown diagonally against a dark background with a green grid and a green waveform. The microphone has 'AKG C460 B' printed on its body. The text 'Because every sound' is written in a stylized font across the lower left.

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



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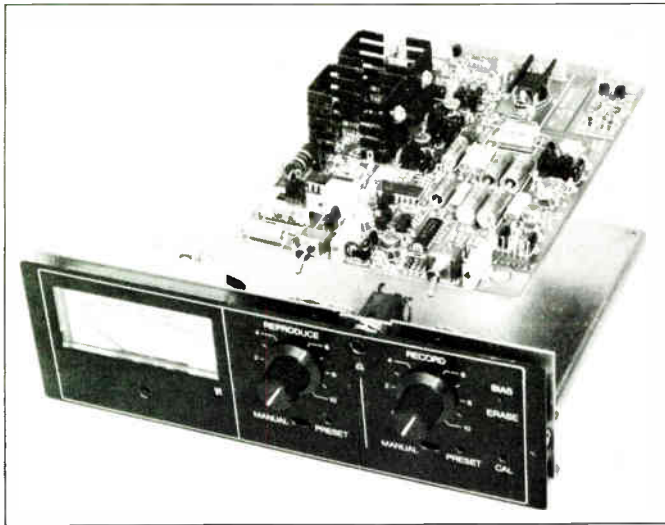
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—from Page 96

speed fan control circuit.

To protect the power supply from failure, the thermostatic switches are wound into the power transformer. The new Model 7000B also features DC speaker protection so that in the event of amplifier failure, there will be no damage to loudspeakers.

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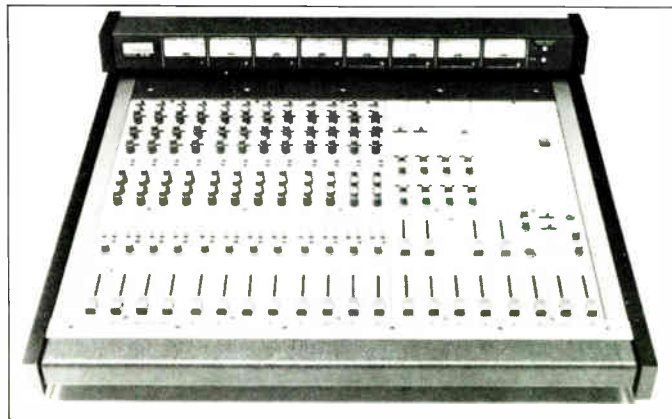
SSI ATR-100 I/O BOARDS

The Strategic Sound Inc. transformerless input/output boards are designed for direct replacement in Ampex ATR-100 recorders. Featuring simple setup and alignment, the SSI design eliminates the need of four internal d.c. offset and calibration adjustments. Other features include transformerless coupling, unbalanced line output capability without level change, class "A" output operation, and a power on/off mute protect circuit. List price is \$1,450/pair.

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TASCAM M-50

The Tascam M-50 is a 12 in x 8 out recording console designed for small recording studios, video production



and post rooms, and multi-media facilities. Each channel has a balanced XLR mike and a tape input. In addition, two RIAA phono inputs (for effects or reference disks) and two "direct box" type instrument inputs are provided.

Output flexibility includes eight main mixing busses, and two independent, auxiliary stereo systems for performer cues, effect sends, remote feeds or monitor mixes. A talkback mike and a slate/test tone oscillator are built in. Other features includes a 178 jack rear-panel patch bay, 3-band sweep-type parametric equalizer on each channel, and eight output buss VU meters with peak LEDs.

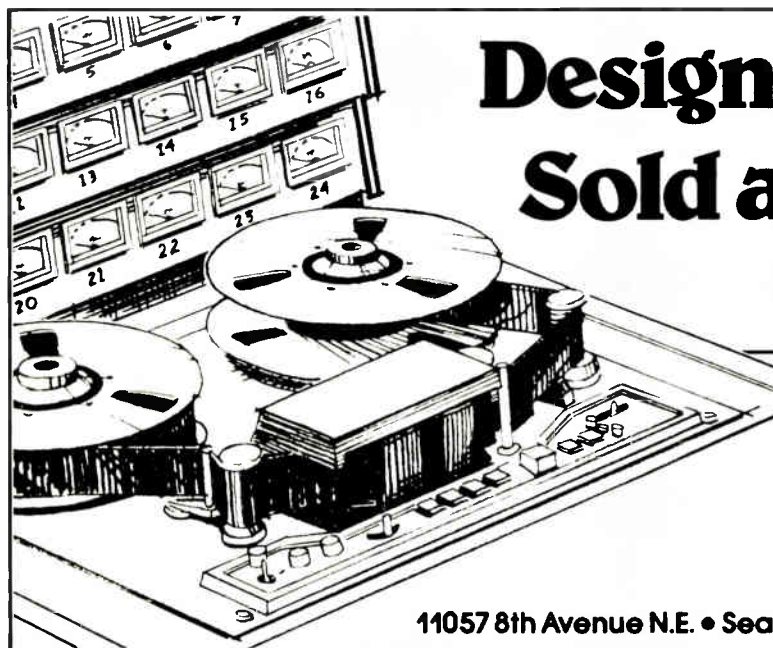
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RAMSA WR-8112 CONSOLE

The Ramsa Model WR-8112 is designed with 12 mike and line inputs, and provides the versatility of trim, monitor/effect send, solo controls, stereo effects returns and cue send outputs. The outputs include 4 Group, 2 Master, and 1 Mono Master. A flexible set of controls direct both sound reinforcement and recording functions, including a 3-band equalization section on each input. The high and low knobs are equipped with a two-position frequency selector, and sweepable, peak-dip midrange controls are provided.

A 12-point LED barograph meter section provides diverse metering capabilities. With the touch of a button, output levels can be visually metered, including mono master, left and/or right, groups 1 through 4, or send outputs. The Solo function also permits any of the 12 input or four group signals to be isolated and metered.

—Page 103



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THE COPELAND APPROACH

by Chris Haseleu

It may be ironic that New Wave music is benefitting from conservative business strategies, but it is no coincidence that three of the most important names on the New Wave scene are all Copeland. Stewart Copeland is the drummer for The Police. Miles Copeland III is the head of the I.R.S. (International Record Syndicate). Ian Copeland is the head of the F.B.I. (Frontier Booking International). It is also no coincidence that they all chose business names with law enforcement connotations. Their father Miles Copeland II was a founding member of the C.I.A. (the real one) and most recently a writer of spy novels.

As most people know, The Police are one of the most successful of the New Wave bands. What many people do not know is that the I.R.S. and F.B.I. were responsible for developing not only The Police, but also The Go-Go's, Oingo Boingo, The Dead Kennedys, and many other New Wave bands. The way in which both organizations have

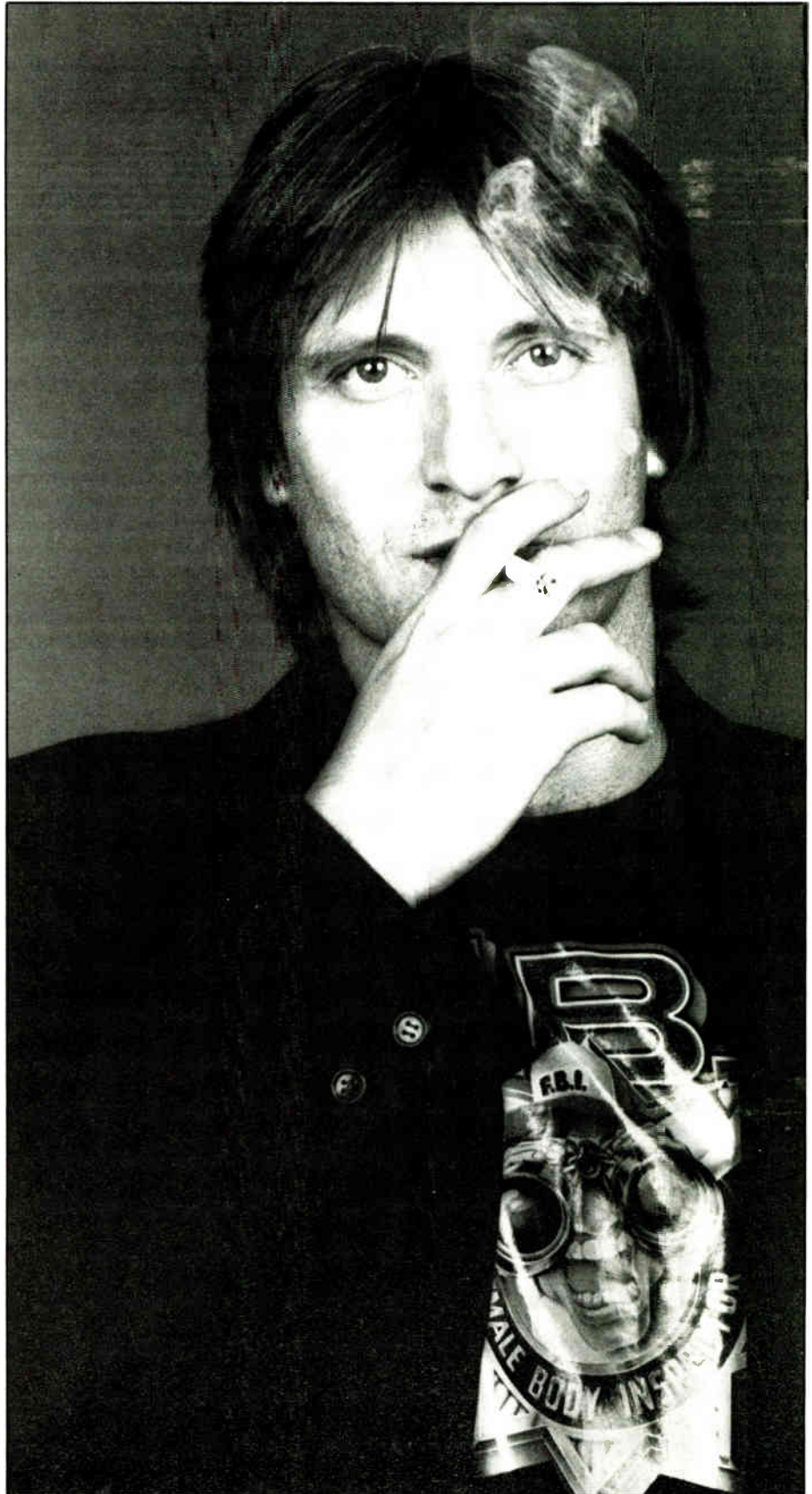
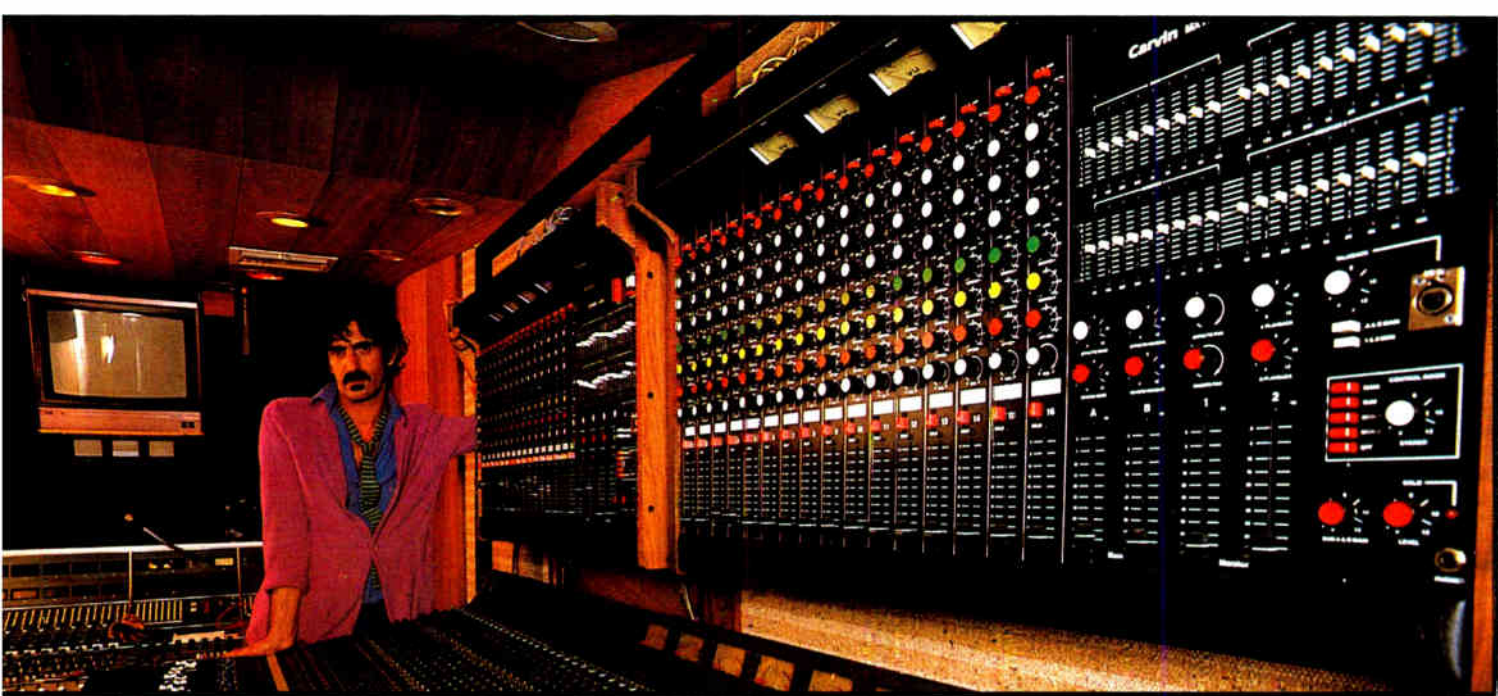


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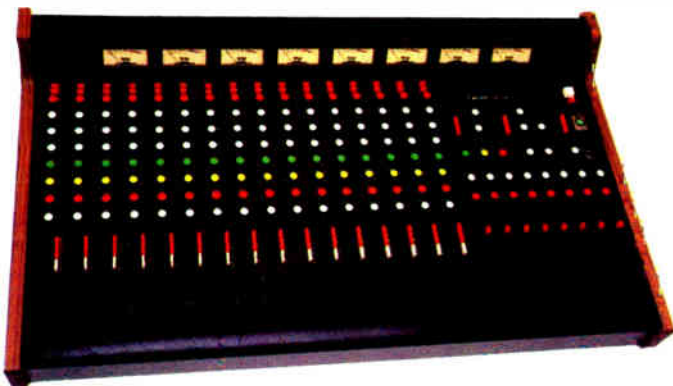
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gone about developing and marketing their clients is reflected in an I.R.S. poster which reads "Stepping Back Into The Future." Partly out of financial need and a desire to open new markets to new bands and partly out of a wish to not follow in the footsteps of the giant corporate record companies, both organizations were conservative in the way they developed, booked, and signed their clients. The result of these conservative strategies has proven very successful, as can be witnessed by the popularity of the Go-Go's and The Police.

In a recent interview, Ian Copeland talked about the F.B.I. Ian and Miles started in the industry in England; Miles as a personal manager, Ian as an agent. Ian left England to work for the Paragon Agency in Macon, Georgia, which was booking largely Southern rock bands and wanting to expand into the English New Wave scene.

At Paragon, Ian learned a number of things that would influence the way the F.B.I. would be run. For instance, booking a new artist with a big name band might satisfy the record company's desire for a large head count, but might not result in either

record sales or audience acceptance of the artist. It would be far better, he found, to book the new artist in a smaller venue befitting that artist's style of music.

Tour support provided by record companies gives the company the power to pull the strings on a tour. The desire to sell records and the need for the artist to make money on the road are not always compatible. Thus, a new artist with a hit record may be provided with tour support and encouraged into a tour schedule and budget beyond his or her means. The artist may then find the money from the resulting album sales is eaten up by the losses incurred on the road.

When the Paragon Agency went out of business Ian moved to New York and started the F.B.I. Working mainly with English New Wave bands, Ian had a chance to put his tour theories into action. Looking for the proper venues was initially frustrating. What was needed were small venues which attracted an audience looking for the New Wave sound. Through local radio stations and record stores, Ian began to locate a string of New Wave dance clubs, ideal for low budget tours.

Typically, a band would travel in a van, with the equipment and a road crew of one or two. By staying in local motels and eating at local restaurants the per day cost was kept way down, allowing a four piece band to play a \$500 gig and make an adequate profit. The availability of English talent, in turn, fostered growth in the number of club venues.

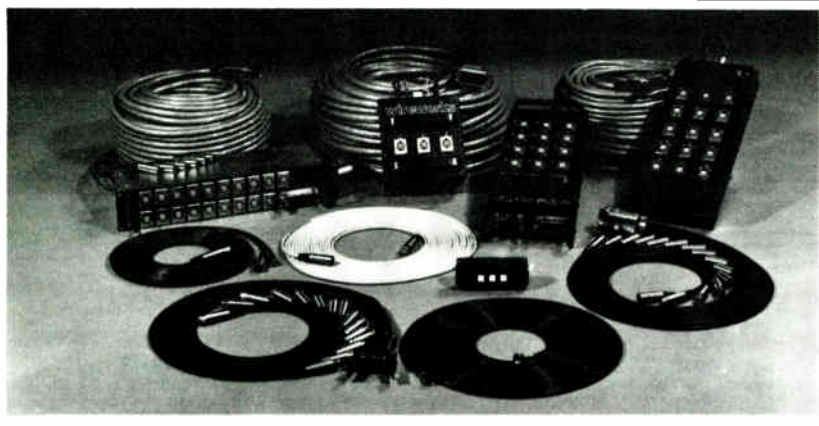
This process was not all a bed of roses, however. A constant problem was a lack of skilled club managers. Getting paid on time and the correct amount was something that required work and sometimes pressure by the F.B.I. office. Also, the promotion of a band's appearance often was left to the F.B.I. This job was handled by aggressively working with the local promoter, radio stations, and record stores.

As the New Wave scene grew, American bands began to develop and surface. The F.B.I. was by now in an ideal position to sign the best of these. At the same time, some of their early clients were signing label deals and selling lots of records. The F.B.I. was ready to book big venue tours when the acts were ready to do them. Still, these tours were planned to stay within the financial means of the bands. Equipment and crew were adequate, but not overdone. Outrageous demands on promoters for limousines, etc., were kept to a minimum.

As Ian worked on the F.B.I.'s success, Miles worked on establishing the I.R.S. label in England. The I.R.S. signed new artists with the idea that they would not be overnight successes. The plan was that the band and label would work hard together, over several years if necessary, to develop the act and its audience. This meant, of course, touring, often with the help of the F.B.I. It also meant that several albums or EPs might be cut before the 'hits' would happen. The production budgets were such that a relatively small number of sales would cover the cost and even return some profit. The label made it a point to pay attention to these new acts and the promotion of their records.

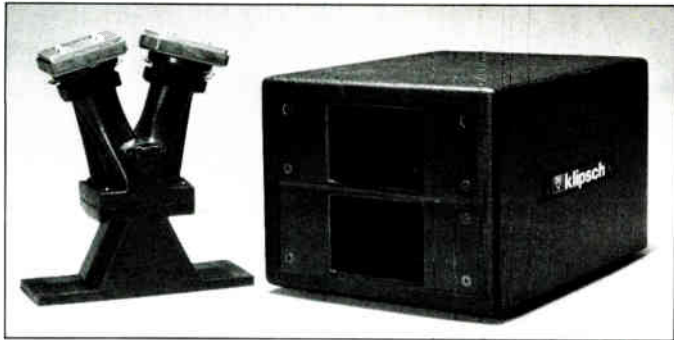
The I.R.S. opened the American market to its acts via a distribution deal with A & M Records and also made arrangements to sign over acts to larger record companies, like A & M, when they needed the attention and money of a larger corporation.

Needless to say, the Copelands' astute fiscal practices are paying off for them and their artists. Many parts of the industry might do well to take a hint from the I.R.S. and F.B.I. In these days of declining sales, realistic budgets and hard work can still lead to success. ■



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KLIPSCH MMTM HORNS

Klipsch & Associates has introduced a new high frequency, long throw horn, the Klipsch MMTM, offered as an alternative to the MTM high frequency horn which has been available for several years. The usable frequency range of the MMTM is 6.0kHz to 16.0kHz, ± 5 dB. On axis sensitivity is 108 dB SPL with one watt input and 124 dB SPL with 40 watts input as measured in far field and referenced to one meter.

The crossover employs a passive 6kHz high pass filter with 18 dB per octave slope. Four Klipsch high frequency drivers are used in each MMTM. There are two horns, each having two drivers. Suggested retail price is \$408.

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The MICMIX MC-Series is a modular audio signal processing system. The system currently includes a powered 5 1/4" rack mount card frame, the Dynafex MC-101 noise reduction unit, and a reverberation decay-control device, MC-201.

The MC-101 is a single channel unit providing up to 30 dB of noise reduction without encoding or decoding. The Master Room MC-201 allows the user to vary the decay time of virtually any reverb device, without altering its tonal characteristics. The card frame will accept up to five individual modules with storage space for one extra module, and is compatible with the dbx® 900 series.

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PRC-3 FROM NADY SYSTEMS

The latest model in Nady Systems' line of Easy Talk™ personal radio communicators is the PRC-3, with full duplex transmission (simultaneous hands-free two-way reception and transmission). The PRC-3 is an integrated receiver/transmitter with a headset and belt clip body pack. The unit features an adjustable microphone boom, stowable whip antenna, and an efficient headphone allowing use in high noise situations. No license is required for operation.

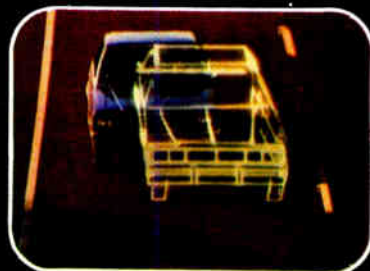
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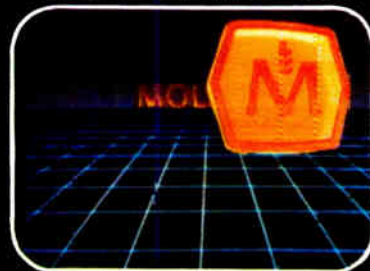
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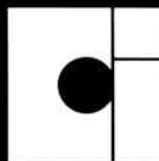
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Bill Gazecki

PHOTO: DEBORAH SCHOW

by James Riordan

Bill Gazecki has always been a little ahead of his time. At 25 he had already earned his first platinum album as associate producer of *"The Rose" Soundtrack*. Raised in San Francisco, Gazecki was experiencing one of the most influential culture movements of our time just as he was becoming a teenager. Being part of that San Francisco at its peak had a crucial effect on Gazecki's attitude toward music. At the age of fifteen he became involved in experimental encounter groups which pioneered a liberated approach to psychology by acting out traumatic moments in the lives of the members of the group. Gazecki wound up selecting the music to be played during these sessions. Thus, his after school job became matching the right music to the right trauma, so to speak. (Packing groceries somehow pales in comparison.)

"The work I was doing in psycho-drama proved to be influential

to my later work in music," says Gazecki. "It gave me an opportunity to see the kind of effect certain music had on people under almost laboratory conditions. I was told I had a great talent for selecting the music and, as I got more involved, I really became interested in the power of music."

After a brief stint in college, Gazecki took classes at two different recording schools, a rarity in themselves at that time. And though he had studied not only engineering, but music law, arranging, and principles of acoustics, in 1975 Gazecki found himself painting houses in the Haight-Ashbury. "I just couldn't deal with the job market. I had no idea of the competition and I was very naive. So I moved to L.A. and got hired at Producer's Workshop as an assistant. Later I worked with Richard Perry and Howard Steel at Studio 55 and then in maintenance with Wally Heider's before I came back to work at Producer's Workshop as an

engineer."

While working at Producer's Workshop Gazecki was hired to help design and install an in-house studio at Elektra-Asylum. When the studio was finished he was hired as the engineer. It was here that Gazecki linked up with Paul Rothchild, a major step in his career.

"My boss had done a couple of records with Paul and since he was now managing the studio I was assigned to work with Paul. We hit it off really well and he invited me to continue working with him on some other projects, including some film work he was doing over at the Fox lot. In the course of that I became involved in film sound, which was quite a departure from rock and roll."

Gazecki initially worked with Rothchild on *The Doors' Greatest Hits*. Rothchild was so pleased with Gazecki's work that he made him Associate Producer on *"The Rose" Soundtrack*. Later they co-produced Fast Fontaine for EMI, and worked together on some new wave bands, one of which (The Twisters) Gazecki went on to produce for Rhino Records.

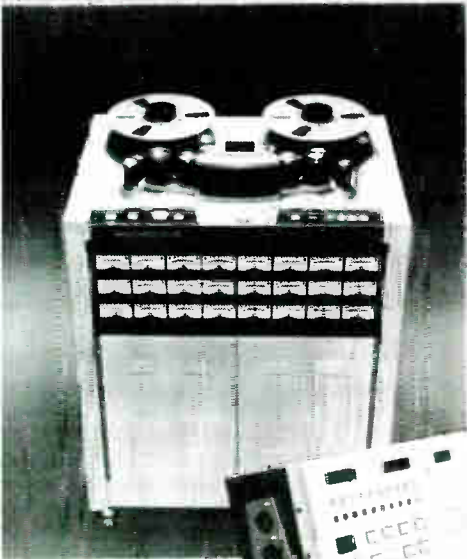
Working in film has given Gazecki a whole new perspective on sound. "It's really a team effort in film. In records, a lot of producers tend to think of themselves as artist savers and sometimes consider the record as primarily their effort. I don't think any film director would seriously consider himself responsible for the completion of a picture. He/she may feel very attached to that picture but realize it was created by a team."

Working on "The Rose" additionally gave Gazecki an appreciation of sound from a new perspective. "We in records tend to feel that the control room monitor playback is the height of audio reproduction quality. In film sound there is a whole different set of standards as to how good sound is achieved and what represents the epitome of quality. Learning to interpret audio quality in terms of theater standards as opposed to rock and roll standards by working in a dubbing theater was a real nice aspect of 'The Rose' for me. Theater equipment is more suited for orchestral and non-punchy sounds. You don't have the freedom and the leeway that you do acoustically to play with frequencies and pump up some of the low end. You can't do the same things with a kick drum sound in a theater that you can in a studio. Trying to apply the

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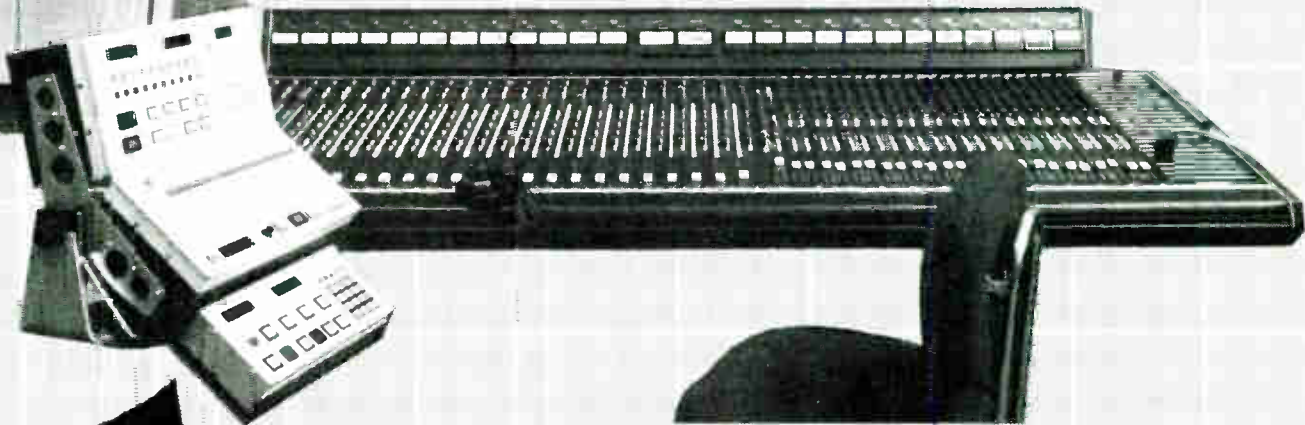
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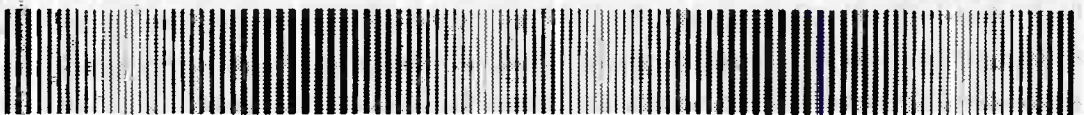


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multi-track technology of rock and roll to a film medium was a big part of 'The Rose.' It was kind of like trying to squeeze a square peg into a round hole. It had been recorded in a remote truck with recording studio ears and when it was brought into the theater we realized that we had a different animal on our hands. We had to learn to make that medium transfer into rock and roll."

Working in the film medium also opened Gazecki to a new way of mixing. "Mixing for film is much different than records because you also have sound effects and dialogue to deal with most of the time. Team mixing is really the only way to do it. When Paul and I mixed together it

was four hands on the board all the time just for the music. He would handle the lead vocals and the background vocals and I would do all the lead instruments and the rhythm track. We would be moving stuff all the time, working to each other. By the time a mix finally got to tape we were literally bouncing off of each other in our moves. Tucking, raising, and dipping things to suit each other's respective increments. That was a new aspect of mixing."

Gazecki's current work is with the "You Asked For It" television series which is edited at Canyon Recorders. He is in charge of audio sweetening for the program. "My responsibility is to first make sure that the audio mate-

rial that is required at the next step of production is delivered on time and complete. That means I have to gather a dub of the picture, a dub of the available sound, the dialogue, the music, the sound effects, and put them all together so that it sounds congruous from beginning to end. A show of this type is a lot more complex than the usual television production because most of the sound is done in post production. More and more people are starting to shoot on film, transfer to video, and do all of the sound and picture editing on video."

Working with Ed Lever and Canyon Recorders has also led Gazecki to be involved in what he calls one of the new horizons in film sound. "We are venturing into a brand new area of digitally recorded sound effects for feature film. Sony has put out a new portable digital encoder that can be used with a portable video recorder and that enables us to do remote digital recording. Most film sound effects libraries are at least ten years old and there's been tremendous improvements made in miniaturization, microphone technology, tape technology, and what can be used in the field during that time. We've taken it another step with digital. We recorded some airplanes at the Santa Monica Airport and a few automobile start-ups and played them at the Samuel Goldwyn Dubbing Theater in Hollywood and the place went nuts! A lot of people sitting in the middle of the theater swore up and down that the surround speakers were on, but we were only playing a normal two track stereo tape that we had recorded digitally through the front speakers."

Film sound people are becoming aware of what digital can do for them, according to Gazecki. "The biggest problem in film is dynamic range. It's having enough dynamic range to make things exciting by going from very loud to very soft. Digital offers that capability. The problem is applying a very new and expensive technology like digital to a very old and cumbersome business like the film production business. There are the Coppolas and other exceptions but in general the industry standards are using a lot of thirty and forty year old techniques. Digital can increase the dynamic range 30 or 40 dB. The recording quality possible is stunning. We're taking recording studio trained ears and putting them into an environment where traditionally the medium of listening for recording sound effects is a 1949 pair of General Electric mono headphones. We're applying the outer reaches of digital technology for recording film sound effects."



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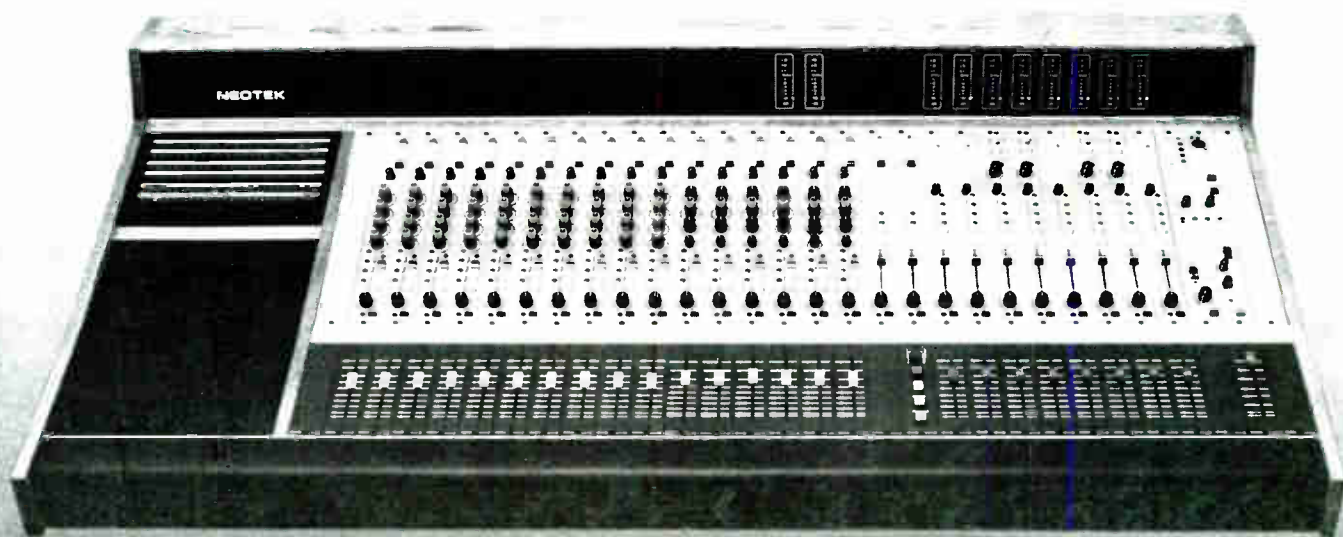
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World Radio History

An Interview with David Paich and Steve Porcaro of

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PHOTO: DAVID HOLZMAN

by David Goggin

This interview with David Paich and Steve Porcaro, keyboardists with Toto, took place shortly before the Grammy Awards Show in which the group earned a total of six awards, including Album of the Year, Record of the Year, Producer of the Year, and Best Engineered Album (Non-Classical). Combined Grammy nominations in which members of the group participated in some form or another totaled an unprecedented 28.

Toto's studio is housed in a building behind David Paich's spacious home in the San Fernando Valley. The studio, which they call "The Manor," is a mad scientist's keyboard and sound processing workshop designed to serve the needs of the innovative synthesist.

Tell us about your studio.

Steve: The main playing keyboard in the room is a Yamaha GS-1 digital syn-

thesizer. It's been around for two or three years now. We have one of the three programmers for it in the world, so we can program our own sounds. Basically, it uses the Chowning style of FM, which is all sine waves. John Chowning developed this technique of synthesis. The room also features a doubled micro-composer setup. There are two Roland MC-4s and two Roland JP-8 polyphonic synthesizers. In essence, we can orchestrate music to string arrangements, or whatever, and load them in. We also have two Linn LM-1 drum computers, an Emulator, and a vast array of modular stuff.

Over here is a Gamble mixing console. The room is set up so you can sit from this one keyboard position and do everything. There's a remote control for the tape machine here, and you can switch tracks right here. We have a monitor console for all 24 tracks, and it's mainly used as an input mixer so we can have everything coming up at

once. It's basically a keyboard booth that is set up for the performer. Engineers may not like seeing the board off to the side, but in this room we are usually the engineers.

David: It's a lot easier for us to adjust the sound in this way, with no middleman.

You're putting the tool more in the hands of the artist . . .

Steve: Exactly. Ed Simeim tweaks the multi-track and takes care of the technical responsibilities.

Ed: I cut my teeth as an engineer at Village Recorders in Santa Monica.

What will be the next equipment acquisition?

Steve: We're waiting on a few things—a new polyphonic keyboard that Robert Moog is making with four axes of touch response that will be able to play the Jupiters and the Emulator. We're still getting down what we have here—getting the banks hard-wired and that sort of thing.

Ed, what is your role in this work-

DOCTOR CLICK

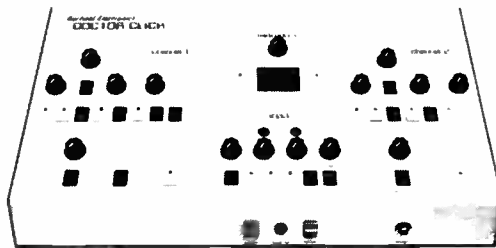
The Doctor Click Rhythm Controller makes it possible for the first time to synchronize the world of sequencer, drum machine, synthesizer composition with any one of the systems on the market or combinations of the systems on the market. Furthermore, the Doctor Click will cause sequencers, drum machines and synthesizers to play in time with a human drummer. It will also read click tracks and sync codes. The internal metronome provides both beats per minute and frames per beat calibrations.

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External Clock Input
Footswitch Controls

The brand to brand problems of timebase, voltage level and polarity are solved by the Doctor Click's diverse output capability.

The ability of the Doctor Click to connect to many units at once coupled with its footswitch control capability makes it ideal for multi-sequencer, drum machine, synthesizer live applications.

Since the Doctor Click metronome produces beats per minute and frames per beat calibrations it is always convenient to get just the tempo you need. It is even possible to get fractional tempos such as 118½ beats per minute.

The Doctor Click's two independent rhythm actuated envelopes allow VCF, VCA and VCO parameters of synthesizers to be modulated in 32 rhythm values ranging from four measure cycle to 64th note triplet with variable attack, decay, sustain and amount. This eliminates the problem of rhythmic drift when using a conventional LFO.

The ability of the Doctor Click to transform metronome click tracks into timebase clocks allows frames per beat music film work to be

done with virtually any sequencer, drum machine or synthesizer.

The ability of the Doctor Click to read live tracks allows sequencers, drum machines and synthesizers to play in sync with the varying tempos of a human drummer or a built click track.

The ability of the Doctor Click to accept external clocking or either of the types of FSK sync to tape codes allows sequencers, drum machines and synthesizers to be synced to any existing track.

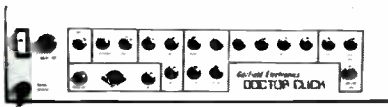
The pulse shaper circuit turns a pulse from an instrument into a trigger waveform allowing synthesizers to sync to a drum fill.

The headphone output allows click tracks in multiples of the tempo to be generated and is capable of driving a speaker.

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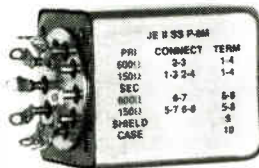
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shop?

Ed: I empty the ashtrays

David: He's a guide to the unknown.

Ed: I build the interfaces, and I'm the technician. When we're on the road, I pre-mix Steve's keyboards before they go out to the house.

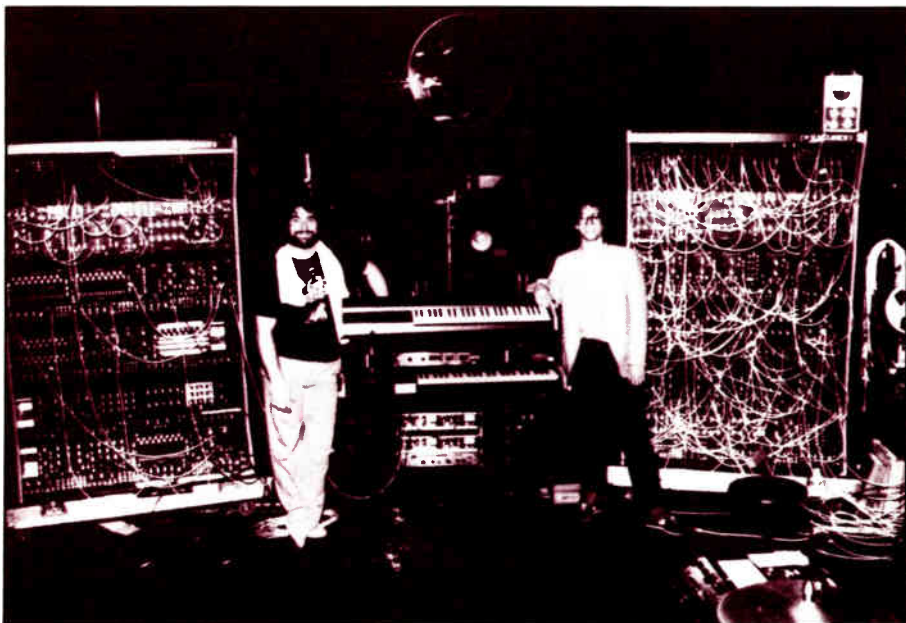
Steve: Ed helps this all make sense. He's helping us to develop this system — doing custom switching matrixes, patching.

Would you consider this a unique operation?

Steve: Very much so. It functions as any

Steve: We've had Don Henley in here, and we've done work on Donna Summers' album, Michael Jackson, Kenny Loggins, The Tubes. Now that we've established this room on our own with the Toto stuff, there are producers and friends of ours who are attracted. They can have slaves made of their master tapes and bring them in here, instead of having us cart everything to another studio to do a session.

(At this point we returned to David's living room to continue the conversation amidst two grand pi-



recording studio does, but it's set up with the keyboard in front of the speakers instead of having the mixing console in that position.

Ed: The console is a secondary item, in that the primary playing position is also the primary monitoring position.

Steve: This is the only studio I know of like this. Most of the time we have to set up our own mixing console and pile our keyboards in the control room. It's a drag because you never have optimum sound. If you're creating sounds, or performing, you are the one who wants to hear it correctly.

In addition to going direct with your synthesizers, do you record with microphones in here?

David: We have a headphone setup, and we do overdubs in the corner over there.

You haven't done any special acoustic treatment to this room, have you?

David: I haven't done anything, because the room was like this when I bought the house. It just happens to have rock, carpet, wood, and glass, which all work well acoustically.

Steve: It's a very flexible room.

Who else has recorded here?

anos, stacks of classical sheet music, an array of music awards, and an extensive record collection. . .)

Your fourth album turned out to be quite a phenomenon in the music business — did you expect it to do so well?

David: Kind of. We just tried to re-establish the audience we had for our first album, put together what we had done on the first three albums, and make a record for all of our audiences that we had been pursuing individually. We wanted to make a mainstream album this time. You go out on the road and you come in and make rock and roll albums and you try different things, but when you start reading reports like, "We haven't heard from Toto these days," and "The Toto audience may be dwindling," you want to show people that you can do anything you desire.

Steve: What I like about this album was that we produced it ourselves. We had one guy cut most of the basic tracks; we had a couple of people do overdubs. We did a lot of the work ourselves as far as keyboard overdubs went. And we had someone else mix the album. It really wasn't the norm, as far as how our records have been made. I loved it,

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classical music and understanding more about the nature of music.

How do you discover new sounds on the synthesizers?

David: It's largely trial and error. We take music very seriously and we take sounds very seriously. There is a difference between doing session work and doing your own creative thing. When you do session work you try to please the person who has hired you. With Toto, the sounds are representative of the types of people we are. It's another form of expression. Steve says that synthesizers are the first thing to date records. We are always looking for sounds that people haven't heard.

How long have you been doing rock videos?

David: Since the first album. We've had four different shootings and done ten videos.

Do you have any plans for upcoming videos?

David: It's hard to say until we get the tunes together. The tunes dictate the storyboard for the video shoot. I think we were one of the forerunners in getting away from the live-looking performance videos. We got into the story format very early when people were saying that we should just be up there playing.

How have the conceptual videos affected your audience?

Steve: I think that it has put them closer in touch with us. They are able to see some of our feelings about a song and it gives them something more concrete to grasp onto.

Are there any films that you've been approached to work on?

David: Quite a few, but we're still waiting for the right script. We're very anxious to jump into films, but it's a real hornet's nest if you're not prepared. I've had some experience and I want to be overprepared when we do our film work. I want it to be something that we can artistically sink our teeth into.

Both of you have very active musician fathers - they must be proud of you.

David: They are, and vice versa. We're proud of them for keeping up on all the technology, and staying open minded, and still practicing and pursuing all the different aspects of what music is made up to today.

How did your father affect you when you were young?

David: He was a positive influence on me; he gave me the basics. There are so many musicians around who didn't make it and they tell their kids to stay away from the music business. My father happened to be successful. He was talented and went to school for eight years, got a Master's degree, worked real hard and it's done him

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PHOTO: DAVID SCHWARTZ

(l. to r.) Jerry Wexler, Carlos Santana, and Barry Beckett

Santana's All Star Solo Sessions

"On paper, Carlos Santana and the Fabulous Thunderbirds doesn't make much sense," concedes Jerry Wexler. "But to me this is just a testimonial to good, natural ingredients and letting the music flow rather than trying to prefabricate it."

Wexler is referring to *Havana Moon*, Santana's new solo album, which he co-produced with his frequent collaborator (and cornerstone of the legendary Muscle Shoals Rhythm Section), Barry Beckett. Wexler, a four-star general among record producers, became involved in the project after getting a phone call from his old friend Bonnie Simmons, who works with Santana's management firm. "She asked if I would like to do a Carlos Santana album, and I said I'd like to do it with Barry," Wexler recalls. "So she said, 'Come on out and talk to Carlos.' This was January the third; I called Barry the next day, and we were in the studio by the seventh."

Most of *Havana Moon* was recorded at The Automatt in San Francisco; some finishing touches were added and the album was mixed at Sausalito's Record Plant. Jim Gaines, who developed a good working relationship with Santana during the making of *Shango* (by the Santana band) last year, was brought in to engineer.

Solo albums have different ground rules from band albums, most notably the artist's freedom to choose exactly the right musicians for each track. Santana used the Fabulous Thunderbirds as his foundation—"He saw them in a club once and fell in love with them," Gaines explains—and collected contributions from a strikingly broad range of guest artists including keyboardist/vocalist Booker T. Jones (singing the title track, a Chuck Berry composition), the Tower of Power Horns ("One of the best bands to come out of San Francisco," Gaines enthuses), Tex-Mex accordionist Flaco Jimenez, vocalist Greg Walker, and none other than

—Page 124

Engineer Jim Gaines



PHOTO: DAVID SCHWARTZ

Product Report: Yamaha's CE20 & CE25 Combo Ensembles

Because most analog homo sapiens lack a clear understanding of signal chain, the idea of programming —of thinking about a sound before producing it—is truly intimidating. It's not really all that deep, but it's apparent that many players are still approaching synthesizers from a keyboardist's point of view; and though they want a wide range of sounds, they want 'em ready to heat and serve — without any computer-age midwifing.

Such is the reasoning behind Yamaha's new CE20 Combo Ensemble (and the recently introduced CE25), a 49-key satellite keyboard that offers a wide range of expressive monophonic



and polyphonic voices in a pre-set, velocity-sensitive, combo organ-styled format. The implicit goal of the CE20 is to eliminate user responsibility for programming and to narrow the gap between piano techniques and synthesizer voicings. Yamaha achieves this through the use of a *linear frequency modulation* system, the product of Stanford's John Chowning (patent acquired by Yamaha), which contrasts with *additive* and *subtractive* approaches to synthesis as follows: in additive synthesis you combine simple sounds to create a complex waveform; in subtractive synthesis you begin with a sound rich in harmonics and complex waveforms and carve away at it until you've filtered out all the elements you don't want.

FM synthesis (frequency modulation) represents a pitch change; in *linear* FM you're not changing the pitch of the oscillator, but rather generating a complex timbre by having one waveform modulate another. The pitch doesn't change, but the timbre does, yielding a richer selection of harmonics. As a result, the CE20's pairs of oscillators—one a carrier (what you hear) and one a modulator—aren't set up to give

you freak-out sounds or oblique oscillations, but to deliver a variety of sophisticated lead and harmony sounds: 14 monophonic voices, and six 8-voice polyphonic presets.

What most distinguishes the Yamaha CE20 (besides a very affordable list price of \$1,395 for keyboard, volume pedal, sustain pedal and plastic dust cover) are its remarkably lifelike approximations of "natural" acoustic and electric instruments, and the intimacy of its velocity-sensitive (unweighted) keyboard - making it a truly expressive supplement to an electronic piano (and in a pinch, the CE20 and the all-polyphonic CE25 could hold their own as club date keyboards).

Of the monophonic presets, *oboe*, *clarinet*, *saxophone*, *violin* and *cello* are serviceable at best, useful for colorations in the tradition of the reed settings on Farfisa and Vox combos. But the *flute*, *contrabass 1* (bowed), *contrabass 2* (plucked), *electric bass 1* (deep) and *electric bass 2* (bright) are very good, particularly for ensemble passages, and the attack-decay characteristics of contrabass 1 allow one to *think* like a string player, as it were; finally, there's a light, breathy *piccolo* (you can practically hear the spittle) and the brash, legato *trumpet 1*, *trumpet 2* and *trombone* (which duplicate the breathlike swells, bends and percussive attack of these instruments well enough to fool all of the people some of the time). Hitting the *symphonic* switch adds a choral thickening to the voices, and defeating the preset switch allows you to modify the *vibrato* (after vibrato, depth, speed, depth, delay) as well as *tone initial*, *tone after*, *brilliance*, *pitch* and *total volume* (really just laymen translations of synthesizer terminology like ADSR, LFO, High Pass, Envelope filters).

On the CE20 you have a *slide control wheel* instead of a pitch bend or joystick, to vary the glide time from one note to another - a useful feature which can allow gliss and vowel sounds with one hand, leaving another free to bang out chords. Still, the control could be smoother, and cost factors notwithstanding, players will miss the traditional pitch bend (on the all-poly CE25, you have a vibrato-depth control wheel for LFO effects) as well as poly-glide (too expensive to engineer into this format). One other feature Yamaha ought to consider is a switch to vary the priority trigger note so that the low note isn't always the primary note (in mid-solo you might want to hammer-off notes *from the top down* instead of only from the bottom up), the held tone. But obviously the CE20 was designed with the

—Page 123

Looking In (A Little Late) On Bobby Whitlock

A decade has passed since Derek and the Dominoes toppled and thereby dropped keyboardist Bobby Whitlock into relative obscurity, but rock's current luminaries haven't forgotten him. When Whitlock played a rare impromptu gig at a Nashville club called The Cannery, Tom Petty, Nick Lowe, and Paul Carrack—in town for a concert earlier that week—showed up for the occasion. A short time after they arrived, Joe Cocker strolled through the door. Only one problem: they all came in after Whitlock had finished his one short set. Oh well, at least it gave Petty, a Cocker admirer, his first chance to meet the gravel-voiced veteran. Local resident Leon Russell, rumored to be working in the studio with Cocker, stayed home.

Whitlock, a Tennessee native, moved to Nashville two years ago to

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SCHEDULE CHANGE

Due to the scheduled dates of the New York A.E.S. Show (Oct. 9-12), the editorial schedule of **Mix** will be changed as follows:

October: AES/New Products Directory
Special Report - Test Equipment
Ad Closing: August 8th

November: North Central Studio
Listings. Special Report - Limiters
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concentrate on his songwriting. He started out in the Memphis R&B scene in the mid-1960s, hooked up with Delaney and Bonnie, became a Friend, then a Domino, and for the last few years he's been struggling to break through as a solo. Judging from the audience response to his Cannery set (mostly R&B-flavored rock with a tinge of country), he may have a shot at it. Backing Whitlock, who alternated between guitar and organ, were old buddy Bobby Woods on piano, plus studio

stalwarts Chris Leuzinger on guitar, Karl Himmel on drums, and bassist Mike Leech.

Carlene Carter was also part of the Petty-Lowe troupe that evening. She and hubby Nick may have extended their Nashville stay in order to visit June Carter Cash, hospitalized for complications following abdominal surgery, and Johnny Cash, who occupied an adjacent room at Baptist Hospital during his short bout with pneumonia.

—Sam Borgerson

Waxing Philosophical with Maynard Ferguson

"I just think it's an honor to be nominated," Maynard Ferguson said about being considered for a Grammy this year. "Of course I would be tremendously excited if we were to win, but I would not go out and get drunk if we didn't. I would not have a fit of depression; I would still feel very happy

and joyful about it."

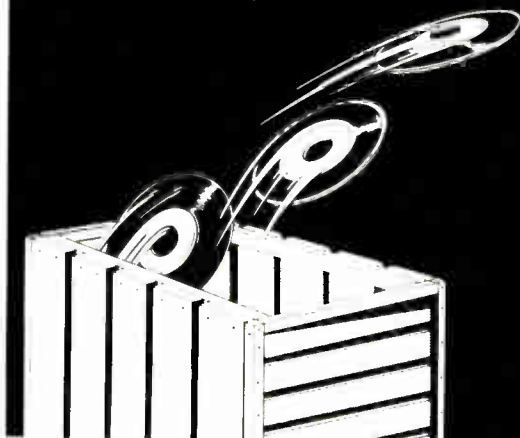
As it turns out, the master of blistering high-note trumpet solos did not win the Grammy—but there is little doubt that Ferguson still relishes the nomination. In his second time up for a Grammy, Ferguson was in the running for Best Rock Instrumental for the song "Don't Stop" from his 1982 CBS album, *Hollywood*. With a jazz history that goes back to the Stan Kenton band of 1950-52 and his own Birdland Dream Band of 1956 through his 13-piece big bands from the sixties to the present, Ferguson was especially pleased to be named in the rock category (in which the winner was the British synthe-pop



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band, A Flock of Seagulls, for "D.N.A.").

"I'm always talking about how multi-directional the band is," he said in a phone conversation from Pittsburgh, PA, the week before the Grammy Awards, "or to use the media word, 'fusion,' only not just two things fusing. We won the award from the college group, the NACA (National Association of Campus Activities), as this year's number one Jazz Entertainment Group, which pleases us, because within the same week we were nominated for rock instrumental. So I'm quite delighted by it."

Ferguson's last Grammy nomination came in 1978 in the Pop Instrumental category for his explosive version of Bill Conti's theme from *Rocky*, "Gonna Fly Now," and the latest recognition would seem to indicate that Ferguson is faring much better in airplay and in the public eye than most instrumentalists. "If I were to complain," he said, "I'd have so many other instrumentalists looking at me like, 'What are you, crazy?' We get an awful lot more radio play than most predominantly instrumental groups do, so I guess I can't complain about that too much. After all, the recording industry is in such bad shape right now overall, with the economy and all that."

Stagnation in the industry hasn't affected Maynard Ferguson, however. "It's a fascinating time in music, actually, because when there's chaos, new things come out; and just as new things come out of me, there'll be new groups coming up, too. It's a terrible thing to say, but the last time we had a depression some fantastic new music came on the American scene."

Ferguson reads his Grammy nomination as an optimistic sign for his future. "I'm like Steve Garvey," he commented. "Just as we got nominated for a Grammy, my contract ended with CBS. So we've all been kind of laughing about that and comparing it to the baseball world." But if the honor enhances his negotiation position, Ferguson is confident that it won't impose limits on his own musical direction. "If anything, I would say success enhances the opportunities to go ahead and do all the things you really want to do. Luckily, I'm a believer in change and I seem to be the type of person who's artistically more alive when I'm both staying contemporary and doing things from the past.

"Like in concerts," he continued, "you'll hear me play this new bebop medley that we have called "Bebop Buffet," which is a tribute to Charlie Parker and Dizzy and Miles and Monk, but at the same time you'll hear from the



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Primal Scream thing to *Rocky* to a lot of the newer things that are in the book now."

His penchant for keeping up with current pop and rock trends has confounded jazz critics who have admired his earliest work but can't hear beyond the flamboyance and bravura of his latest projects. "I enjoy the confusion," Ferguson said with a boisterous laugh. "And yet I don't impose my type of thinking on people that I've loved dearly all my life. Like Count Basie's band is identifiable usually within the first five notes, and that doesn't bore me. As a matter of fact, it thrills me. I get a thrill every time I hear Basie's band and I know what I'm going to hear pretty much. But it doesn't apply to me—it doesn't work for me, is I guess what I'm saying."

What Ferguson does intend to keep working for him is his alertness to technical innovation. Having been a contract musician for Paramount Studios in the past, he said, "I still have a great feeling for film music and that's why I'm very excited as to where the industry is going now in regards to video—how we're going to adjust to visual as opposed to non-visual record-

ing, people spending more on their three-minute commercial than they spend on their album, all that sort of thing."

Moreover, Ferguson is dabbling with electronic attachments for his horns. "I fool around with them from time to time," he explained, "but oddly, the technology for putting it onto the horn has not been as successful as on other instruments. That's something I'm working on with Holton right now because, of course, I design horns. The next step for me is to get into the electronic attachments for the horns that I design. Certainly I have no prejudice against any kind of computerized on-stage recording or anything else like that. People tend to get romantic and say, 'It's replacing real musicians,' but it isn't, because a bad keyboard player will sound lousy on a synthesizer."

As far as future awards, nominations and honors go, Ferguson claims to take a rather dispassionate view. "When we talk about personal success," he explained, "I almost become Buddhist in content. That is, I don't have Maynard Ferguson rallies hoping to win at the cost of everyone else." And, he said later, he tries to communicate

that philosophy to the high school and college music students he meets in the clinics which he conducts almost once a week when he's on the road. "I tell them that music is a thing of joy," he said, "and don't get the idea that you only really get off on yourself as soon as you have a Number One record and you're on the *Billboard* Top Ten. I advise them to know about that as part of the music business and to separate the music business from the music in your own mind while you're playing. If you're going to be a professional, you've got a big thing that most people in life don't have. You've got a great spiritual mystic thing and you want to play music and you're going to bring joy to people."

Almost as if he were climbing to one of his patented double-high C crescendos on trumpet, Ferguson grew breathless as he raced to his conclusion. While his band is a prime model for school orchestras around the country, Ferguson pushes students to learn more than the hot licks they hear from him. "I'm always telling them to go and buy some Dizzy Gillespie and Miles Davis," he said, "as soon as I hear a young guy that sounds almost exactly, quote, 'in my bag.' And whereas I can enjoy the



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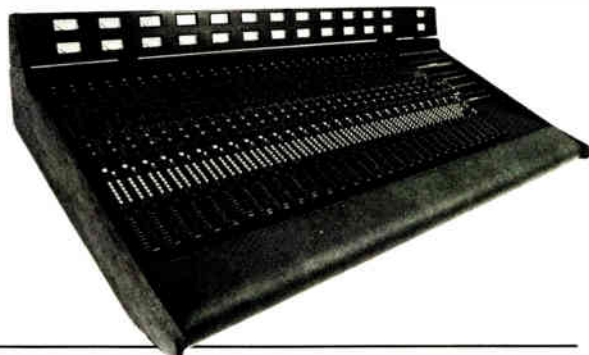
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egoism of the adulation and all that, at the same time I think it would be nice if he would be influenced by lots of other people so that eventually he'll sound like himself."

—Derk Richardson

Zildjian's 360th Birthday Draws All-Star Celebrants



(L to r) Phil Ehart, Larrie Londin, Rab Zildjian (vice-president/sales, North America), Ralph MacDonald, Steve Gadd, Carmine Appice, Tony Williams, Lennie DiMuzio (Zildjian merchandising manager) and Jay Wanamaker.

It isn't often that a company has the opportunity to celebrate its 360th year in operation. And what a celebration! In an effort to say thank you for the support of their product, Zildjian hosted, free of charge, a series of clinics by some of the most respected drummers/percussionists today. There seemed to be not an empty chair in USC's Bovard Auditorium's 1,600 seat theater for "Zildjian Day," January 16.

The all-day schedule covered all areas of drumming with Phil Ehart (Kansas) demonstrating rock drumming, Larrie Londin instructing on Nashville studio techniques, Tony Williams discussing contemporary jazz drumming and Alex Acuna displaying Latin percussion.

The USC Trojan Marching Percussion Ensemble opened the show, later joined by Carmine Appice, who integrated rock drumming with various rhythmic techniques à la the Marching Band.

Larrie Londin's clinic turned out to be much more than a lesson in studio playing. With dynamic solos combining rock, blues, jazz and country elements, he managed to dispel any preconceived images of what a Nashville studio player is and is not. Londin brought the audience to a standing ovation and remained the topic of conversation throughout the day.

Drummer/percussionist Alex Acuna also surpassed the expectations of the crowd. Alternating between his kit, congas, bongos and timbales, he adeptly demonstrated various rhythms, adding layers of polyrhythms.

The event most anxiously awaited was the arrival of Steve Gadd, whose presentation was the last of the day. Gadd was joined by percussionist Ralph MacDonald and bassist Marcus Miller in order to give the audience an awareness of the interrelationship between players. While the number of sessions Gadd has done made it impossible for him to recall certain specifics to

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which some questions were directed, he did manage to demonstrate his utilization of four sticks in Paul Simon's "Late in the Evening" and accommodated someone's request with a taste of Simon's "Fifty Ways to Leave Your Lover." Concluding the day, Gadd said, "This was a great opportunity. I've been playing for so many years and I've gotten so much out of it. I just wanted to give something back."

—Robyn Flans

Tiny, Perfectly-Formed Guitars

In this microchip age it's expected that everything will get smaller, from calculators to synthesizers. What's so surprising is when something like an electric guitar, which seemed so set in its dimensions, suddenly appears in miniature. At the NAMM show last January, tiny guitars were everywhere.

Famed studio bassist Carole Kaye demonstrates the D'Mini bass, which she wears with a special harness because of back trouble resulting from many years of carrying a full-sized bass over her shoulder. The D'Mini, Kaye says, enabled her to go back to work.

Years ago, the Gibson Company made small versions of some of their acoustic models for use as salesmen's samples. The idea was that you couldn't carry very many full-sized instruments in the trunk of a car (even those big ol' 1950s models), so they shrunk them to ¾ or ½ size but made them just like the normal ones.

These days the miniaturization trend emphasizes electric guitars, and a fine example of the genre is the D'Mini Strate, selling at an extremely reasonable \$250. It's a Stratocaster-style axe which plays and sounds so much like the real thing that you might be hard-pressed to go back to the bigger and heavier model. The Strate is great for around-the-house practice, around-the-world travel, or even onstage use. Frank Zappa even took one to Europe and used it to record with a symphony orchestra. Check it out.

—Bob Goldstein

Notable News

"Have you ever needed Dolbies in Des Moines? A Lexicon in Louisville?" reads the press release from *Livingstone Audio*. This outfit rents audio equipment—from single pieces to complete systems—for film and audio productions anywhere in the country. A two-page rate card includes tube and solid-state microphones, DDLs

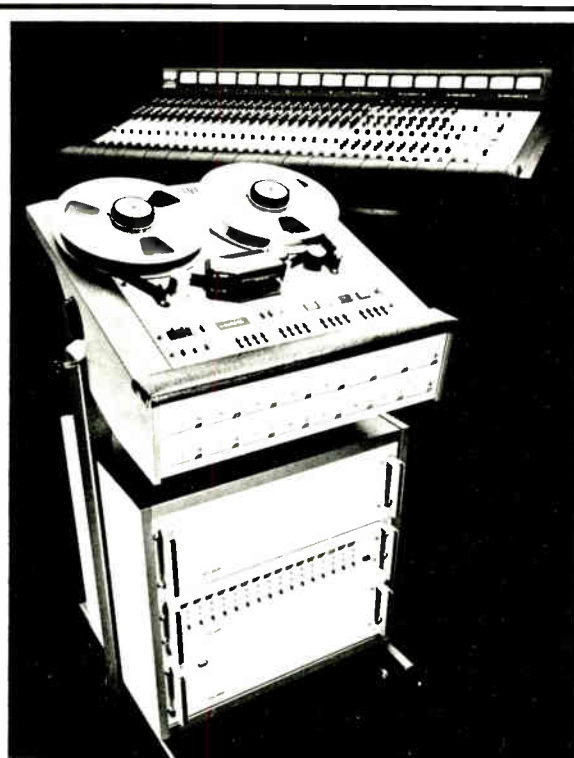


ENTERTAINMENT WEEKLY

and digital reverbs, limiters, equalizers, de-essers, gates, noise reduction, pianos and synthesizers, tape recorders (2 to 24 track), monitor systems, etc. "Call collect," it says here. If they don't have it, they'll help you find it. Livingstone Audio is in Los Angeles at (213) 653-0270. . . Keep watchin' them B sides: **Marshall Crenshaw's** latest single, "Cynical Girl," has two songs on its flip side. The first is Buddy Holly's "Rave On," recorded during an interview on WPLR (New Haven), with Crenshaw on Telecaster accompanied only by handclaps. The second tune is "Somebody Like You," which Crenshaw recorded at home on his TEAC 3340 a few years back. Like "You're My Favorite Waste of Time," which backed his first single, "Someday, Someway," "Somebody Like You" features Marshall Crenshaw on "everything audible." "They told me to do something to make my singles collectible," he says. He's currently in the studio with **Steve Lillywhite** (of U2 and Ultravox fame) producing, with the as-yet untitled second album due for May release. **Fender Musical Instruments** has created a Professional Sound Products Division to produce a full line of audio equipment including microphones, mixers, power amps and speakers. Products will be announced in the spring and will hit the market by this summer.

—from Page 116, *Yamaha* right hand in mind.

The CE20 has six 8-voice polyphonic voices, the CE25 (at \$1,495) has twenty — plus a symphonic depth control to vary the amount of chorus effects. The CE20's rich *brass*, snappy *horns*, percussive (read: Hammond) *organ*, wiry *harpsicord* and burnished *strings* are excellent, and through judicious use of attack speed, vibrato and volume pedal, luminous orchestral swells can be achieved. The CE25's polyvoices include five brass voices (from trumpet to French horn timbres), three string sounds, two organ (including a darker, funkier Hammond than the CE20), two poly-lead (synth sounds of an Oberheim nature), two poly-bass and six percussive (for grand, upright and electronic piano voices). The design of the CE20 and CE25 favors a block chord attack, as it is difficult, even with velocity sensitivity, to bring out inner voicings on chords, and particularly to bring up bass dynamics. But it's worth noting that the CE20 and CE25 weren't designed as main axes, but as all-purpose supplements to an electronic piano. Taken as such, the CE20 and CE25 are cost-effective key-



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MUSIC NOTES

—from Page 123

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—Chip Stern

—from Page 116, *Santana*

Willie Nelson. "There's also a tune that Carlos' father sings, called "Verida Tropical," adds Gaines. "It was recorded a while ago, and Carlos had promised his father for years that he'd put him on a record—so this is the one."

The Thunderbirds and the percussionists from the Santana band worked on the basics for about five days before the T-Birds had to leave for some East coast gigs; the balance of the rhythm tracks were played by drummer Graham Lear of Santana, Muscle Shoals bassist David Hood, Santana on guitar, and both Booker T. Jones and Berry Beckett playing keyboards. "We had to make sure that the excitement and the sounds were right," offers Beckett. "The rest pretty well evolved from there."

We went for the live sound," adds Gaines. "We even cut some vocals live in the middle of the band, with no baffles or anything! We tried some different approaches in mixing, but we still ended up going back to the live sound rather than any slick studio feel."

And how does Willie Nelson fit into all this? "A guy named Greg Brown sent this demo tape to my office," says Beckett. "My assistant said I'd better listen to it, that it sounded like a Texas Swing-style Dire Straits (a band Beckett and Wexler co-produced a couple of years back)."

"Carlos was a little reluctant to cut the song," Wexler continues, "because he wasn't sure about the vocalist. So we sort of steamrolled him—'Come on, Carlos, let's cut it! We'll worry about who sings it later.'" Kim Wilson of The Thunderbirds performed a scratch vocal of the song, called "They All Went to Mexico."

While trying to decide what to do with the track, Santana heard Willie Nelson on his car radio and his mind was made up. "Get Willie Nelson!" he told his producers. Wexler, whose production of *Shotgun Willie* helped rekindle Nelson's then-flagging fortunes, got the redheaded superstar on the phone within a couple of hours. "We went down to Willie's compound in Spicewood, Texas, which he calls 'Willie World,'" says Wexler. "It's got a nine-hole golf course, condos and a great, rambling studio. Willie went over the song a couple of times, we took three passes at recording it, and then we went to dinner. From then on it was Margarita time."

—David Schwartz ■



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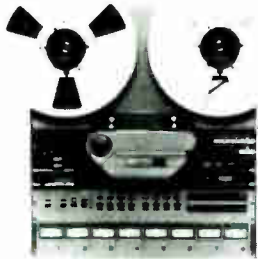
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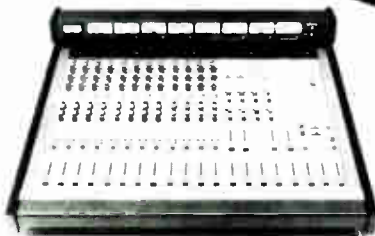
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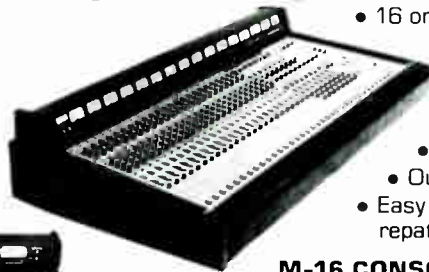
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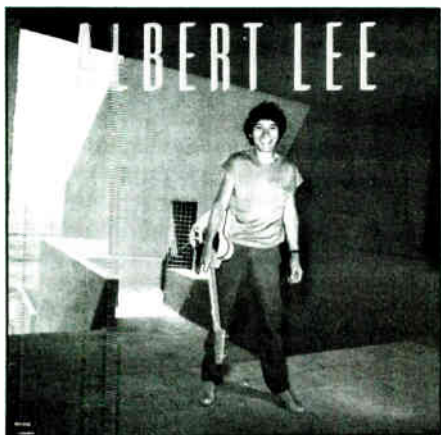
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ERIC CLAPTON
Money and Cigarettes
Warner Brothers 23773-1

Produced by Tom Dowd; engineered by Michael Carnevale with Dennis Halliburton; recorded at Compass Point Studios, Nassau.



ALBERT LEE
Albert Lee
Polydor 1-6358

Produced by Rodney Crowell; engineered by Bradley Hartman with Donivan Cowart, Gary Boatner and Ernie Sheesley; recorded at Enactron Studios and Davlen Studios in North Hollywood, and United/Western in Hollywood.

Here it is, guitar fans, the big game you've been waiting for: the Fender Bowl. This year's clash pits Eric Clapton and the Old Masters of the Bluesoul Conference against Albert Lee and the Upstarts of the Rockabilly Conference. Place your bets.

The Old Masters take the field, and the roster reads like a list of nominees to the Hall of Fame. To hold down the trenches, Clapton has recruited ex-M.G.'s bassist Donald "Duck" Dunn and paired him with Muscle Shoals' inimitable drummer, Roger Hawkins. Sharing the backfield with old Slowhand are Ry Cooder and (the analogy suffers here) Albert Lee. Directing action from the sidelines is none other than the wizard of knobs himself, Tom Dowd. An awesome assemblage of talent.

In first half action they live up to their reputations. Opening with a bread-and-butter

play—Sleepy John Estes' "Everybody Oughta Make a Change"—they churn downfield behind impeccable electric licks, seductive slide by Mr. Cooder, and a bottom end that practically patented sixties soul. Although Lee pops in and out on guitar, his greatest contributions come from behind the piano and Hammond B3; his subtle sense of syncopation and slur adds depth and embellishment throughout the LP, this first cut being no exception. An easy seven points.

The momentum falters briefly on the next two cuts. Clapton's tendency toward vapid lyrics undercuts "The Shape You're In," and "Ain't Going Down" is too thick and too tense for the laid-back bunch. This ain't the Cream team, Eric.

Bouncing back, they wind down the half with two solid scoring drives: "I've Got a Rock 'n' Roll Heart" shimmers with well-crafted lyrics (not Eric's) surrounded by wisps of smoky Fender; and, riding on Dunn's loping bass (gorgeously recorded throughout), "Man Overboard" hearkens back to the easy-rolling feel of vintage Taj Mahal.

The master first half total: 3 TDs and 2 FGs for 27 points.

Clapton's team has the revered names, but Albert Lee's hand gives up precious little on talent. With Larne Londin on drums (for versatility and sheer strength, one of the best on the planet), Emory Gordy, Jr. on bass (an emigre from Emmylou's Hot Band), and occasional keyboards by Bill Payne (he of Little Feat), Albert's aggregation commands considerable respect. Prowling the sidelines is producer Rodney Crowell, the renaissance man of current country-rock.

A Hank DeVito tune, "Sweet Little Lisa," kicks off the action for Albert's boys. With pumping drums and slashing guitars, the Upstarts execute this tune with an inspired precision that makes Dave Edmunds's rendition (on *Repeat When Necessary*) seem amateurish in comparison. They quickly strike again with John Hiatt's "Pink Bedroom," a satiric gem with lyrics well worth the required careful listening. Tearing a page from the Fleetwood Mac songbook, Albert next tries slow cruising on "Boulevard"—and stumbles. The ersatz Buddy Holly raver which follows is held back by lame, seemingly impromptu lyrics. Calling in saxophone reinforcements, Lee stomps out with a straight rockabilly shuffle just strong enough to hit payday one more time. Three TDs and two FGs for the Upstarts.

Whew. Tie game.

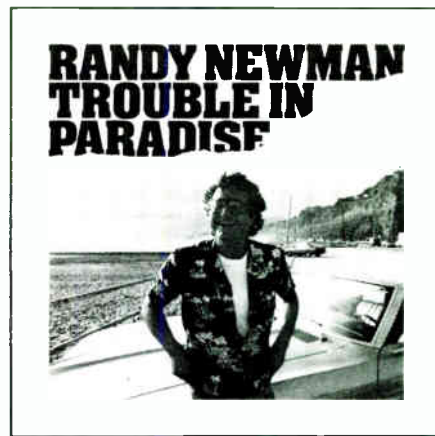
Clapton comes out for the second half sauntering blithely behind a slow, saccharine ballad. A sensitive guitar solo can't budge it past the midfield stripe. No points. Shocking.

Unconcerned, the Old Masters kick into overdrive and power their way home. Shifting from solid blues ("Crosscut Saw" does rightful homage to the Albert King original) to a catchy mid-tempo ballad ("Man in Love") to a Derek & the Dominoes style reckless rocker ("Slow Down Linda") to a Johnny Otis hand-jiver ("Crazy Country Hop" is a great party starter), Clapton and crew tackle every nuance as if they were convinced that nobody anywhere could possibly do it any better. With the exception of vocals—never Eric's forte—this could well be the case.

Albert plunges undaunted into his second half with another Buddy Holly anthem ("Real Wild Child"), and this time he sparkles. The reggae-tinged "Radio Girl," a John Hiatt encore, is a perfect foil for Lee's offhand, irreverent vocal style. After this, though, the LP crumples. Albert's only self-penned tune is stopped for no gain. Shaken, he pulls a Don Everly ballad out of the bag, but since he can't muster the required silken harmonies he's thrown for a loss. Stunned, he goes to the sidelines, huddles with Crowell, and comes out with Rodney's own "One Way Rider." But he never gets up to speed; his version suffers in comparison to Ricky Skaggs' recent full-till rendition. A last-minute FG for the underdogs.

The final score: Clapton and the Masters 55, Lee and friends 44. *Money and Cigarettes* wins on consistency, but it's a consistency that borders on predictability. At its high points, *Albert Lee* exhibits moments of endearing quirkiness that are more engaging—and more memorable—than Clapton's best work. But Albert is still busy sorting out his influences, and consequently his album emerges as a collection of gems in search of a setting. Eric, in contrast, has a firm grip on his creative persona. Despite his weaknesses as a singer and songwriter, E.C. knows who he is and what he can do. As does Tom Dowd, as do all the pickers behind him. Such awareness is a crucial ingredient in making—as we have here—a coherent, fully satisfying album.

—Sam Borgerson



TROUBLE IN PARADISE
Randy Newman
Warner Bros. 23755-1

Produced by Russ Titelman and Lenny Waronker; engineered and mixed by Mark Linett ("Same Girl" and "Real Emotional Girl" recorded by Lee Herschberg); recorded using the 3M digital mastering process. Recorded, mixed, and originally mastered at Warner Brothers Recording Studios, N. Hollywood; strings recorded at the Burbank Studios. Mastering engineer: Bobby Hata.

Pop music has never known exactly what to do with Randy Newman, whose songwriting has established him as a premier musical gadfly. Deeming nothing sacred—least of all the pop tradition of recycling love songs—Newman

has deftly made light of social ills and special interest groups, aiming a caustic eye on whatever patch of American landscape looks ripe. Of course, Newman's own trouble in paradise has been his sullied rep in the industry as an uncontrollable wisecracker; the tongue-in-cheek hit "Short People" of 1977 and the disappointing rock and roll lampoon of '79's *Born Again* may have caused listeners to overlook Newman's fertile musicianship. Along with a disarming and dangerous wit, Newman wields one of pop's most resourceful musical minds, a fact which is drawn into renewed focus by his latest LP, *Trouble in Paradise*.

Trouble in Paradise is really the theme of the bulk of Newman's work; he delights in unveiling the warts and the vanity in legendary Edens. While he has called off the satirical dogs a tad since *Born Again*, Newman here gives sly coyness to such Elysian topics as L.A., Miami and Capetown, all the while celebrating a diverse stock of American musical influences—ragtime to Gershwin to R&B, gospel to hard pop à la Toto (members of whom comprise Newman's rhythm section here).

"The Blues," the first single, has something of the discreet, curve-ball quality of "Short People." Contrasting with Newman's uncharacteristically springy chorus, Paul Simon appears in a gamely self-parodying cameo, singing a hard-luck tale over maudlin chord changes. With Simon's richly-layered background vocals and Steve Lukather's sing-songing guitar bridge, the tune satirizes blues music rue with the slightest touch.

Lukather's bullying guitar provides some clues of meaning in "I Love L.A.," as well. After Newman's amber-lit intro, turning Gershwin-esque chords under anti-east coast lyrics, a low-end guitar riff and pounding piano chords announce a bright, Angelino groove. Yet Newman is interested in the underbelly of L.A. as well as its seductive surface—the "big nasty redhead" in a convertible is underscored by a bum down on his knees. Thus it makes dramatic sense when, after Newman rattles off major boulevards answered by drill team shouts of "We love it," Lukather is given a minor-mode solo spot—a sort of harmonic commentary on the action.

Attempts at weaving stylistic veins and effects into lyrical angles in popular music often go the way of theatrical contrivance, yet Newman somehow avoids narrative excess. He usually stops short of posting huge musical cue cards; suggestion is his strong suit. "Miami," for instance, is an infectious enough entry in his series of spurious odes to cities; unexpectedly, the telling hook is Michael Boddicker's gulping, sirenic synthesizer patch, which sidles up to the song like a woozy, white-suited slickster up to the bar in the Tiki room. Although "I'm Different" is the least engaging cut on the album, it, too, exemplifies Newmaniack craftiness. Its lilting groove and King Sisters-like backups ("he's not going to play your gosh-darn game") give the hoary rock theme of defiant individualism a Mr. Rogers twist.

Newman wisely lets the seedy fun-hunting of "There's a Party At My House" speak for

itself; the musical centerpieces are gutsy horn charts over a barrelhouse shuffle. But it is on "My Life is Good" that Newman breaks out the hats and hooters and comes away with a piece of epic vaudeville. Like Joe Walsh's self-effacing anthem, "Life's Been Good," Newman's tune seeks to debunk nouveau riche megalomania: after being told that his unruly child bucks the system and must change his ways, Newman sets the teacher straight about the superiority of his star-studded life. As he describes an encounter with Bruce Springsteen in the Bel Air hotel, the background music shifts from a gurgling shuffle rhythm to an almost Nino Rotaesque chord pattern. When Newman explains that Springsteen invited him to take the sceptre of being "the Boss" for awhile, the rhythm drops out, turning a celestial texture replete with angelic voices. Next, enter a working-class-heroic sax solo by Ernie Watts à la Clarence Clemons.

There's no question that Newman fashions his music in a painterly way, taking heed of complementary contrasts in context, orchestration and rhythm. And, while a master with bold, ironist strokes—those of a sinister cartoonist—Newman can still pen heart-wrenching ballads. "Same Girl" deals with an aging prostitute for whom the singer still has an abiding love, a sad-eyed affection etched in tightly-voiced piano chords and spare string parts. "A Real Emotional Girl," on the other hand, reeks of fading innocence in its portrayal of an ingenue who leaves the comforts of home to discover a chilly outside world. Resignation to social imperfection is the pressing issue in "Christmas In Capetown." Opened and closed by a synthesized organ cadenza that feels like a benediction, the tune plays on opposites—apartheid and yuletide, black and white, a visiting English girl's indignation and the singer's feisty resolve to ignore the stirring racial unrest and enjoy the nightlife in "Jungletown."

As with most of Newman's albums, *Trouble In Paradise* ends on a subdued note—the wistful eulogy for Vietnam casualties, "Song for the Dead." Played mostly on solo piano (though enhanced in imagery by Jeff Porcaro's military drum rolls and Lukather's ominous swells on electric guitar) Newman's tribute is a lucid and uncritical laurel to those who died for their country—regardless of their country's skepticism. It made me cry.

Ultimately, Newman is not nearly the merry prankster that public opinion may label him; he is, rather, a hip shooter fueled by both cynicism and compassion and the search for musical grace. The kind of guy who goes into an old pub haunt in "Mikey's" only to be irked by the percolating din of a new wave format. "Whatever happened to the fucking Duke of Earl?" he shouts. It could be the big theme here; for all Newman's trouble in paradise, he still finds salvation in the wealth of American musical heritage.

When most of his Pop contemporaries are putting out radiant but formless stuff, Newman is lunging at a higher plane: the grand, dying art of listening and learning.

—Josef Woodard

MARK EGAN/DANNY GOTTLIEB *Elements*

Philo PH 9011

Produced by Mark Egan, Danny Gottlieb, and Rich Brownstein; engineered by Rich Brownstein; recorded on an MCI Series 500 console, MCI 24 track tape recorder; recorded at a studio in New York.

Elements is the brainchild of bassist Mark Egan and drummer Danny Gottlieb, until recently mainstays in the Pat Metheny Group. In their first record as a duo, Egan and Gottlieb present a range of material that moves from sparse, light, ECM-ish interplay to reggae and funk offshoots. Keyboardist Cliff Carter and saxman Bill Evans also make sizeable contributions to *Elements*.

"Color Wheels" shows off Gottlieb's love of cymbals—he never plays a drum during the song (except the bass drum). Gottlieb has overdubbed cymbals on top of cymbals on the tune, and they are mixed in and out to provide an interesting bit of extra kick. Dolby was not used on the overhead (cymbal) mikes, according to engineer Rich Brownstein, and I would say that the crispness of the high end is above average.

The feeling of "Starward" gradually builds from a reggae-type fusion to an open-ended Miles Davis funk groove. Gottlieb's ringing, open hi hat and Egan's bass ostinato propel a lurking, winding Evans Soprano sax solo.

The elements of nature come into play on the second side. The sound of waves hitting the beach introduces "Haena." As the ocean melts into free-form sound signatures from the band, Egan begins painting a lovely backdrop of metal-flanged bass. Gottlieb again doesn't touch a drum, preferring to make several passes at the cymbals instead.

Gottlieb's drum solo vehicle, "Conundrum" paints a far-reaching percussive picture. It begins with bells, goes through a series of tomtom chants, some serious cymbal bashing, a sprightly percussion-sax jam later joined in full by Egan, and ends after reaching a resounding peak with the sound of a cloudburst. Egan then solos ("Valley") with rain falling softly in the background. Egan's ringing harmonic sound has to bring to mind Jaco Pastorius, though his style of playing is more within the ensemble concept than some of what Jaco is known for. (Egan was recorded on three tracks on *Elements*: two were chorus effects and the other was a combination of a direct out and a mike on the amp.) Egan's solo vehicles, "Electric Fields" and "Aerial View," are passionately understated and constructed with completeness. They are like statements—they pick you up here, put you down over there, and you know you've been somewhere.

Hearing Egan and Gottlieb play in a situation outside of the Metheny band makes it easy to see how much of a musical force they were in that original group. They go in many directions on *Elements*, are always cohesive and always individualists. The sparring, jabbing, and jamming on *Elements* bodes well for future recordings from this pair.

—Robin Tolleson

what we are is a rock and roll station. It's really not fair because you don't go to your basic rock and roll station that's playing Led Zeppelin or AC/DC and expect to hear Aretha Franklin. If you do that, then you bastardize the sound. If you put Aretha on, then how do you deny Waylon Jennings? It's 18-24 white male rock and roll.

"If MTV were not playing Garland Jefferies, or Phil Lynott of Thin Lizzy or The Bus Boys, then I'd say there definitely was a lot of prejudice on the channel. If it's rock and roll, whether black or Chinese, it'll get on."

Although MTV has no real competition now, a country music

admit that the company is usually consulted by record companies before a video goes into production. Although an acceptable video can cost as little as \$10,000, some of them, such as Paul McCartney's lush "Take It Away," can cost upwards of \$200,000.

Some of the most expensive videos produced by record companies were not produced before talking to MTV and the resulting clips were rejected for being sexually or violently offensive.

Among the rejected clips are Queen's "Body Language," The Rolling Stones' "Neighbors" and Van Halen's "Pretty Woman."

"We had to do it with Van

"We're breaking new acts, but at the same time we've got to keep the mix because people want to see The Who and The Stones."

channel is being developed in Nashville, and Percy Sutton's Apollo Network in New York City is putting together an R&B music video channel. Both are designed to grab the markets that MTV has chosen not to go after.

Only HBO's "Video Jukebox" and U.S.A. Network's "Nightflight" have really gone after the MTV audience. However, Sykes expects more cable channels trying to duplicate their success.

"We wish the best for anyone getting into video music," he added, "and we wish the best for the Nightflights of the world, because what they do is they bring more attention to video music."

MTV has certainly brought plenty of attention to music video, so much in fact that the number of record company videos doubled from 1981 to 1982. In addition to selling records, record companies also see MTV as being a very important medium to expose new artists that record companies can no longer afford to send out on financed development tours.

"Now, we are finally being promoted by record companies," said Sykes. "In the beginning, a few of the companies couldn't figure us out because they were judging us by the old standard, which was a 'wait and see' attitude. Some were very quick in the beginning to get right in and be aggressive and work with us, but now every company calls us regularly to talk about what's going on because we're a very important cog in the wheel to break a record. They can use us to get some radio stations on the record."

Although Sykes claims that MTV "doesn't play God" with the artists and record companies, he does

Halen's clip," said Sykes almost apologizing, "because there was this scene where a transvestite gets whipped by a bunch of midgets. I mean, we tried to play it, but we just had to stop it."

MTV did, in fact, program the Stones' clip for a long while, until the letters against it became too great. "I mean, I would like it, you would like it, probably any adult would like it but you have to remember we're also popular with 12 year olds," Jackson said. "The Stones really got into it. It alluded to a lot of violence in the clip and there was a lot of blatant sexuality in it. Mark Goodman and I, being old FM jocks, were a little upset they took it off. But seriously, we changed our minds once we read one of the letters that came in from this lady in New Jersey, a very intelligent woman who was just trying to protect her children."

When MTV first started they had around 50 clips and the rotation was heavy. Now their library exceeds 600 clips, not to mention over 200 films and prerecorded concerts. Rotation is now down to a 2½ day flow and in order to keep it exciting, MTV says they won't exceed 8 commercial minutes per hour. In addition, they plan to stay just as open to new acts in the future as they are now.

"It's a balance," said Sykes. "We're breaking new acts, but at the same time we've got to keep the mix because people want to see The Who and The Stones."

Sykes only sees MTV going onward and upward. He sees the limitations as few and the possibilities as endless. "Television is no longer the boring old tube," he said in conclusion. "It's such an information center now. And that's the medium to get."

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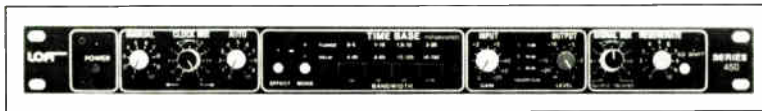
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(continued from page 87)

LOFT MODEL 450

The Loft Model 450 is a delay line/flanger having a maximum bandwidth of 18 kHz and up to 160 milliseconds of delay (expandable to 320 ms with an optional extender module). The unit's front panel controls allow much flexibility in creating flanging, chorusing, double-tracking, slapback echo and other effects. The 450 also features a musical instrument input with up to 20 dB of gain, a rear panel foot pedal jack, and 1/4" and XLR connectors on both inputs and outputs. Three LED headroom indicators



Loft Model 450

are provided. The Loft Model 450 is priced at \$825.

LT SOUND TAD-4

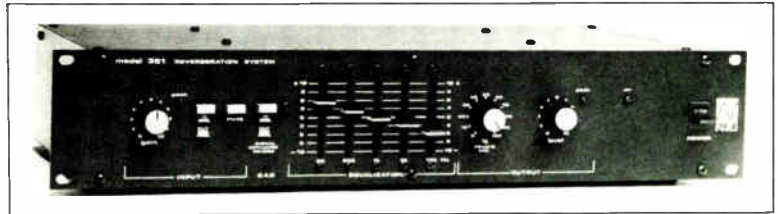
The Thompson Analog Delay from LT Sound is a dual-channel

mode at twice the normal bandwidth, and oscillator input for delay time modulation, and increased send/receive buss flexibility. The TAD-4 with the studio option package carries a pro net price of \$825.

MARSHALL 5402

The Marshall Model 5402 Time Modulator is an analog delay/flange unit based on modulated bias delay technology. The device allows delays of up to 400 ms with a 15 kHz band-

the proprietary reverberation elements, can be located up to 250' from the main unit. Front panel controls include adjustable decay time (with digital display), reverb mix, mode selectors, and both fixed and sweepable chamber equalization. Input and output connectors are XLR-type. The XI-515 is priced at \$3,990.



N.E.I. 351

N.E.I. 351

The 351 Reverberation System from N.E.I. features an SAR™ (signal activated reverb) gating circuit which, combined with the unit's spring drive circuitry, helps to eliminate spring slap, feedback and rumble caused by impact and vibration, two problems sometimes encountered when using spring units on stage. The 351 contains an Accutronics type 9 reverb tank, a five band graphic equalizer, and a mix/percentage control for the precise duplication of the reverberant characteristics of almost any room. Input and output gain controls with peak LED indicators allow the 351 to be used with a wide variety of systems, stage or studio. The N.E.I. 351 is priced at \$349.

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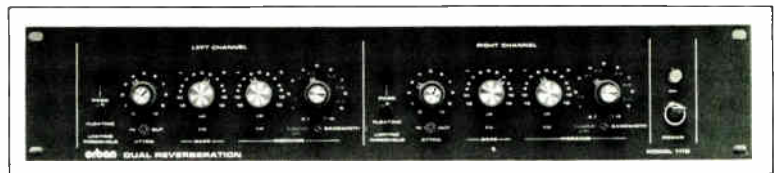


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Orban 111B

width and a full 72:1 continuous sweep range. The 5402 also features programmable locked sweep delay ratios of the internal delay lines which can provide for new harmonic and tonal effects, as well as separate isolate flange and delay section controls.

MASTER-ROOM XL-515

The Master-Room XL-515, by MICMIX Audio Products, is a two-channel reverb system which offers three operational modes which synthesize the characteristics of a plate, live chamber, and concert hall. The XL-515 is comprised of two separate rack mount units, one housing all control functions and parameters, while the remote chamber unit, which contains

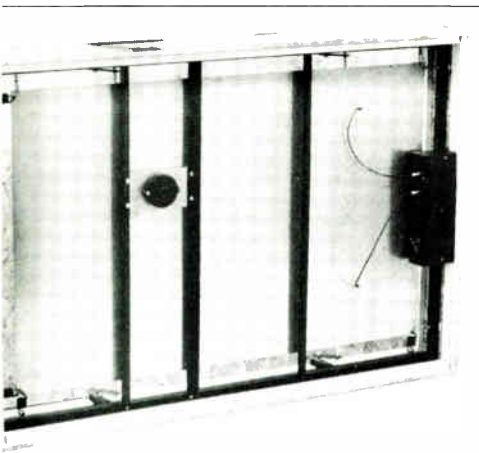
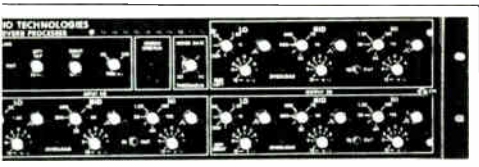
ORBAN 111B

The Orban 111B Dual Reverb is a two channel spring unit which utilizes six springs per channel. The 111B features two limiter circuits which allow the system's full headroom potential without concern for overload distortion. Reverb circuitry equalization includes bass shelving (± 12 dB) and a quasi-parametric midrange section. The unit's outputs are transformer-coupled; floating and balanced. The Orban 111B is priced at \$849.

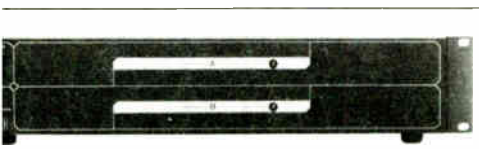
STUDIO TECH REVERB PROCESSOR/ECOPLATE

The Reverb Processor from Studio Technologies is designed to enhance any reverberation system,

and contains analog time delay, three band parametric EQ, two noise gates, and Stereo Stretcher™, a frequency selective circuit which widens the stereo spread of the reverberation. The processor's three electronically balanced inputs allow the user the flexibility of using three send busses: one with all processing, one bypassing the delay, and one which bypasses both EQ and delay. The Reverb Processor is priced at \$1,750.



The Ecoplate III is a full sized (55" x 9" x 36½") plate which offers variable reverb times of .5 to 4 seconds. The unit boasts a 50 - 20k Hz reverb frequency response and available options include remote controls and vertical mounting.



TASCAM RS-20

The RS-20 Dual Reverberation System is based on spring transducers designed by Johann Van Leer. This independent, two-channel unit uses three springs of the same size, yet each having a different propagation rate to simulate the sound of an acoustic chamber. The unit features selectable input/output levels, input foldback, LED signal presence indicators, and a transportation lever which locks the springs in place to prevent transit damage. The RS-20 is priced at \$400.

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