

OCTOBER 1982
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THE RECORDING INDUSTRY MAGAZINE

Mix

Interview: DEVO

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**Studio Monitor
User Forum
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World Radio History



Cover:
5th Floor Recording in Cincinnati, Ohio, was hatched from a rock rehearsal hall in 1970 and arrived at its current 24 track status in 1978. The 5th Floor draws heavily on the region's many nationally labelled groups for its recording business and is also involved in network radio concerts and numerous in-house record production projects.

Photo by:
Michael Maloney

VOLUME SIX, NUMBER TEN

The Mix is published at 2608 9th St., Berkeley, CA 94710 and is ©1982, by Mix Publications, Inc. This is Volume Six, Number Ten, October, 1982. 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) 843 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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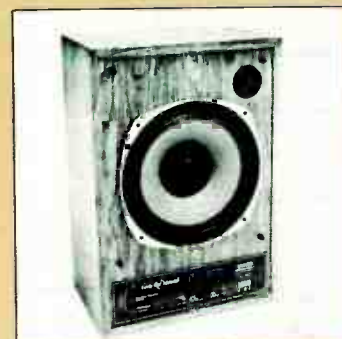
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THE AMPEX SOUND

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feedback

feedback

Dear Mix,

I read with great interest the August issue article in praise of Thomas Edison by Barry Fox, and wish to call your kind attention to a number of errors and omissions.

First, Mr. Fox states that "the beginning of sound reproduction must include Leon Scott de Martinville". Actually, exactly the opposite is the case. (Edouard) Leon Scott (de Martinville) is the inventor of sound recording, not reproduction; and it was this inability to reproduce the sounds he'd recorded that doomed the commercial viability of his great invention, which may be seen in the Smithsonian Institution today. Edison, on the other hand, created the ability to reproduce the sounds he recorded some 20 years after Scott. Edison also created his word 'phonograph' by removing the letters "aut" from Scott's work, 'phonautograph' even though this word, phonograph, was already in use in connection with another industry (stenography) long before Edison appropriated it.

Another Frenchman, Charles Cros, developed the idea of a disk instead of a cylinder, but the very year his paper was read at the Academie de Science, Edison's invention emerged, relegating Cros to the background. Edison knew of Scott's creation but consistently failed to acknowledge it.

On the other hand, my grandfather, Emile Berliner, inventor of practical disk recording and reproduction, constantly acknowledged the inspiration he'd received from Scott and Cros; and my grandfather recognized that the basic law of physics determined that Scott/Cros' lateral-cut method had to be superior to Edison's vertical recording method. Edison went to his death refusing to acknowledge that to cut deeper for louder passages requires geometrical increases in stylus pressure, as opposed to wider lateral excursions for the louder passages where the pressure increases only arithmetically. (Perhaps because Edison was nearly deaf, he couldn't hear the distortion inherent in his system.)

Mr. Fox goes on to mention that Chichester Bell was a brother of Alexander (Graham). Instead, they were cousins. Mrs. Bell was deaf, and Dr. Bell's creation of the telephone was actually inspired by his desire to aid deaf people. He established the Volta Laboratory (now the mighty Bell Labs) with the money from the French government's Prix Volta, which allowed him to hire Charles Sumner Tainter to work on cylinder recording, along with cousin Chichester. Their development of the floating stylus put Columbia

on the map. Columbia was able, through patent acquisitions, to be in both the disk and the cylinder business (graphophones and disk graphophones) and to compete with both Edison (cylinders) and Berliner (disks spelled properly with a "k", not a "c"; although Grandpa originally called the records "plates" - in Germany they still call them Schallplatten, not disks).

Mr. Fox is again mistaken when he reports that "another of Edison's basic ideas had been developed and repatented (sic) by Emile Berliner. First of all, the disk was Cros' idea, not Edison's. Secondly, the Berliner patent specifies a disk with the lateral cut (which Edison had ignored). The Supreme Court subsequently concurred with an appellate court's ruling that the lateral cut disk and any other method of cutting were diametrically opposed and thus Emile Berliner's invention did not infringe on the Edison nor the Bell-Tainter patents. Thus, Grandpa could hardly be accused (by Mr. Fox nor his predecessors) of "repatenting" anyone's invention.

Your writer further seems to regard my grandfather merely in passing and as an also-ran. Your readers may be interested in knowing the following about him: He invented the method of mass-producing disks from a single master. The Berliner Gramophone Company is now RCA Records. He created what is now the world's second-most-famous trade mark, "His Master's Voice." He founded Deutsche Grammophon (now a part of Polygram) and sent William Barry Owen to England to found British Gramophone (now a part of EMI). Although he created today's disk record industry, though few know his name, his greatest invention occurred 10 years prior to his invention of the disk record in 1877 when, trying to improve on Bell's telephone, Emile Berliner invented the microphone - the telephone transmitter into which you speak every time you use your telephone. The Berliner microphone singlehandedly saved the Bell System from destruction at the hand of the then-powerful Western Union which, ironically, had relied upon a (later proved worthless) Edison transmitter patent. After coining the word microphone, Grandpa applied the word gramophone spelled with an "o", please, not an "a" to his disk records and players; and this is the word that is used for them throughout the world today, except in France and the Americas where we continue to improperly apply Edison's word from cylinders, phonograph, to disks.

In closing, while I hate to criticize my dear friend Jack Mullin, in whose article you mention,

INSIDE

A year ago we surveyed the manufacturers of various studio monitor loudspeaker systems to find out how their products were evolving and what criteria they were using in their designs. For this issue's monitor forum we thought we'd look at it from the other direction. So we sent George Petersen out to get some opinions from various critical listeners: studio owners, engineers and producers.

The comments George brought back reflected the subjective nature of the studio monitoring art. Not unlike a fine wine connoisseur, the studio professional goes by what his or her senses register. The critical evaluation is based less on specifications and more on what "sounds good."

So what sounds good? If we could distill our "golden eared" comments into a composite ideal monitor system, we would have a device which would possess these qualities: low distortion, flat response with a solid low end and good high frequency definition (clarity), accuracy, naturalness in voice character, smoothness, wide dispersion (consistent off-axis sound), non-fatiguing, good power handling capacity, excellent imaging, no phase shift, consistency from unit to unit and believability.

Oddly enough, no one mentioned price as a primary concern. Many did stress the critical nature of room acoustics, though, leading to philosophies on equalization, room treatments and near field monitoring. And though most noted that they typically listen at levels between 80 and 110 dB, it was expressed that the ideal monitor should sound consistent from the threshold of hearing to 115 dB.

Of course this all stands in comparison with those who look for the worst speaker they can find to mix on, with the hope that if it sounds good there, it'll sound good anywhere.

TRACKS

as is traditional, Valdemar Poulsen's 1899 demonstration of magnetically recording on a moving steel wire, Jack omitted the fact that Emile Berliner demonstrated this principle some 5 years earlier - his invention, too, may be seen in the Smithsonian today, along with his gramophone.

Sincerely,
Oliver Berliner
Audio International, Inc.
Beverly Hills, CA

CURRENT

Sony President Iwama Dies

Kazuo Iwama, Sony Corporation's president and chief operating officer, died at a hospital in Tokyo on August 24 at the age of 63.

Mr. Iwama joined Sony (then Tokyo Telecommunications Engineering Corporation) in 1946. Together with Masaru Ibuka, the founder of Sony and the present honorary chairman, and Akio Morita, the present chairman, Iwama was responsible for the growth of Sony as an electronics leader.

In 1953, Iwama headed a special task force to study the development and production of transistors for use at radio frequencies. His efforts in this area led to the production of Japan's first transistor radio by Sony in 1955 and the introduction of the world's first transistorized television receiver in 1960.

In May 1971, he was appointed president and chief executive officer of Sony Corporation of America and began promoting Sony's global marketing strategy from the standpoint of production, while taking charge of marketing in America.

Mr. Iwama is survived by his wife and three children.



Gotham Acquires Quantum Audio

Quantum Audio Labs of Glendale, California, manufacturer of small, high quality, inexpensive studio consoles for the broadcasting, video post-production and recording industries, has been purchased by Gotham Audio Corporation of New York and Hollywood, according to Stephen F. Temmer, Gotham President. The acquisition marks Gotham's first venture into manufacturing in its 25-year history of marketing sophisticated audio technology for the broadcasting, recording and related industries.

Quantum's design, engineering and manufacturing facilities will continue to operate as a unit under its new Vice President and General Manager Ernest "Mickey" Knight. John Hall will continue as technical head, while Trece Battle will remain in charge of production.

Audio Coalition Established

The Electronics Industries Association reports that in response to the recording industry's efforts to win Congressional approval of a tax on audio recording products, the Audio Recording Rights Coalition (ARRC) was formed on July 1.

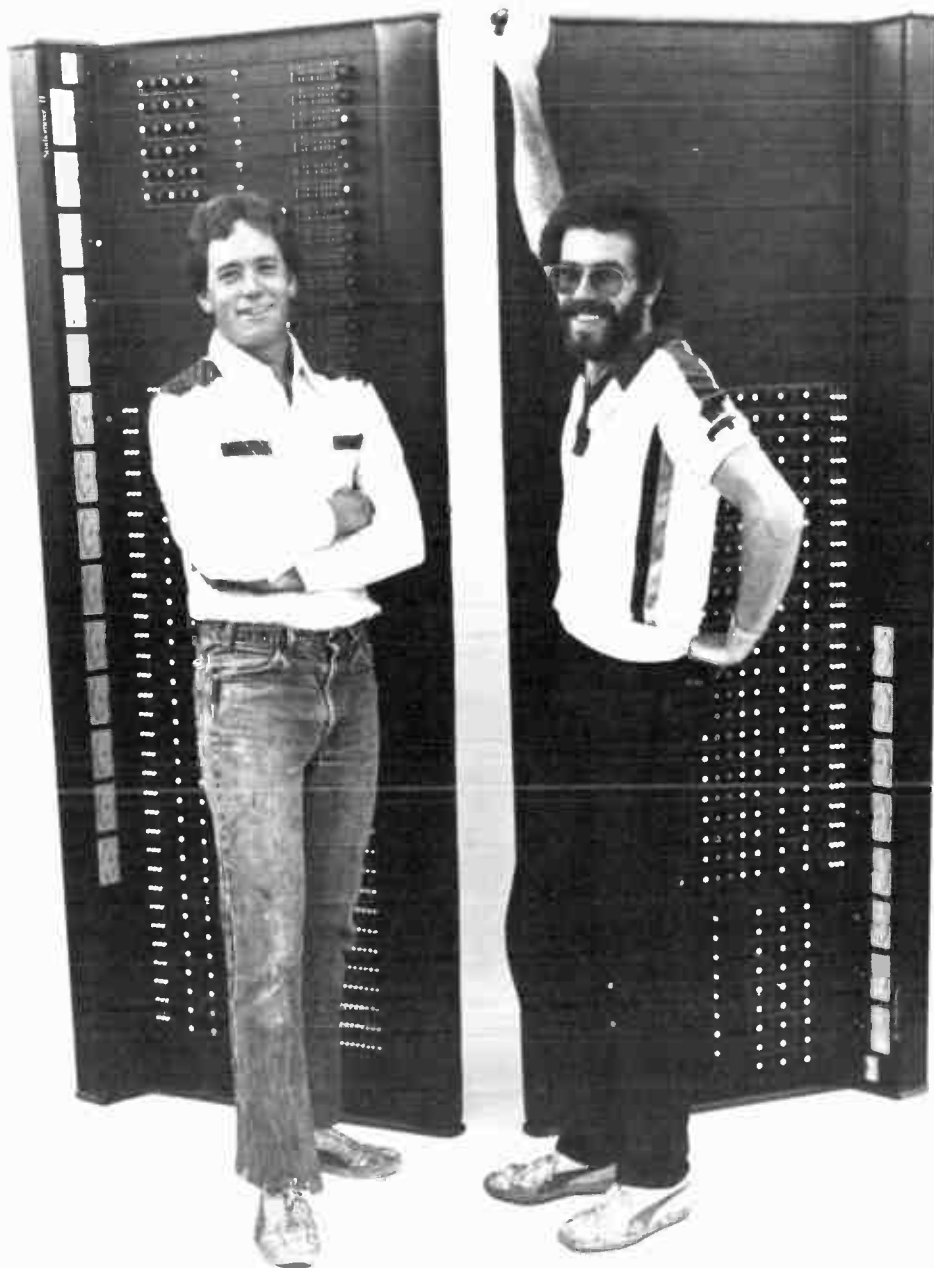
Consisting of manufacturers, retailers, consumers and allied trade associations, the ARRC's principal objective is to defeat any royalty tax on audio hardware and blank tape. The Electronic Industries Association/Consumer Electronics Group played a leading role in the formation of the ARRC and is providing administrative support.

chants... The Music Business Association at Elmhurst, IL, will hold a guitar clinic on Oct. 16; call 312/279-4100 for details... Gene Perry of New York's Harvey Pro Audio tells us about how the U.S. Intrepid, a WWII aircraft carrier, has been demothballed and parked in the Hudson River as a museum. Harvey outfitted two of the ship's theatres, one with Klipsch sensurround for a 35mm film show, and the other with Klipsch mains and EAW subwoofers for a 30 minute recreation of a kamikaze attack using slides and seven channels of hostile audio... The San Francisco NARAS Chapter will be sponsoring a 2-day seminar on the A to Z of Making Records, on Nov. 13 and 14. Call (415) 777-4633 for more details. John H. Hollands has been appointed president of Sony Tape Sales Co.

notes

SPARS has announced the winners of their booster program, awarding over \$100,000 of donated studio time, Ampex tape and other goodies. First prize went to Paul McKenna, producer/engineer at A&M Recording; second prize to Pierre Berducot, of Wilton Square; and third prize to Bob Liftin, from Regent Sound Studios... Back on the receiving end, 26 SPARS studios were given Sony PCM 10 digital audio processor units by the Sony Corporation... In other sweepstakes news Crown International's PZM Challenge was won by David C. Jensen of Sparks, NV; Larry Glenn, Eau Claire, WS; Chet Hall, Canal Winchester, OH; Alfred B. Grunwell, Ithaca, NY; with honorable mentions to Tres Virgos Studio, San Rafael, CA; Michael E. Lamm, Houston, TX; and Joe Bidwell, Tucson, AZ... Antech Labs, Inc. has recently moved their operations to 11118 Olive Street Road, St. Louis, MO 63141, phone 314/997-5666... Biamp Systems has announced the appointment of Gail Martin as Director of Marketing and Tom Hendrickson as Customer Service Manager... Electro-Voice has promoted Paul McGuire to National Sales Manager and tells us that Greg Hock-

man has joined as Marketing Manager/Music Products, Jesse Walsh has come on board as Central Region Sales Manager and Jerry Whaley has recently been added to the sales staff at the Sevierville, TN operation... Nautilus Recordings has just released a half-speed remastered SuperDisc™ of "The Dude," the multi-Grammy winning LP produced by Quincy Jones. Don't miss it... Trident (USA) has become the Northeast American dealer and distributor for Advanced Music Systems, Ltd. of Burnley, England... Larksong Cassettes has announced the addition of Alan Ostby to their sales staff... BGW Systems has appointed Tenick and Associates as independent manufacturer's representative serving Texas, Louisiana, Arkansas and Oklahoma... Endless Summer Music, Beachboy Mike Love's publishing house, is expanding and looking for new material. For more info, write to ESM, 101 Mesa Lane, Santa Barbara, CA 93109... JBL has appointed Tom Floerchinger as Vice President, Administration and Ruth McNevin as Manager of Sales Administration... Elizabeth H. Scott has been named Director of Public Relations for the National Association of Music Mer-



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The 24X8X1 monitor mixer to its right is full of professional features, too, including parallel in/out mic connections on each input channel, phantom power, 5-control input and output e-q, and 8 individual sends per input channel to any or all of 8 balanced, output channels. The operator can monitor any channel via headphones or a side-stage speaker through the master module. And both mixers are expandable, even further!

But the *biggest* feature about Studiomixer is our *Totally Modular* design. Plug a module in or out to expand or modify a mixer's configuration, or for easy servicing. Begin with a small, inexpen-

sive console and let it grow with your mixing and financial capabilities. This growth could include any of the 6 new modules we've recently added to our selection, providing practically any feature an engineer needs. These new Studiomixer modules are, of course, retro-fittable to existing consoles, avoiding the obsolescence of other mixers. By the way, don't be afraid of the over-6-foot boards above. We also offer much smaller sizes which could perfectly suit your mixing needs.

The only thing *not* big about Studiomixer is its price. And our moderate price tag is now being reduced even more, in recognition of the upcoming AES Convention in our own town this October. We hope to see you here for the show, but if you can't make it, be sure to see your Studiomixer dealer about our special, limited time, AES Show pricing. For a short time, our big mixer can cost very little!

To locate your closest dealer, or for detailed information on Studiomixer, write us: Amerimex Co., Inc. P.O. Box 5036 Anaheim, California 92804, or call us at (714) 636-6220.



NORTH CENTRAL

Solid Sound, Inc. in Ann Arbor, MI, reports the **Stingrays** are currently at work on an album with producer, Tom Conner. Other activity includes a project by folk duo, **Gemini**... Recent recording activity at **Pinebrook Studios** in Alexandria, IN, includes: **Don Wyrzten** (Singspiration Symphony); **Ronn Huff** (string overdubs); **Dick Torrans**, **Don Wyrzten**, **Zondervan** (Easter musical); **John Innes**, **Bille Pierce** (album project)... Update from **Streeterville Studios** in Chicago, IL, **Hoyt Axton** for a Busch Beer spot that **Martin Rubenstein** arranged. The band "Off Broadway" (growing rapidly in popularity in the Midwest) recording spots they had written for Old Style beer, **Don Marier** was the producer... **Ajax Recording Team**, Fort Wayne, IN, just completed a thirty minute children's radio show pilot for ethnic musicologist **Doug Macomber**. The program, entitled "Magic Journey," dramatizes the adventures of a group of children traveling around the world and features them performing folk music native to the regions they visit. Macomber's eventual target is PBS syndication... **Mike Vincent** and **Cyclone** are completing their album at **Timbre Studios**, Alsip, IL. Engineer is **Jerry Muzika**, production by **Mike Batson**, Riverview Amusements... **Pogo Records** in conjunction with **Faithful Sound Studios**, Urbana, IL, announces the imminent release of its first album entitled **STABS IN THE DARK**. The record is a collection of songs by the ten following bands: **B Lovers**, **Contraband**, **Invisible Parrots**, **Nines**, **Talltrees**, **Big Daddy Sun**, **The Edge**, **Martyrs**, **Rocking Clones**, **Vertebrats**. All material was produced and engineered at **Faithful Sound** by **Mark Rubel**, Faithful's Chief Engineer and Pogo President... Recording activity at **Studio A**, Dearborn Heights, MI, includes producer **Don Shaw** cutting tracks on R & B group, **High Blood Pressure**. **Eric Morgeson** producing and engineering a single on thirteen year old country sweetheart, **Shelly Lyons**... At **Alan Kubicka's Chicago Recording Company** in Chicago, IL, Capitol recording artists **Duran Duran** from England worked on their forthcoming single, "Rio," culled from the LP of the same name. **Hank Neuberger** engineered.

NORTHEAST

At **Fishtraks Recording Studio** in Portsmouth, NH, **Ben Baldwin** and **The Big Note** pianist **Chuck Chaplin** and **Fishtraks'** staff drummer **Bob Wharton** (ex "Fleet Street Shuffle" and "Cooltones") laying down tracks for producer "Newt" **McKay** for **Tom Chandler's LP**... In Boston, MA, at **Syncro Sound Studios**, **Ministry**

have just finished an EP, produced by **Ian Taylor** and **Vince Ely** with Taylor engineering. **Ric Ocacek** is now recording an album for **Geffen Records** with **Ian Taylor** engineering, assisted by **Walter Turbitt**... At **Soundworks Digital Audio/Video Recording Studios** in New York City, **Donal Fagen** finishing up overdubs for his upcoming Warner Bros. album with **Gary Katz** producing, **Roger Nichols** and **Dan Lazerus** engineering with **Wayne Yurgelun** and **Michael Morongell** assisting... From **Wizard Recording Studios**, Briarcliff Manor, NY, Columbia recording artist **Al Di Meola** mixing live tracks, produced by **Al**, and co-produced and engineered by **Dennis MacKay**... At **Sundragon Productions**, New York, NY, **Felix Pappalardi** just completed production of the first half of a projected album with a new group, **Contraband**, featuring **deElla Spears**, for **Midejo Productions**. **Buddy Pollock** engineered the project, and **Jim McCarthy** assisted... At **RBV Studio** in Southbury, CT, **Henry Soares** has been overdubbing vocals on his tracks. **Bob Silber** completed a poetry/music cassette. **Lena Lynch** (Dancerobics) completed another in her series of exercise cassettes. **Jack Jones** and **Evan Jones** were the engineers on all of the projects... **Arabellum Studios**, Albany, NY, recently completed 45's by **AKA Etc.**, **Mark Musto** and **Leopard Society**, as well as **Gordon Grey's LP "Grey Matter,"** which were produced and engineered by **Arabellum** owner **Art Snay**... **Secret Sound** in New York City handled the live recording of **Saturday Night Live's Eddie Murphy** at the **Comic Strip**. Mixing and editing were also done at **Secret**. Engineered by **Jack Malken**, assistant engineer **Nina Siff**... **Scharff Communications, Inc.'s** Mobile Audio Truck in New York City was on hand at **Nederlander Theater** recently when **Bill Siegler Productions** captured the incomparable **Lena Horne** in a special two night engagement of "The Lady and Her Music."

SOUTHEAST

Sweetsong Productions of Parkersburg, WV, just completed a contemporary gospel album of **Miltenberger & Clark**, and are currently working on producing an album by **Tim Stutler** with **Donny Sumner** assisting in its development... The popular Virginia Beach, VA, country-rock band "Snuff" has wrapped up eighteen months of studio work between four stops to deliver their first release for Warner's Elektra label. **Richmond, VA's Alpha Audio** hosted the session with **Ron St. Germain** engineering and **Phil Gernhard** producing... the **Artisan Recorders' Mobil Unit**, out of Pompano Beach, FL, was recently on location in Montego Bay, Jamaica to record the fifth

annual Reggae Sunsplash for **Synergy Productions, Ltd.** and the **KSR Group**. The **MCI** equipped GMC motorhome was transported from Miami, FL in a **Hercules L-100** aircraft... **Studio Center Sound Recordings, Inc.** of Miami, FL, is proud to announce the signing of "**The Blue Max Band**," for production of an upcoming EP record and television video. Members of the band include **Gary Donalson**, **Terry Lowe**, **Dan Yorke**, **Harry Frey**, and **Mick Atherton**. **Craig Powell** engineered, assisted by **Mark Draeb** and **Dave Axelbaum**... **SoundShine Productions** in Ft. Lauderdale, FL has been busy with **The Cornelius Brothers**, recording tracks for an upcoming album. **The New Jazz Quintet** has also done some songs to make a refreshing sounding demo. Reggae artist **Lee Milo** is continuing to record his second album for **Rhythm & Blues Records**... At **Woodland Sound** in Nashville, TN, **Tammy Wynette** working on a new album for **Epic Records** with producer **George Richey**. **Rick McCollister** is engineering and **Russ Martin** is assisting... **Churchill recording artist Roy Clark** recently returned to **Sound Emporium Studios** in Nashville to begin work on an album with producer **Joe Bob Barnhill**. Engineering the sessions was independent engineer **Mike Poston**.

SOUTHWEST

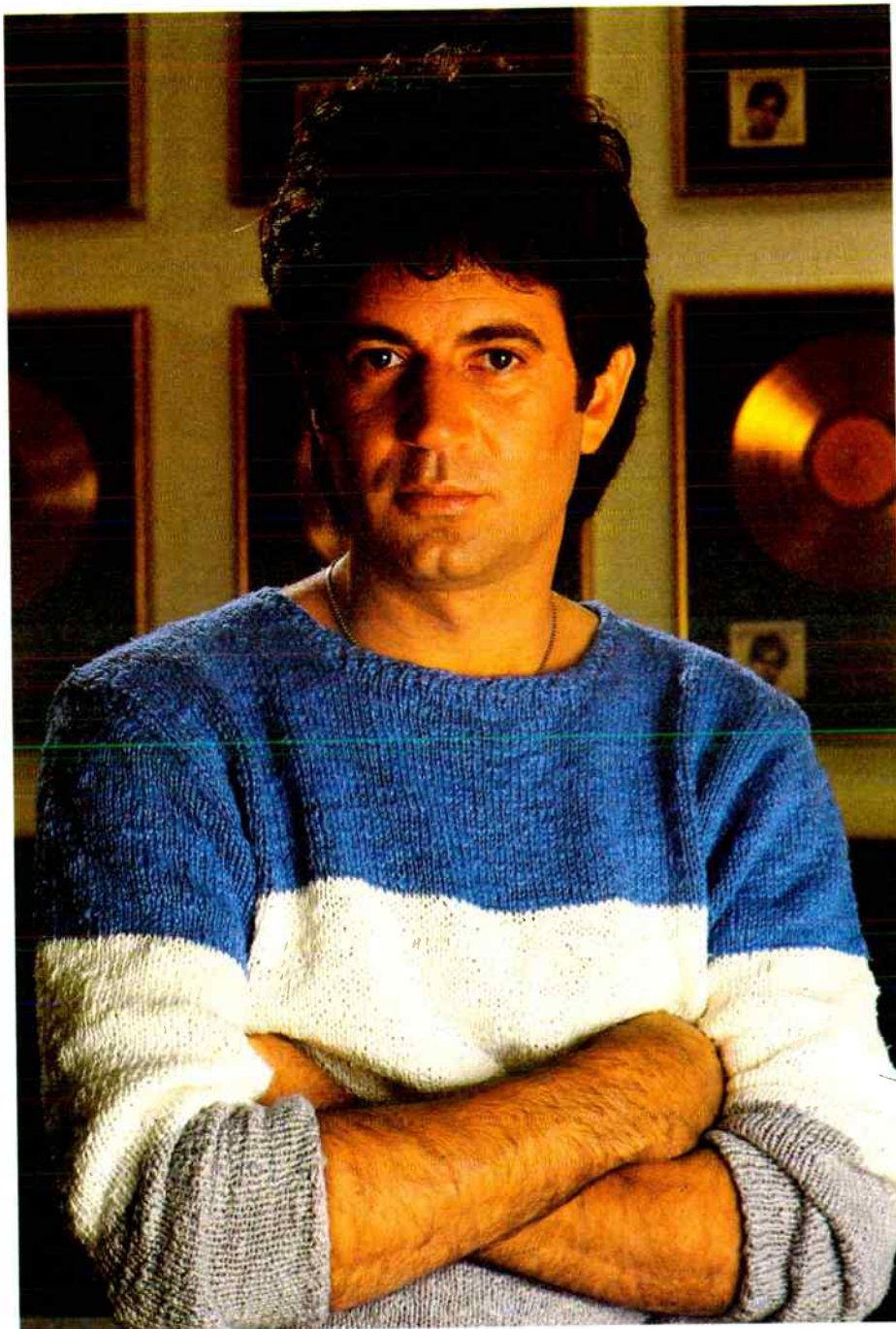
Chaton's 24 track audio truck, "The Cat," of **Scottsdale, AZ** interfaced with **Visual Marketing, Inc.** of **Denver** for a live audio/visual mix at **Telluride's** annual rock and roll festival... At **Rivendell Recorders** in **Pasadena, TX** producer/recording artist **Wayne Watson** is completing a new album by **Harvest** for **Milk n' Honey Records**. Producer/engineer **Paul Mills** is busy mixing **Craig Smith's** latest release, **Hymns**, for the **Star Song** label... **Omega Audio's 24 track facility**, out of **Dallas, TX**, was recently booked for two recording dates by **Merle Haggard** during his **Texas Tour**. The 27-foot recording facility was used to record dates in **Alpine** and **Odessa, TX**. The **Alpine** concert was the scene of rancher **Clayton William's** annual **Brangus** cattle auction and celebration. The concert was recorded for an upcoming live release... **Reelsound's 24 track mobile bus** out of **Manchaca, TX**, was in **Houston** at **Cardies** to record **John Waite** for **D.I.R.'s King Biscuit Flower Radio Show**. **David Knight** producing with **Malcolm Harper, Jr.**, **Mason Harlow** and **Greg Klinginsmith** engineering

NORTHWEST

At **Commercial Sound Studios** in **Las Vegas, NV**, **Tony Orlando** completing production on his album being produced by **Tony Orlando** and

This Is Val Garay.

He Is The
1981
Grammy
Winner
For
"Record Of
The Year"
Bette Davis Eyes:
(Kim Carnes).
Musician.
Engineer.
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Brooks Arthur, and engineered by Robin Freeman and Bob Garretson... Tracking at Hyde Street in San Francisco, CA, Carlton Hester recorded and mixed his jazz album with engineering by John Cuniberti. Norris Davis in Studio C, continuing with overdubs, with Mark Wallner... At Sensa, in Sunnyvale, CA, local night club band The Toons finished recording tracks for their second album, "Looking at Girls," with John Milne and Cal Ball producing and Doug Hopping engineering... In its first month of operations, Ocean Studio in Stinson Beach, CA recorded the following great Bay Area Bands for an album on the Kingspot label: Stu Blank and his Nasty Habits, Jimmy Knight and the Daze, and Modern Eyes with Reuben Burke... Marty Balin (former singer for the Jefferson Starship) mixing 15 new songs at Tres Virgos, San Rafael, CA with Bob Hodas engineering and Gordon Lyon seconding... At SoundSmith Studios in Portland, OR, Mike Fingerut in, producing 4-song demo to be shopped to record labels by Quarterflash manager J. Isaac. David Tower producing 24 track music project for songwriter Joe Guppy... Peekaboo Mountain Studios in Colfax, CA has "Jerry Skellenger and the Saddle Tramps Band" recording their first album, with Conrad E. Nelson producing, Jeff Hester and Ken McCary engineering... At Corasound Recording in San Rafael, CA, San Francisco band Peter Bilt has completed a four song project with Mikey Razor engineering. Chris Saunders has completed a soundtrack for a video "Rumors of War" Stephen Hart engineering.

SOUTHERN CALIFORNIA

Ira Leslie co-producing and engineering at Chateau Studios in North Hollywood, CA, for TSB (The Street Band), Jamal, Gloria Rivera for Scuzzle Gulch Productions and All the Sound Production You Can Ink, with producers Dale O. Warren and Vicki Gray... At Soundcastle in Los Angeles, Rita Coolidge was in tracking a new LP for A&M Records. Rita is also doing a single with Jermaine Jackson. David Anderle producing, Joe Chiccarelli engineering, Mitch Gibson assisting... At Larrabee Sound in Los Angeles, CA, Stanley Clarke producing Natalie Cole for CBS Records. Engineering for Natalie is Erik Zobler and Judy Clapp assisting. Dynasty currently mixing on the SSL for Solar Records. Leon Sylvers producing and Steve Hodge engineering. Nyssa Lark assisting... Kendun Studio I in Burbank, CA, tracking sessions for Ken Rankin on PRC Records, produced by Bob Cullen with engineers Hank Cicalo and Bob "Zyg" Winard; producer Ollie Brown tracking sessions for Atlantic Records' artist, Gloria Gynor. Mike Stone, assisted by Bob "Zyg" Winard at the console... At Skip Saylor Recording in Los Angeles, CA, Ian Ainsworth, former songwriter for CBS Records and member of "Great Buildings," is currently recording his first solo album with back up from Voice & Vision. Skip Saylor and Jon Gass engineering... At Pasha Studios in Hollywood, CA, Spencer Proffer producing Randy Bishop's debut LP for the Pasha/CBS label with Duane Baron engineering... James Brown in recording 3 songs at Evergreen

Recording Studios in Burbank, CA for the upcoming Universal Pictures film "Dr. Detroit." The songs include Brown's hit "Get Up Off of That Thing" and 2 tunes by composer Ira Newborn. The film is being produced by Robert K. Weiss, directed by Michael Pressman and stars Dan Aykroyd. Engineer on the session is Rick Riccio, assisting is Michael Hatcher

studio news

Ajax Recording Team, Fort Wayne, IN, has just updated their facility with the addition of a Sound Workshop Logex 8 console, as well as an EXR Exciter, Valley People Stereo Dyna-mite, and four more channels of dbx noise reduction... Westwood One Recording, of Los Angeles, CA, a division of Westwood One, America's largest producer/distributor of nationally sponsored radio programs, features, concerts and specials, has built a \$500,000 Hi-Tech mobile recording studio for use as its primary remote recording studio. State-of-the-art recording equipment includes MCI 636 Series Console; two Ampex MM-1200 24 track tape machines; Ampex ATR-102; Sony color video monitor system; the main speaker system consists of two 604 E in custom DeMedio Cabinets with mastering lab crossovers. Westwood One's 45-foot mobile recording studio was officially unveiled to the industry on June 24, at ceremonies on the Culver City lot of the West Coast offices of Westwood One. Music Annex

BORN IN THE STUDIO,



THE TOA RX-7 SERIES

in Menlo Park, CA, announces the addition of equipment for their A/V, ad media studio. Purchases include two Tapecaster Cart Machines, another UREI 1178 stereo limiter, and video formats are 1/2" VHS, 3/4" U-Matic... **Oak Valley Sound Recording Studio** in Nashville, TN, recently added a new Studer A80VU MKIII 24 track recorder to its roster of studio equipment... **Patchwork Productions** in San Rafael, CA, announces the recent expansion of their eight track facilities, with the cooperation of **Patchbay Studios**, to include, full 24, 16, and two track professional mastering. New equipment includes: a modified Soundcraft Series 3 32x16x16, console; MCI JH-16-24 recorder with JH 114 transport and autolocator; MCI JH 114 mastering two track; AKG BX 10/II; Lexicon Prime Time; Sound Workshop stereo reverb; Ashley parametrics; LA-2A's; dbx 165's; complex stereo limiter; 32 channels dbx noise reduction; mics including Sony's, Shure's, AKG's, Sennheiser's, E-V's, Audio Technica's, Nakamichi's, Neumann's; and a collection of classic tub mics including Neumann (U 47's, M 49's, 269's), RCA (77) and AKG (C 61's)... **Clyde Davis** and **Shirley J. Lindsey**, owners of **Rocshire, Inc.** (pronounced Rockshire), announce the appointment of **Gary Davis** as President of Rocshire Records. Davis and Lindsey state that Rocshire is a self contained record company with its own studios (just finishing their first and starting their second Jan. 1st). The Rocshire complex also contains its own video production outlet and soundstage, housed in Anaheim, CA... Marking its 22nd year of pro-

viding soundtracks and original scoring, **Servisound Inc.** in New York City recently installed new consoles and signal processing equipment to serve its video, film, radio and multi-media clients. According to **Nat Levy**, president, the new equipment includes a 24 track Syncon II, two additional Allen & Heath multi-track consoles and a **Harmonizer**... **Crosseyed Bear Productions** announces the opening of **Bear Tracks**, a new state-of-the-art recording studio, thirty miles north of New York City, in Rockland County, NY. The studio is equipped with a fully automated Solid State Logic 48 input console and Studer tape recorders; two A-80VU MKIII 24 tracks, synchronized by an Audio Kinetics Q-Lock system, plus A80VU 1/2" and 1/4" mastering decks. Live chambers including a three story stone silo supplement, three reverberation units and a full complement of outboard signal processing equipment. The facility was designed by **George Augspurger** of Perception, Inc., built by **Jerry Salvesson** of JLS Interiors and equipped primarily through Vision-Sound Professional Audio. **Bear Tracks** and **Crosseyed Bear Productions** are owned by **Richard Calandra** and **Jay Beckenstein**, producers of the jazz fusion group **Spyro Grya**. The studio will be limited to in-house work for most of the first year, though outside projects are contemplated for the future... Monday, August 9th was the Grand Opening of **Creative Workshop II** in Nashville, TN, "The Mountain Room." With 600 people invited, the grand opening party featured **Pepper Martin** and **His Texas Band**. The ribbon on the new room was cut by

Nashville sheriff **Fate Thomas**, **Creative Workshop** president **Buzz Cason**, vice president **Brent Maher** and studio manager **Monty Nugent**. **Creative II** features a Sphere "C" console which is fully automated, the Studer 24 and 2 track recorders, and custom-designed JBL, TAD and Northwest monitors. All the latest digital and electronic innovations are available to the producer and artist... **Rhythmic River Productions** in San Francisco, CA, has completed its newly constructed 2" 16 channel studio featuring large live rooms, MCI JH-600 automated console, and the new MCI 1/2" 2 track. **The Dennis Rice** designed control room features phase-aligned monitors and delay and harmonizers by **DeltaLab**... **Digital Sound Recording** in Los Angeles has announced the appointment of **Sandy Taylor** as Vice President/Director in charge of Technical Marketing Services including film, video, music and digital recording... **Sound City** recording studios in Van Nuys, CA, has announced the addition of a new Studer A80VU MKIII 24 track recorder to its equipment roster. **Sound City** has also added a 1/2" conversion kit for its A80 two track mastering recorder... **Associated Productions** of Lufkin, TX has designed and installed a totally-interfacing sound/studio system at **The Texas Stage**. The Houston-owned combination nightclub/recording studio boasts a 35,000 sq. ft. concert hall (seating: 2200). **APT** provided acoustical conditioning for concert sound, a state-of-the-art sound system, and an on-premises 24 track recording studio that features E-V and MCI products.

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Studio Monitor Forum

by George Petersen

In our Special Report on Control Room Monitor Systems (MIX, November 1981), we talked to various monitor manufacturers about their design philosophies. Not surprisingly, we found a wide range of approaches to the complex and often controversial science of monitor design. Since the choice and selection of control room monitors is a subjective and very personal decision, specifications alone do not tell the whole story.

For our survey this year, we thought it would be interesting to interview a variety of producers, engineers and studio owners around the country to find out their criteria in choosing studio monitors. While such a straw poll sampling is basically unscientific in nature, the responses were informative and sometimes surprising.

Along slightly more scientific lines, we also tallied monitor usage from the studios and remote units which listed equipment in our Mix Studio Listings over the last year. The results were as follows:

4 & 8 TRACK

1. JBL	64%
2. ALTEC	32%
3. CUSTOM	9.6%
4. ADVENT	8%
E-V	8%
5. MDM	4.8%

16 TRACK

1. JBL	73%
2. ALTEC	27.3%
3. E-V	15.5%
UREI	15.5%
4. MDM	4.5%
5. GAUSS	3.6%

24 TRACK

1. JBL	67.5%
2. UREI	44%
3. ALTEC	31%
4. CUSTOM	14.4%
5. MDM	7%
6. E-V	5%
7. TANNOY	4.5%
WESTLAKE	4.5%
YAMAHA	4.5%
8. KLIPSCH	3.6%
9. FOSTEX	3.0%
10. SIERRA	2.7%

REMOTE UNITS

1. JBL	44%
1. E-V	18.5%
3. UREI	15%
4. ALTEC	11%
CUSTOM	11%
5. TANNOY	8%

The percentages listed above total over 100% since many studios have several monitors available. In addition, 71% of the studios listed also had Auratone mini reference speakers.

ROY SEGAL
Studio Manager, Fantasy Studios, Berkeley, CA.

"We have four different monitors in our studios, UREI 813's, Altec 604-E's, Sierra Hidley SM-3's, and another one, designed by George Augspurger. Our clients like the Sierra system in Room D very much, and the Augspurger system is similar in sound. There's so much work being done on close and near field monitoring that the main studio monitors aren't that controversial anymore. We have a whole gamut of near field monitors available in each studio, and during mixdown each studio is set up with 4 or 5 types of speakers so the mains are not the only point of reference. It's a very subjective thing, one man's poison is another man's dessert. I've had people swear by every system that's been made. I still think the 604's are a very safe approach to studio monitors. I go to all the shows and listen to all the monitors, and they're all good. I didn't hear any monitors there that weren't good. 'It's all bullshit!', that's what my senior tech just said to me, meaning it's all subjective. Anything subjective is all bullshit because you can't nail it down. In the old days, you hung a couple of speakers on the wall and that was your monitor. If enough customers didn't like the sound in your control room, you just hung up another pair, and kept hanging them up until they liked it. Today things are much more scientific."

RICH WARREN
Producer, WFMT Chicago

"We use the B&W monitors. I like them. They have a very good balance of sound, good power handling capabilities, and the trademark of B&W speakers is that they are perhaps the most natural on the human voice. This is a classical music station as well as a recording studio. The people here are ultra-critical about sound. The B&W SL-6 is the first speaker put into the main control room that we didn't throw out. We have a pair of Bowers and Wil-



B&W 801 Monitor

kins BM-6's we use in our orchestra control room to record the Chicago Symphony. Since most of my recording is vocal, I absolutely must have the B&W's. There's a naturalness in the voice character that is very hard to find in other speakers."

WHAT WOULD YOU LIKE TO SEE IN THE IDEAL MONITOR?

"Accuracy is everything, whether you are recording classical or jazz. When recording rock and roll, where everything is amplified, you don't have an acoustic reference point. In classical music, you know what a cello sounds like. You should be able to hear that same sound from your monitors. Of course, room treatment is also important. I don't think any monitor can sound good in a bad room."

J.D. BLACKFOOT
Recording Artist, Owner of Bison Recording, Columbus, Ohio

"We're using the Fostex LS-3's in our control room, and the LS-2's in the studio. I think they're an exceptionally hot monitor. Gary Hedden, who designed and installed this room, put me on to Fostex, and I have such faith in him as an engineer that I bought them without hearing them. After the studio was completed, I heard them and was

extremely impressed. The amount of power they are able to take is very, very exceptional."

WHAT PERCENTAGE OF YOUR WORK IS DONE ON THE MAINS?

"I do all my recording on the mains. When mixing, I stay the hell out of the control room until Gary has the basic mix done. He usually does that on MDM-4's and goes down to Auratones, back to the MDM-4's and checks the mix with the mains. For the final production mix, he calls me in and I'll make some adjustments from a performer's standpoint. For my production mix, I use the mains about 70% and Gary does the opposite."

GEOFF DAKING
Producer, Engineer,
Owner of Nimbus-9
Recording Studio,
New York City

"We have the new JBL Biradials, and are using them with Bryston amplifiers. The Brystons make a big difference with them. It's a happy marriage. The JBL's are apparently non-directional. It's easy to build a control room and have the image be very neutral in the room. You don't have any beaming. The stereo center is very comfortable and runs the full length of the board."

WHAT LEVELS DO YOU USUALLY MONITOR AT?

"We have a fairly small control room, so I don't usually go over 103dB. But we do have some people who like to come in here and change the barometric pressure of the room, and the monitors and amps will do that nicely."

BILL VERMILLION
Engineer, Bee Jay
Recording Studios,
Orlando, Florida

"We were the first Florida Westlake studio. Our monitors started out life as Westlake TM 1-A's. We don't know what to call them anymore. The cabinets are still Westlakes, but the day we installed them, we threw away the Westlake crossovers and tri-amped them. First we used UREI electronic crossovers. Six months later, we custom built a crossover that was identical left and right. When we started, we had Gauss drivers on the bottom, and JBL's on top. About nine months later we covered over the ports on the side and changed them to tuned ducts. At the time we had Crown amplifiers on the bottom and midrange, and a BGW on top. We

pulled the Crown off the bottom, tried five different amps, and wound up with a BGW 750 driving the woofers. Then we put Pioneer TAD drivers on the mid-range, and, with their highly extended range, we were supposed to go two-way. We didn't have enough top end, so we kept the two-way crossover, let the TAD's go as far as they could, and added about 2 dB of the JBL tweeters. So we had a two-way system with a tweeter added, not a three-way system. Sometime during the past year, we felt the bottom end wasn't quite right. We kept experimenting, and replaced all the cable with Monster Cable—it's 12 gauge cable with 500 strands. We picked up two-thirds of an octave of usable bottom end by using that cable. The last change was four months ago, when we took the Crown out of the midrange and replaced it with an APT amplifier. Tom Allom, the producer of the new Judas Priest album, did half the mix here and half at Bayshore. He says these are the best Westlakes he's ever heard."

PAUL DOBBE
Engineer, United Western
Studios, Hollywood, CA

"I prefer the UREI Time-Align monitors. The 813 is my favorite of the series. They are a very logical progression from the 604-E, which pretty much was the standard in Hollywood. A lot of people were used to the sound of an Altec, and it became a reference point."

WHAT OTHER KINDS OF MONITORS DO YOU LIKE?

"Outside of America, JBL's and Tannoys

are pretty much the standard, and you don't see many Altecs there. But since I've come to America, I've become used to the 604's. The Tannoys are great, but you can't get the power out of them that you could get out of other monitors."

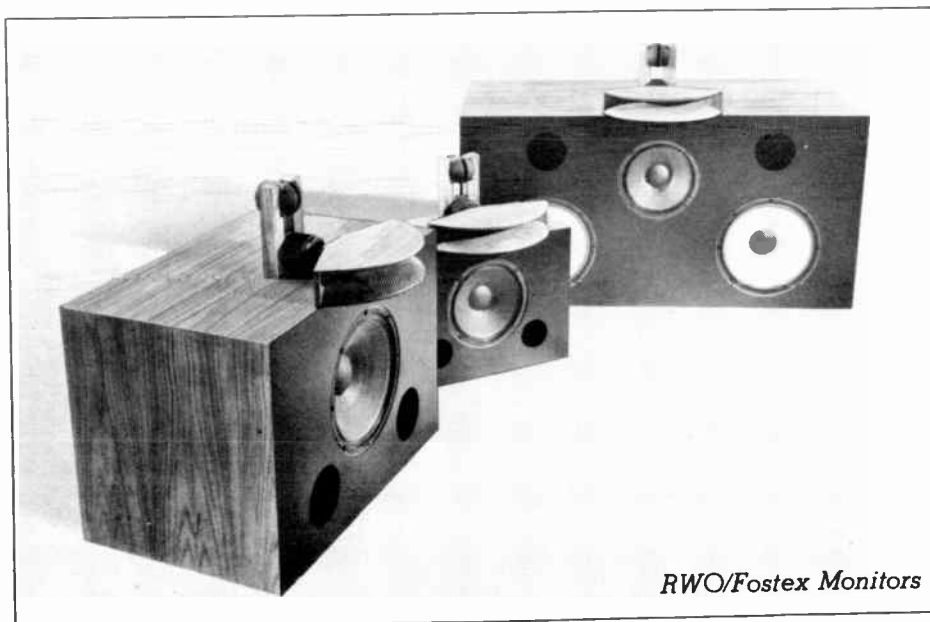
HOW WOULD YOU DESCRIBE THE IDEAL MONITOR?

"Something that wouldn't be fatiguing to the ears. Control room design is also very important. I've heard 604's in rooms that were heavily padded, and they sound very strange. So you can't depend totally on your 'ideal' monitor."

TIM BOMBA
Staff Engineer, Sound-
mixers, New York City

WHAT DO YOU THINK ABOUT THE SIERRA SYSTEM YOU'RE USING?

"In general, they're pretty good. You do have to stay on top of them and keep them tuned. They're real accurate as far as going out of the control room to a mastering place (we usually go to Sterling). Everybody has their own preferences. I carry around a little set of bookshelves to use along with the Sierra system. If I work here or at the Record Plant I can be sure the TM-3 monitors, or the newer ones we have here, will be pretty accurate from room to room. A large part of it is the room and not just the speaker. I would say that the sound is a 50/50 thing. So much of it is Hidley's room design. I usually get my sounds on the Sierras and mix on my bookshelves. I do about 90% of my overdubbing on a set of ROR's or my Burhoe Acoustics."



RWO/Fostex Monitors

STEVE SPERRY
Commercial and Jingle
Producer, The Mult Shop,
Chicago

WHAT DO YOU THINK OF THE
MDM-4 MONITORS YOU HAVE?

"I have a very specialized use for them since my studio is so small. Therefore the near field aspect of these monitors is quite important. I find them to be not hypey, and I think they're pretty honest. My personal preference for monitors is the UREI 813's. I have a pair of 811's at home which I may bring down here, but frankly, even they are larger than we'd be comfortable with in this control room."

JACK LINNEMAN
Engineer, Hilltop Record-
ing Studio, Madison, TN

"We're using the Klipschorn. They're great. We looked all over when we built our room and we didn't hear anything better."

ARE THEY MOUNTED AT GROUND
LEVEL?

"No, they're in the corner up near the ceiling."

SO THEY FACE DOWN TOWARDS
THE BOARD?

"Right. The horns are on top. They're technically not being used as they were meant to be. The bass corner cabinet is really halfway up the wall. Our rooms are fairly flat. We're not using a lot of equalization in the monitor circuit. The reason I like them is they will produce the ultra-lows. If you've got rumble and roaring and all that crap going on, you can hear it. I've found the Klipschorns to be less tiring than any other speaker I've heard."

BILL BRADLEY
Engineer, Universal
Recording, Chicago

"I used the Fostex while at JVC (Cutting Center, Hollywood). I think they're great. Their definition, especially with HF, was very, very good. The imaging was excellent. I found them to be un-fatiguing, and basically just a clear, clean, easily relatable monitor."

AT WHAT LEVEL DO YOU USUALLY
LISTEN?

"I don't really have a stock level when mixing, but when mastering at JVC, we usually listened at the 88-100 dB level."

WHAT PERCENTAGE OF YOUR
WORK IS DONE ON THE MAINS?

"90 to 95 percent. We also have a pair of Brauns that I like. They're real crisp, and provide a different vantage point."

WHAT WOULD YOU LIKE TO SEE IN
AN IDEAL MONITOR?

"Better transient response."

DR. RICHIE MOORE
Independent Engineer

"The monitors I like best now are the UREI's, the 811's and 813A's... they've solved the phase and time coherency problems inherent in monitor speakers. I like engineering with a co-axial speaker, rather than a system with separate woofers and tweeters. The phase shifting common in some monitors bothers my ears and causes fatigue. I guess I'm a single point monitoring person. UREI's have an excellent axial response. The main drawback of the UREI's to me is the horn."

YOU'D PREFER A CONE SYSTEM?

"Yeah. I'm a big Tannoy fan and the old Tannoys had compression drivers, and the flare of the compression driver matched the shape of the woofer. You didn't have to be right on axis to hear the highs. I liked that wide dispersion. The UREI's are very direct, like (Altec) 604's. I pretty much grew up mixing on Tannoy's, and in the states I mostly used 604-E's."

WHAT LEVELS DO YOU USUALLY
MONITOR AT?

"I dislike loud levels when used continuously through a session. I usually monitor at 85 dB, and use the mains to establish EQ through mike placement, rather than through the board."

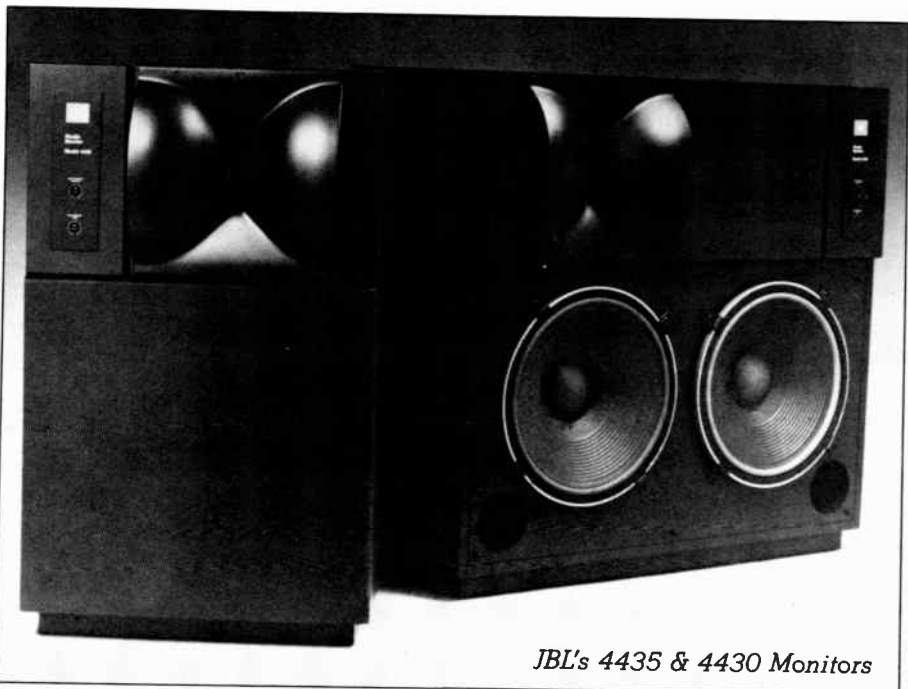
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JBL's 4435 & 4430 Monitors



Meyer 833 Monitor

WHAT PERCENTAGE OF YOUR WORK IS DONE ON MINI SPEAKERS?
 "About 50/50. For my sound balance I

use Auratones and switch back to the mains occasionally. I feel more comfortable listening at low levels and can get a better feel for the song when I'm drawn into the speakers rather than pushed away from them. I've been using Auratones for about 13 years and they can sound different depending on what amp is used to drive them. Power amplifiers have a lot to do with monitor sound. I've been using the UREI 6500 power amp, and it's excellent for most speakers, but for driving UREI monitors, I've found that Haflers do a better job. Now if only UREI could build time aligned co-ax speakers using cones rather than horns. Actually, I prefer the 811A's over the 813's, because 99% of the rooms I've been in that have 813's are not large enough to need that much subwoofer power."

GARY STARR
 Engineer, Herb Pilhouser
 Music, Minneapolis

"I love the (JBL) 4430's. I used to use UREI 813's. The JBL biradial design

gives a good stereo imaging. I like the clarity on the top end. A lot of the sound depends on the room. Though, 813's in the right room can sound just fine."

AT WHAT LEVELS DO YOU USUALLY MONITOR?

"Probably about 110 dB, but I also like switching down to the Auratones to get normal levels. The JBL's are almost too good for mixing."


WHAT CHARACTERISTICS WOULD YOU LOOK FOR IN THE IDEAL MONITOR?

"Naturalness. A monitor that would work well in any room."

ALAN SIDES
 Owner, Ocean Way
 Recorders, Los Angeles


COULD YOU DESCRIBE THE CUSTOM MONITOR SYSTEM YOU'RE USING?

"It's *very* custom. The components are quite different from what everyone else



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*Patents applied for



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833 specs:

Frequency Response	35-18,000 Hz ± 3db
System Time Delay (including electronics)	± 350us, 100-20,000Hz ± 25 us, 2,000-20,000Hz
High Frequency Dispersion Vertical	40 degrees
Horizontal	80 degrees
Maximum SPL Continuous	120 dB
Peak	130 dB
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Studio Monitor Forum



Tannoy SRM 12B Monitor

is using. It's a tri-amplified system, using Marantz model 9 tube amplifiers for mids and highs, and a modified Phase Linear 700 on the bass. It's unique because it uses two drivers on the mid-range horn, and it has a direct radiating dome tweeter which is our own design. Because of the size of the horn, it's a 300 Hz horn, we have no problems with the monitor character changing at loud levels. Due to the efficiency of the horn, there's never any strain. So even with a guy like Andy Johns, you don't have things blow out. Things don't change. It sounds the same one day to the next, which is one of the biggest problems with a complex tri-amplified system."

WHAT OTHER KINDS OF MONITORS DO YOU HAVE THERE?

"We use the little JBL 4313's, the Yamaha NS-10's, and Auratones. Generally I find most of the mixers check out the kick drum and the quantity of low bass on the larger speakers, and then check the overall balance on smaller speakers to make sure it's compatible."

HOW DO THE YAMAHA'S COMPARE TO THE JBL'S?

"They're similar. The 4131's are amazing little speakers. JBL has a 4441 that sounds good, too. The 4313's, 4441's and the NS-10's are quite different from the older 4311 style. They're a lot more linear sounding on top, and much more natural sounding. And yet there are guys like Bruce Swedien, who do a great job and like using the older JBL's, 4310's or 4311's."

ROGER NICHOLS Independent Engineer

"For the past 5 or 6 years we've been using nothing but David 9000's, a small bookshelf speaker. We mixed (Steely Dan's) *Aja*, *Gaacho*, and the album we're doing now (Donald Fagen's solo digital album) on nothing but those. Most of the time the big speakers depend on the control room architecture, and it doesn't work out because they have to EQ them a lot, and the EQ does strange things. You still have the humps

(continued on page 18)

Independent Engineers & Producers

Your listings are coming soon to Mix Magazine. Don't miss this once-a-year chance to let those potential clients know how to get in touch with you. To get listed, just fill out this coupon and mail with a \$25 check or money order to:

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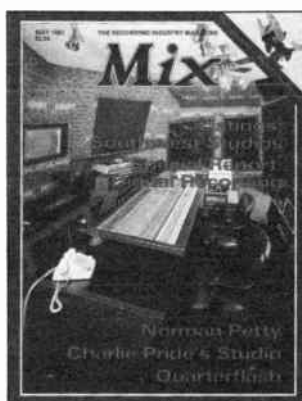
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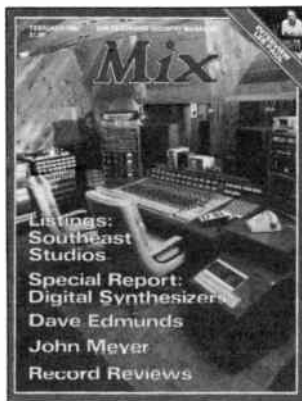
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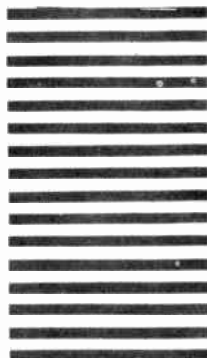
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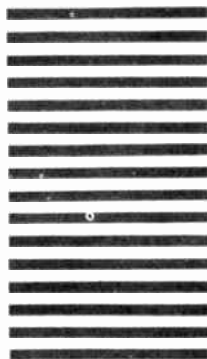
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Revox B710 MKII: Shamelessly Professional.

The Naked Cassette Deck—At Studer Revox, we're not ashamed to bare all. What you see above is an unretouched photo looking down inside a new B710 MKII cassette deck. If you compare what you see here to any other deck, you'll find that the B710 MKII is more professional where it counts—on the inside. This is the first cassette deck built to the exacting Studer Revox standards for craftsmanship, mechanical precision, long-term transport stability, and uncompromising quality control.

The performance follows suit. A B710 MKII not only makes recordings and dubs of unprecedented accuracy, but it also guarantees consistently repeatable results from one B710 to the next. And, thanks to total microprocessor control, production work with this deck is fast and foolproof.

Engineering Fundamentals—The B710 MKII utilizes a die-cast aluminum alloy

chassis as a solid base for the four direct-drive motors. (Rubber belts, pulleys, and clutches—which can degrade long-term performance—will not be found here.) The two Hall-effect capstan motors are quartz regulated for exact speed and synchronization; and the two DC spooling motors are microprocessor controlled for constant-speed fast wind, controlled tape tension, and gentle electronic braking.

Revox has also developed a unique pivoting headblock system to assure absolute azimuth stability. Instead of sliding



into the cassette shell on the usual "sled" mechanism, the B710 MKII headblock pivots upward on two precision conical bearings and locks into a stable three-point mount.

Finally, because every part is made to professional specifications, you can depend on superior performance long after other cassette decks have succumbed to early retirement.

Features in Summary—Three head design • Automatic start-of-oxide cueing • Dolby B and C NR • Modular plug-in PC boards • Mic/line mixing • Internal timer for programmable start stop in record or play • Precise 4-digit LED counter • Headphone volume control • Optional remote • Full microprocessor control of transport modes and audio switching • Adapts to external computer control.

Look and Listen—Examine and audition the unabashedly professional Revox B710 MKII today at your nearest Revox dealer.

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World Radio History

Studio Monitor Forum

(continued from page 16)

between the 1/3 octave bands. Once in a while we'll turn on the big speakers just to hear how horrible they are. (Laughs.) We've gone to a lot of studios, and we just tote our little 9000's around. We've been real happy with them."

DO YOU FIND THAT POWER AMPLIFIERS MAKE A BIG DIFFERENCE?

"Yep. Especially on these little speakers. You can pump a lot of power into them. If it's clean, they sound great. If it's dir-



UREI's 813A Monitor

ty, it just pops the tweeters twice a week. I like the JBL Ice Cubes. They're real good—my favorite."

HOW WOULD YOU DESCRIBE THE IDEAL MONITOR?

"Somebody should listen to the David 9000's and make the big speakers sound like them. A studio in North Hollywood, Jennifudy, has UREI's which accidentally sound just like the Little David's, except bigger, with more bottom end."

IS THAT DUE TO THE ROOM CHARACTERISTICS?

"Yeah. Also, their room came out so they didn't need any EQ on the monitors. That makes all the difference in the world. The monitors at Lion Share, Kenny Roger's studio, also sound great. The whole thing is room design more than speakers.

"One thing I've got to stress is we spend a lot of time finding a speaker that was right down the middle, rather than mixing on a speaker on one end of the spectrum. If the guy who buys the

record has a speaker at the other end of the spectrum, it's gonna sound like dog-meat. We lucked out, because the speakers we ended up using sound great all by themselves."

JAMES TUTTLE
Studio Manager, Studio
South, Austin, TX

"We have a Sierra Hidley system, and I like it a lot. For me, the less crossover points, the better, and being a two-way system, there is less of that to deal with. The top end of the TAD drivers is real sweet-sounding."

DO YOU LIKE THEIR DISPERSION?

"I do, quite a bit. I particularly like the dispersion in what I call the Smith Horn. I use the stock JBL version of that in live work, too. Capitol in L.A. has some Augspurger stuff that's built around the same horn. The side to side response is smooth."

DO YOU TEND TO DO A LOT OF AB'ING BETWEEN MAINS AND MINIS?

"I like to do quite a bit. We've been using a pair of small to medium speakers these days, the Yamaha NS-10's. Chet (Hines) introduced me to them, and they seem to be becoming a standard on their own. They're real applicable these days, and while the Auratones have always been the tiny car radio standard, today almost anybody has better speakers in their car."

JOHN PHELPS
Producer, Engineer,
Director of Full Sail
Recording Workshops

"I'm very much into Fostex. I think that Fostex took the UREI Time-Align idea and carried it further. I'm not Mr. Technology about it, but they are incredibly smooth, believable, and comfortable to work with. Before that I was a UREI fan."

WHAT LEVELS DO YOU USUALLY MONITOR AT?

"Medium loud, 95 dB. I find that if you mix very loud, you get hyped, and especially after a long day, you think it sounds better than it does. If you can make it sound good at a medium level, then when you crank it up it sounds wonderful, but that's not true the other way around."

WHAT WOULD YOU LOOK FOR IN AN IDEAL MONITOR?

"Believability and smoothness. I like to go out of the studio and listen in my car, at home, on my ghetto blaster, or any

other piece of gear and have it sound like it still lives. So I don't need this control room or a pair of Westlakes to show somebody what the tape really sounds like."

BEN TAYLOR
Chief Engineer,
Chaton Recordings,
Scottsdale, AZ

WHAT MONITORS ARE YOU USING IN YOUR TRUCK?

"We use Tannoy monitors. I'm an old Tannoy user from a long time ago."

YOU LIKE THE OLD TANNOY'S TOO?

"Yeah, the monitor Golds, the Reds, and all that. I have some experience with them early in my days with Elektra Records, and I like them and these SP-12 B's are great. The Tannoy's are an old design, similar to the Altec concentric design where everything is on axis, so you have a point source rather than two separated speakers. We use UREI's in the studio and Tannoy's in the truck. One of the reasons we chose them is that they radiate similarly, but the Tannoy's are a smaller package and fit into the truck. We've had good results, and pretty good compatibility between the two."

STEVE HAM
Woodland Sound,
Nashville, TN

"We have the THE-1's. They're Westlake copies. John Gardner built them when he had THE Company. They've got the wood midrange diffuser on the mid-range driver. We put Hafler power amplifiers on them and George Augspurger came in to help with our control rooms. Those are our main monitors now. They work extremely well. We also have MDM-4's, Auratones, and we're trying out some JBL 4312's. The THE-1's are very realistic and true at different levels. My personal favorites are the UREI 811's and 813's, but 99.9 percent of the people coming in here have a good feeling about the mains and the MDM-4's."

WHAT WOULD YOU LOOK FOR IN AN IDEAL MONITOR?
















"Smooth and solid frequency response, from 115 dB to as low as you can hear, is critical. When some monitors are played loud, they sound one way, and when they're turned down they lose the body of the mix. The tonality of our speakers here remains the same at a low level. To me, that's real important.

(continued on page 20)

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 <p>M-88 Bi-Directional Printed Ribbon Microphone</p>	 <p>M-85 Noise Cancelling, High Fidelity, Printed Ribbon Microphone</p>	 <p>FX-300 MONITOR/ROAD POWER AMPLIFIERS FX-600</p>	<p>?</p> <p>New at the AES - Anaheim CA</p>

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World Radio History

Studio Monitor Forum

(continued from page 18)

Country music is totally different from a monitoring standpoint. In Nashville, most studios are set up for country monitoring, and if you bring in a rock and roll band, it just doesn't sound right."

HOWARD WOLEN Independent Engineer

"I like the UREI 813's. They seem pretty natural. Any EQing I do on them trans-

ing is done, to hear how it sounds. I think this is the last place you need a surprise. I like monitors that sound not necessarily good, but accurate. And accurate at all power levels; not one that sounds good at exactly 90 dB SPL, and fakes you out at 75 or 110 dB."

AT WHAT LEVELS DO YOU LISTEN WHEN EVALUATING TAPES FOR MASTERING?

"We like to switch around, but normally listen between 80 and 90 dB. A lot of

normally fix it up in the mastering. If you blow a mix on UREI's, we sometimes can't do enough surgery to save the patient."

WHAT IS THE DIFFERENCE THERE?

"I think the difference is the JBL and Westlake/Eastlake designs are more forgiving. The UREI's are very exacting."

ANYTHING ELSE?

"There is one thing that has really got me. If you go to the mastering studios on the West Coast, like Alan Zentz or Kendun, you find the common monitoring setup you'd find in a recording studio. Very similar. However, if you go to Sterling, or Masterdisk, or the New York places, Frankford/Wayne and such, you don't have standard monitors. George Marino masters on Snell 'Type A's. Bob Ludwig uses Quad's. This is high grade home type stuff. That's not common out here, but it is common on the East Coast. That's a strange situation."

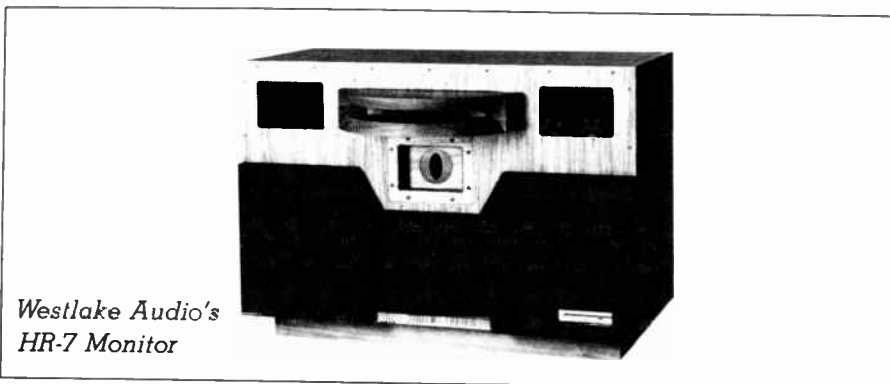
PAUL CHRISTENSEN Owner/Engineer Omega Audio, Dallas

WHAT DO YOU THINK ABOUT THE JBL BIRADIALS YOU HAVE?

"They're the best monitor I ever mixed on, for a lot of reasons, not just accuracy. I think they've broken through and done things with this monitor that weren't possible before: incredible dispersion, there's just no sweet spot; people can sit in there for twice as long before they have any fatigue problems; low distortion and flat frequency response. Also, we don't have to biamp them. We're running them with a Crown PSA-2, and they're killers."

YOU'RE USING THEM WITH THE STOCK JBL PASSIVE CROSSOVERS?

"Just as they came. Just hook 'em up and go. When we built the room I spent days there, with string and a dummy in a chair, thinking about the sweet spot. Now I find I don't have one. On the far side, in the producer's area, you hear the same exact thing. You can sit in the back in sofas, and there's hardly any bass build-up. I don't know how much of that's a function of the LEDE design, or the monitors. When I first heard these at the AES convention, I was so impressed with them, even under those conditions, I decided to give them a whirl. And I haven't been disappointed. In my opinion, when UREI came out with their thing, they got JBL back to the drawing board, and they've gone way beyond UREI now. To me that's what technology is all about."



Westlake Audio's
HR-7 Monitor

lates pretty well to most other speakers, like the JBL 4311's or Acoustic 626's."

WHAT PERCENTAGE OF YOUR WORK IS DONE ON THE MAINS?

"I'm always switching around, but I do about two-thirds on the mains, and the rest is divided between the 4311's and the Auratones."

WHAT IS IT ABOUT THE UREI'S YOU LIKE BEST?

"The sound seems to hit you all at once, that's the idea behind the Time-Aligned monitor, and you get a truer characteristic of the bottom response."

HOW WOULD YOU DESCRIBE THE IDEAL MONITOR?

"My ideal monitor would be something that sits where the VU meters are on the board, and would be small so they could take a lot of the room characteristics out of what you're listening to. Things like these are being developed all the time. Yamaha has a pair that sound real good, a little on the trebly side but they're in that ballpark."

LARRY BODEN Chief Engineer, JVC Cutting Center

"We have two studios, one has (JBL) 4343's, and the other has Fostex LS-4's. I don't think the *average* monitor is that good. We get a high calibre of clientele in here, and a lot of times people are surprised after all the tracking and mix-

studios make the mistake of trying to save money by cheapening their monitoring system. That's the last place I would try to save a buck. I would get the best possible speakers I could, and especially get the best possible amplifiers."

SO YOU FEEL THAT AMPLIFIERS ARE A CRITICAL PART OF MONITOR SOUND?

"Yes. Some speakers will sound entirely different with different amplifiers. Other speakers aren't so picky about what's pushing them. I've found the UREI monitor line to be relatively insensitive to top-of-the-line amplifier differences. Others, however, like Fostex and certain JBL monitors, are very particular. It's just a matter of trying different amplifiers and experimenting."

WHAT ADVICE DO YOU HAVE FOR ENGINEERS FROM YOUR MASTERING STANDPOINT?

"In the mastering studio it's very much a live or die situation. This is it before it goes to the disk. If you blow it here, you can really blow it. A good engineer can make records on any kind of speaker as long as he's used to it. The trick is to know what those speakers are giving you. But if they're giving you the truth, that's better, so you don't have to compensate for them while mixing. If mixers who blow a mix are faked out by their monitors, and are using JBL, Eastlake, Sierra, or Westlake speakers, we can

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Chris Stone - President, Record Plant Scoring, Inc.



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“We needed a loud-speaker system that could

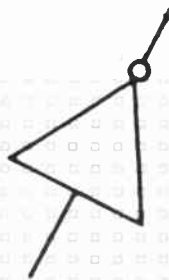
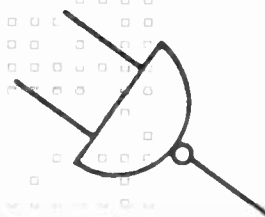
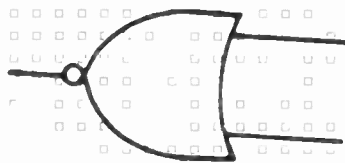
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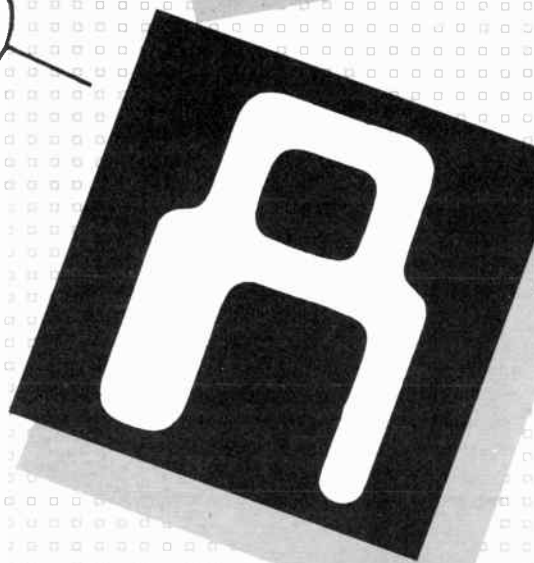
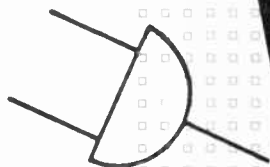
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DIGITAL



ALGEBRA



by Ken Pohlmann



Our era is the Age of Information. If reasonably intelligent human beings have been around for the equivalent of 600 lifetimes or so, consider how things have changed in the most recent couple of lifetimes. All of that is due to information, and how we process, and utilize it. As I mentioned last month, a big step forward in information processing was the devising of number systems to represent our information. Another more recent step was the devising of number systems to handle those numbers. But obviously numbers alone are insufficient. We also need a set of fundamental logic operators to manipulate the

numbers, as well as a system of mathematical logic to manipulate the logic itself. That would give us the tools necessary to design the logic networks which comprise useful digital systems.

Boolean algebra is named in honor of its inventor George Boole who published his account in 1854 in the very curious work entitled: An Investigation of the Laws of Thought. One aspect of his work opened the doors to symbolic logic. For example, consider these three premises:

1. Babies are illogical.
2. Nobody is despised who can manage a crocodile.

3. Illogical persons are despised.

The irrefutable, absolutely logical conclusion is, of course:







4. A person able to manage a crocodile is no baby.

More along the lines of the discussion at hand, we are interested in Boolean algebra because it presents a method to combine and manipulate binary signals. It is of primary importance in the understanding of digital systems; the form of Boolean algebra used in all digital computers is called switching algebra. Working from the basic postulates we can define a set of basic logic operations using one or two



(continued from page 22)

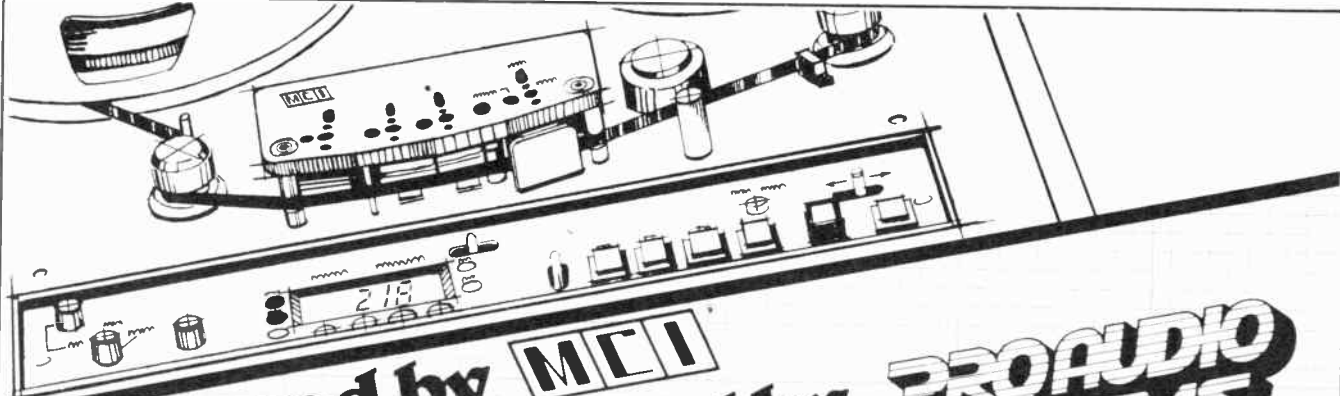
variables. They are listed below:

Complement	$F = \bar{X}$	<table border="1"> <tr><th>X</th><th>\bar{X}</th></tr> <tr><td>0</td><td>1</td></tr> <tr><td>1</td><td>0</td></tr> </table>	X	\bar{X}	0	1	1	0					
X	\bar{X}												
0	1												
1	0												
AND	$F = XY$	<table border="1"> <tr><th>XY</th><th>XY</th></tr> <tr><td>00</td><td>0</td></tr> <tr><td>01</td><td>0</td></tr> <tr><td>10</td><td>0</td></tr> <tr><td>11</td><td>1</td></tr> </table>	XY	XY	00	0	01	0	10	0	11	1	
XY	XY												
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OR	$F = X+Y$	<table border="1"> <tr><th>XY</th><th>$X+Y$</th></tr> <tr><td>00</td><td>0</td></tr> <tr><td>01</td><td>1</td></tr> <tr><td>10</td><td>1</td></tr> <tr><td>11</td><td>1</td></tr> </table>	XY	$X+Y$	00	0	01	1	10	1	11	1	
XY	$X+Y$												
00	0												
01	1												
10	1												
11	1												
Exclusive OR	$F = X \oplus Y$	<table border="1"> <tr><th>XY</th><th>$X \oplus Y$</th></tr> <tr><td>00</td><td>0</td></tr> <tr><td>01</td><td>1</td></tr> <tr><td>10</td><td>1</td></tr> <tr><td>11</td><td>0</td></tr> </table>	XY	$X \oplus Y$	00	0	01	1	10	1	11	0	
XY	$X \oplus Y$												
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N AND	$F = \overline{XY}$	<table border="1"> <tr><th>XY</th><th>\overline{XY}</th></tr> <tr><td>00</td><td>1</td></tr> <tr><td>01</td><td>1</td></tr> <tr><td>10</td><td>1</td></tr> <tr><td>11</td><td>0</td></tr> </table>	XY	\overline{XY}	00	1	01	1	10	1	11	0	
XY	\overline{XY}												
00	1												
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N OR	$F = \overline{X+Y}$	<table border="1"> <tr><th>XY</th><th>$\overline{X+Y}$</th></tr> <tr><td>00</td><td>1</td></tr> <tr><td>01</td><td>0</td></tr> <tr><td>10</td><td>0</td></tr> <tr><td>11</td><td>0</td></tr> </table>	XY	$\overline{X+Y}$	00	1	01	0	10	0	11	0	
XY	$\overline{X+Y}$												
00	1												
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Given this set of operators, our next step is to develop a system of algebraic relations which forms the basis of digital processing in the same way that regular algebra governs the manipulations of our familiar base ten operators. In fact, the two systems are very similar, to the point of confusion; thus the following laws hold true from switching algebra, but remember that they are often uniquely defined:

- Idempotence $X + X = X$
 $XX = X$
- Complementation $X + \bar{X} = 1$
 $X\bar{X} = 0$
- Involution $\overline{(\bar{X})} = X$
- Commutation $X + Y = Y + X$
 $XY = YX$
- Association $X + (Y + Z) = (X + Y) + Z$
 $X(YZ) = (XY)Z$
- Distribution $X(Y + Z) = (XY) + (XZ)$
 $X + (YZ) = (X + Y)(X + Z)$
- Absorption $X + (XY) = X$ $X(X + Y) = X$
 $X + (\bar{X}Y) = X + Y$ $X(\bar{X} + Y) = XY$

These laws are important in the reduction, or simplification of tangled logical expressions. When the end result of an expression is a hardware circuit, such simplification is understandably crucial. For example, con-



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sider these expressions:

$$F = XY + X\bar{Y} + \bar{Y}(X + \bar{X})$$

$$F = XY + X\bar{Y} + \bar{X}\bar{Y}$$

$$F = XY + X\bar{Y} + \bar{Y}$$

$$F = \bar{Y} + YX$$

$$F = X + \bar{X}\bar{Y}$$

$$F = X + \bar{Y}$$

All of these functions would call for different hardware circuits, but their outputs are all identical. Obviously, the last representation would be the designer's choice.

The process of reduction requires a thorough knowledge of the switching laws, as well as a few clever techniques. For example, it is often desirable to obtain a mathematical expression from a truth table. Canonical forms, using minterms and maxterms, are used for this. The canonical sum of products can be used to realize circuits using only NAND gates and the canonical product of sums can be used for NOR gate circuits. Another important reduction trick is expressed in DeMorgan's Theorem. This theorem has the form:

$$\overline{XY} = \bar{X} + \bar{Y}$$

$$\overline{X + Y} = \bar{X}\bar{Y}$$

You might have observed that with this theorem a computer could get by with only the OR and NOT operators, since the theorem could be used to generate the other:

$$XY = \overline{\bar{X} + \bar{Y}} \text{ forms AND from OR \& NOT}$$

$$X \oplus Y = \overline{(\bar{X} + Y)} + \overline{(X + \bar{Y})} \text{ forms XOR from OR \& NOT}$$

The implementation of problems solvable by combinational logic is the essence of digital design. As an example, let's look at a classic case—the binary adder. Let us assume that we have two binary words to be added together; we must design a logic network that forms this sum. The simplest case is that of a part of 1 bit words. The desired truth table is shown below, detailing the two input words X and Y, and the output sum and carry, S and C:

X	Y	S	C
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

From this truth table we can form a logical expression to realize the desired summation:

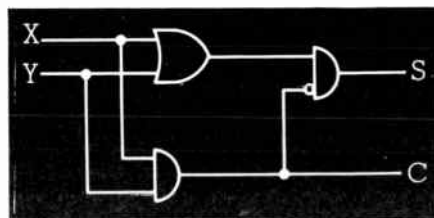
$$S = \bar{X}Y + X\bar{Y} \text{ or, more efficiently,}$$

$$S = (X + Y)(\bar{X}\bar{Y})$$

$$C = XY$$

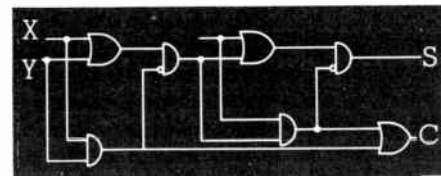
The resulting network is called a half

adder. One possible realization is shown below:



Of course, a more useful network would be able to handle inputs more than one bit in length. After some thought, we see that an effective solution to this problem is a string of adder cells, as long as the word length. One

possible solution is to use two half adders to form a full adder cell. One half adder adds the augend and addend to form a partial sum and carry. The other half adder adds the partial sum and the previous carry to form the final sum and carry. Both overflows are OR'ed together and applied to the next cell stage. The scheme is shown below:



(continued on page 26)

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MIX READER PROFILE

Patrick Gleeson

OCCUPATION:
Synthesist/Studio Owner

BACKGROUND:
A co-creator of the acclaimed Different Fur Studios in San Francisco, Patrick has added tracks to many award winning albums and film soundtracks

RECENT PROJECTS:
Realization of Vivaldi's "The Four Seasons" on Varese Sarabande Records. The album was recorded 'digital to digital' with two Synclavier II's replaying the complete work from computer memory to a Soundstream digital two track.

ABOUT MIX:
"The staff here at Different Fur never misses an issue of Mix. Advertising in the Mix has also proven successful."



This is an operational, but clumsy solution. Starting from scratch, we can develop the full adder from its truth table:

X	Y	C ₁	S	C
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

That truth table can be represented by these logical expressions:

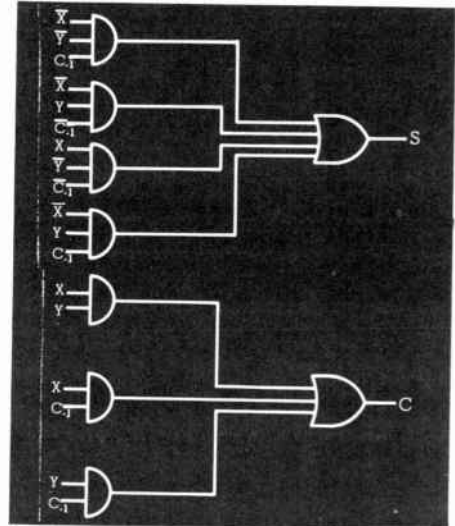
$$S = \overline{X}Y\overline{C}_1 + \overline{X}Y C_1 + X\overline{Y}\overline{C}_1 + XY C_1$$

$$= X \oplus Y \oplus C_1$$

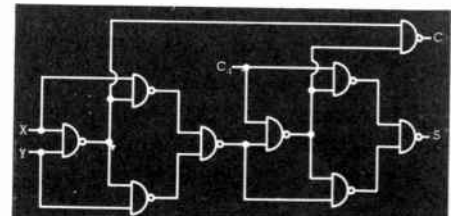
$$C = \overline{X}Y C_1 + X\overline{Y} C_1 + XY \overline{C}_1 + XY C_1$$

$$= XY + X C_1 + Y C_1$$

And those two expressions can be easily realized in actual circuitry:



However, the need for complementation variables and two different kinds of gates is somewhat uneconomical. A more efficient realization uses nine identical NAND gates:



Thus, we have seen a few of the elementary methods used in designing logic networks to accomplish simple arithmetic operations. Of course, that is still a long way from sophisticated information processing, but everything from here on out, from TTL gates to sorting routines—all are essentially grounded in switching algebra. Next time I'll consider the problem of storing the information once the processing is done. ■

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THE JINGLE BIZ

CHICAGO STYLE

by Cary Baker

The recession has taken its toll on most "luxury" industries. And as the technology moves forward, the economy often can't keep the pace. Indeed, the viability of commodities like cable and pay TV, videodiscs, laser mini-discs and home video is evaluated by their slowness to appear in living rooms across America.

Such an economy, of course, coupled with a glut of product, a minimum of channels for exposure of new music and a tightening of reins in all factions of the record business, often points to reduced recording budgets. And decreased studio activity.

Except in Chicago. Yes, Chicago.

No, you're perfectly correct to assume that a certain amount of recording activity was displaced when Mercury/Phonogram and Brunswick left town; Wooden Nickel, Ovation and Chess dissolved; and Curtom restructured, essentially leaving Chisound, Alligator, Delmark, Flying Fish and Erect. But Chicago's four major downtown studios—many of whom you'll recognize from their credits on the liners of LP's by Styx, REO, the

Ohio Players, Heart, Third World and the Blues Brothers—are booked day and night. The magic word along Michigan Avenue's "Magnificent Mile" is **jingles**.

"I estimate the value of the jingle business to be somewhere in the neighborhood of \$30-million a year

by the time composers, producers, studios, orchestras and musicians are paid," says Ruth L. Ratny, editor and publisher of *Screen: The Weekly Newsletter of Chicago-Originated Production*. Her estimate is quantitatively compiled through union figures and other sources, developments up-



Morris 'Butch' Stewart producing a jingle session for JoyArt.

dated both weekly and in an annual jingle music sourcebook and special report.

The reason, of course, for this rare streak of prosperity—which, by the way, does not necessarily transfer to many of the “off-Michigan” studios with many prominent exceptions—is that four major international advertising agencies’ corporate headquarters are along the Mile: J. Walter Thompson; Leo Burnett; Tatham, Laird, Kudner; and Needham, Harper, Steers.

The agencies, in turn, call on any of upwards of 40 “music houses,” including prototypes like Dick Marx & Assoc., Com/Track and Nuance, as well as ambitious up-and-comers like Colnot-Fryer, Marier Music, Joy-Art, Hershel Commercial, MTS and MasterSource.

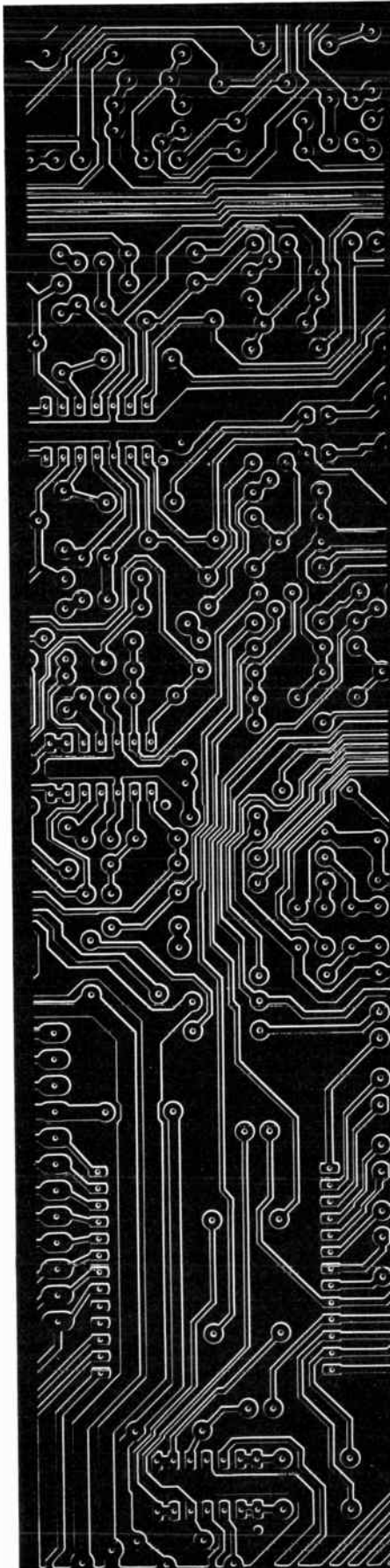
With the exception of a few houses which have their own in-house demo studios (Steve Sperry & Co. among them), music houses buy time at any of four “Magnificent Mile” studio complexes—Universal, Chicago Recording Company (CRC), Streeter-ville and Paragon. It’s commonplace to hear that Weather Report or Shoes are cutting their next album down the hall from a Com/Track session for McDonald’s. And the studio owners target both clientele.

“If it weren’t for the presence of several Fortune 500 companies and top-notch agencies, there’s no way you could have built a complex like ours just to serve the record business. You’d have built an albatross,” says Alan Kubicka, at 32 the president and founder of the Chicago Recording Company, who claims his three 24 track music studios and four production/sound effect/editing studios turn out “more commercials than any other single studio in the country.”

“I know we do more jingles than anyone in Chicago—that’s a fact—and that Chicago is second to New York in total jingle production,” says Kubicka. “But by virtue of the fact that you have three or four studios competing for the pie here, and 30-some complexes in New York, each studio here has got to be doing more than most studios in New York.”

A large part of the commerce at CRC and other downtown studios is the industrial and trade slide show and film soundtrack. For instance, a McDonald’s convention in Las Vegas attracting all 5,000 franchisees may utilize a commercial music house to score and produce an original music program, in turn recorded at Chicago’s “Big Four.”

“Chicago has always been diversified,” says CRC engineer and operations manager Hank Neuberger. “It’s always catered to the record and



The design of a recording console must successfully integrate the elements of function, style, and technology. In the rapidly advancing world of professional audio high demands are placed on consoles and critical attention is focused on their operational systems, sonic performance, and construction quality.

A console must be an adjunct of the creativity of the audio engineer; it must offer great flexibility yet be intuitive in its operation. The most innovative circuit topologies must be incorporated, to limit noise and distortion to their physical minima. When these criteria can be met in a package that is attractive and durable, the result sets a standard by which other designs are measured.

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CHICAGO STYLE

advertising business. So when the record business fell off, it was able to continue because of the steadiness of the ad accounts."

Contrasting a record session from a jingle session, Neuberger cites the "faster pace" of the latter. "You see 30 or 40 music stands, 30 or 40 chairs in the room, 30 or 40 single-ear headsets for the string and horn players. You record the rhythm tracks, then, ten minutes later, 30 strings, and eight minutes later, 30 singers. A fully-orchestrated McDonald's or United spot, 30 or 60 seconds in its finished state, may be done in five to eight hours," he says.

This, he adds, is because most of the creative decisions are made prior to the producer's arrival at the studio.

"The recording studio is expected to provide a facility technically



able to execute these previously-made decisions in the shortest amount of time, mostly due to the high price of talent."

Joanie Pallatto, a Chicago vocalist who's heard coast-to-coast as the official voice of McNuggets and

(Above) A shiny 1955 Pontiac Star Chief two-tone coupe, supplied with a full tank of gasoline, was awarded by Donn Marier, president of Marier Music and SynthetScore of Chicago, to Bruce Kramer, art director at Ogilvy-Mather Advertising, Inc., in Chicago, in a promotion staged to create visibility for the Chicago-based jingle and commercial music house.

In order to enter, ad agency creative personnel had to call Marier Music requesting the producers' latest sample tape. Attached to every tape was a raffle ticket. The auto, long the prized possession of Marier, was awarded in a gala cocktail party held at Streeterville Recording Studios in Chicago.

Among Marier's recent commercial music campaigns are Jovan, RC Cola, Sears, Cessna and the Chicago Sun-Times.

Brown's Chicken, sings evenings as a member of nightclub jazz ensemble Sparrow AM/FM, a moonlight stint that she feels "strengthens my vocal cords and gives me a chance to stretch out.

"You're given a lead sheet, headphones with the band track already recorded, and you must sight-read because time is money in the studio," she says. "One must also have perfect intonation, blend and stylization. You learn, for example, that it's not 'You dee-serve a break today,' but rather 'You d'serve a break today.' You need to adapt to the style the producer wants."

Donn Marier, one time leader of new wave recording group Citizen,
(continued on page 32)

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Circle #019 on Reader Service Card



(continued from page 30)

returned to his original line of work—jingle writing and producing—"Because you can't get paid in the record business. Getting paid is certainly a privilege for working just as hard as I did on records, yet I actually earn a living doing this.

"Further, doing commercials gets me to look at areas of music I've never looked into. Sometimes, you work with a musical possibility that might never have fit with anything other than the film you happen to be writing it for," says the owner of Marier Music and its original electronic music subsidiary, SynthetaScore.

Marier adds that he's delighted to see many of his friends from the record business joining him in the advertising world.

"Ultimately, with these new faces," he says, "advertising will become a *leading* creative entity instead of a *following* one. Advertising may one day musically lead a direction. I'm working on such a commercial right now, and we'll see if it makes it to the air. Who's to say who's going to be working in the ad business who once made a fortune in the record industry?"

Marier is not alone in making the transition from one field to the other. Chicago jingle producer Morris "Butch" Stewart of Joy-Art, one day envisions his return to record-making, having started as an understudy to late Chess Records producer Charles Stepney.

"Sure, no musician intends to land in the jingle business when they're starting out in high school," says Stewart, "but they eventually see that you can make a buck in an industry like this, and that it's very stable. Most end up staying, but not *this* kid!"

While Stewart has, and continues to solicit, many lucrative accounts like Hyatt, General Mills, Schlitz and Fisher-Price, he's in the process of completing construction of a home 8-track studio in his suburban home with extensive customization by studio technician Bob Lucas. He's put it through a few practice runs, "and it really taxes the musicians—they love it!"

He worked on some record demos at home, details of which are premature, during June/July—when many advertising creatives take their

vacations. August, however, found him back in the saddle, writing and producing more commercials like his Clio Award-winning "doo-wop" spot for Coca-Cola, shown a few years back.

As Chicago benefits from the conquests of the Illinois Film Office, spearheaded by Lucy Salenger who helped bring movie shoots like *The Blues Brothers*, *Ordinary People*, *Continental Divide*, *Four Friends*, *Thief* and *My Bodyguard* to the city, Streeterville Studios manager Jim Dolan, Jr., sees the record business undergoing a major redefinition.

"It will become more of a *media* business in general," he believes. "And as that happens, the record side will pick up again. Chicago has always been much more involved across the board. And that's why some of our studios have been more successful during a supposed down time."

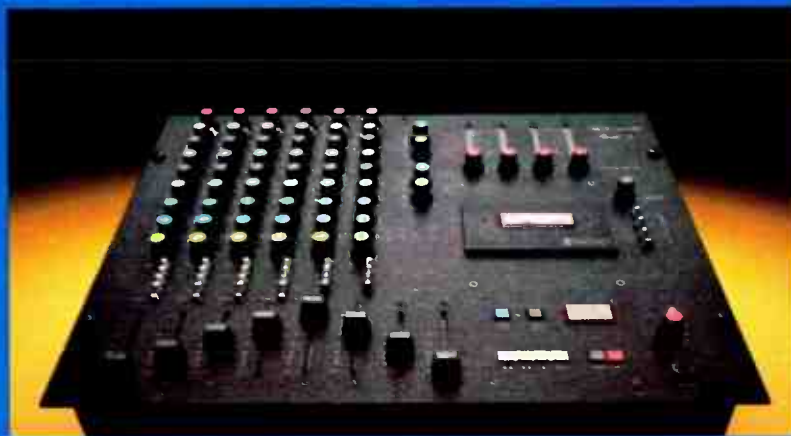
"Chicago has spent a lot of time and talent in the jingle business—arranging, writing, performing and recording—whereas New York and L.A. talent is diverted to other areas. It's more likely that their focus is film or television. A lot of our talent has always thrown a few cents into this jingle melting pot—not just for two or five years, but for 15 years. We see a lot of people with talent and aggressive attitudes that can do jingles and get better.

"I'm 29 and I've been in the studio business for 11 years," says Dolan, "And I still have a lot of energy to put into the commercial thing. And it's looking to be a steady industry—we've tripled the number of music houses in the last three to five years."

Indeed, it's nearly impossible to find a single jingle music producer or studio owner involved with jingle music who has something less than glowing to report on the state of affairs. Nobody in the mainstream of the field has sights set on New York, Los Angeles or Nashville. Shelley Elias, partner in the prolific TMK-Elias music house, even moved to Chicago following a stint with Hanna-Barbera in L.A., to get his piece of the action.

Screen magazine's Ruth Ratny puts Chicago's terminal "Second City" complex in a nutshell when she says, "We look at each other in a tiny mirror instead of taking in the larger picture. Ad agencies here don't use out-of-town jingle houses, but Chicago jingle houses often work for out-of-town agencies. The only people who tend to undermine Chicago's role in the field are Chicagoans themselves. Too often, we tend not to appreciate how good and strong we actually are in the national picture. ■"

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Objectives — Studio 4

- Packaged correctly — sturdy — usable
- Easy to understand and use
- Readily interfaces with your existing equipment (Mic Cables — Guitar Cables — Condensor Mics)
- Incorporate features necessary to do professional quality recording
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Results — The Studio 4

- Packaging — The Studio 4 comes in a 19" rack mount, metal package (optional wood sides available). The Studio 4's packaging will live up to your demands on the road.

Features — Back

- 6 transformerless balanced XLR mic inputs (You can use your existing cables and connectors plus you won't have to buy expensive matching transformers).
- 1/4" line and 1/4" effects looping jacks/direct outs (You can have both mic and line sources plugged-in simultaneously plus use existing 1/4" phone plugs instead of buying adaptors)

Features — Back (Continued)

- Phantom Power — built in 48V Phantom Power supply to allow you condensor mic use.

Features — Front

- E.Q. — Studiomaster "Parametric E.Q." allows you total control over your sound. *Separate* Frequency Select and Cut/Boost Controls give you easy control both audibly and visibly.
- 6 input channels — 6 channels lets you, for example, do a complete drum mix — or function as a live or keyboard mixer. 6 channels gives you real flexibility.
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- Remix — The "Remix" functions on the Studio 4 are clearly labeled. The term "Remix" is one you easily recognize and the way we've laid it out makes it easy to use.

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World Radio History

TRENDS IN 1982

THE MIDWEST MARKET

by Tim Clark

In an age when nearly everybody in the recording business is talking about digital, it seems odd that that is all they are doing—talking. The fervor, on the other hand, lies with higher-tech analog equipment, half-inch two track tape and remote recording.

The digital age will come, but costs must be reduced and skepticism reversed. "We're getting no requests for digital," said Jerry Milam of Milam Audio in Pekin, Illinois. "I think all

studios will eventually go digital, but now it is hard to see its cost-effectiveness," he added. For Solid Sound Studios in Ann Arbor, Michigan, digital just can't be fit into their budget. "Digital isn't happening," said owner/manager Robert Martens. He said that digital has to be cheaper or studios will give up on it. He also said the revenue isn't there to convince studio owners to invest in digital. With costs so high, returns can't be seen in the near future.

Chief engineer Andy Symons

of TRC Mid-America in Indianapolis also said it is not quite time for digital, at least in the Midwest. "I think the Midwest is staying analog for a while," he said, pointing out the common search for alternatives to digital in economically troubled times.

"The biggest problem right now with digital is the price," remarked Doug Orden of Chicago's AVC systems. "People are beginning to look real hard at analog systems that will be

(continued on page 37)

STREETERVILLE: SPECIALIZING IN VERSATILITY

Streeterville Recording Studios, Chicago, is a sprawling complex of five studios that is solidly entrenched in audio communications.

Streeterville set up shop at the present location in 1968, in association with a TV and radio production company called Shield Productions. The original facility consisted of "Music I," a 16 track music room accommodating up to 40 musicians, and two production studios with 8 track and 4 track capabilities. Streeterville spent the next ten years growing and establishing itself as an independent and diverse state of the art recording studio involved in the vast production scene of Chicago.

Since Chicago has a reputation as the Blues and R&B capital of the world, and as one of the nation's

advertising centers, it is not surprising that the studio keeps busy with a variety of recording. On one particular day, everything from a rock and roll album to a slide film for Encyclopaedia can be recorded. Commercials such as United Air Lines, RCA, McDonalds, Pizza Hut, RC Cola, Marlboro and Schlitz are just a few examples of what keeps the studio busy during the day. Evenings are busied with bookings for rock bands, blues bands, Chamber Consortiums, demos, etc.

Jim Dolan, Jr., Studio Manager, says, "I watched the growth of the recording media in Chicago over the years and realized the need for expansion. In 1979, we chose Perception, Inc., George Augspurger and Jack Edwards, to design

two new 24 track rooms now commonly known as 'Music II' and 'The Mixing Suite' (hereafter known at the 'Suite'). Along with Music I, which was rebuilt in 1980, this gives Streeterville three music rooms: a 40 person room, a 25 person room, and the Suite, with a 10 person sweetening booth.

"The concept of the expansion," Dolan says, "had to be a unique one because of the diversity of our clientele. It was to have versatile, but compatable rooms which could be used independently or simultaneously. For example, on a Budweiser Light commercial, I recorded the rhythm tracks in Music II, did large orchestra overdubs in Music I, and vocals and dubdowns

(continued on page 40)



Back Issues

- 1980 July, N. Cal/Northwest Studio Listings. Independent Recording. Fantasy Studios. The Jingle Biz.
- 1980 August, Southeast Studio Listings. Opryland Mixing. South Florida Recording. Recording School Listings.
- 1980 September, S. Cal Studio Listings. Equipment Leasing. Rock Vibe. Indigo Ranch.
- 1980 October, Northeast Listings. Ken Scott's Studio. Construction Problems. Sigma Sound.
- 1980 November, AES New Products. Studer Grand Opening. Wally Heider. Console Automation.
- 1980 December, Tape to Disk Listings. Leon Russell. Disc Mastering. Frankford/Wayne.
- 1981 January, Northwest Listings. Recording Schools Update. Laservision. Leo Kulka.
- 1981 February, Southeast Studio Listings. Ray Stephens. Norbert Putnam. Ardent Recording.
- 1981 March, Southwest Listings. History of the Tape Recorder. Producer's Role. Indian Creek Recording.
- 1981 April, Northeast Listings. Todd Rundgren's A/V Studio. Women in Audio. History of the Tape Recorder, Part 2.
- 1981 May, AES Spring Update. Mike Love's Studio. Envelope Controlled Filters. Women in Recording, Part 2.
- 1981 June, Video Focus. Moogy Klingman. Video Equipment Manufacturers. Introduction to Video.
- 1981 July, Recording Services Listings. Recording School Listings. Remote Recording. Maintenance.
- 1981 August, Studio Design Listings. Dealing with the Bldg. Dept. Building Materials. Monitor Field.
- 1981 September, S. Cal. Listings. Tape Editing. Creative Record Promotion. Janna Feliciano.
- 1981 October, N. Central Listings. Digital Reverb. Chicago Music Recording. John Ryan.
- 1981 November, 1981 AES New Products. Drum Synthesizers. Studio Monitor Report. Carla Bley.
- 1981 December, Tape to Disk Listings. Lee Ritenour. Tape Tips. Sony Compact Disc. High Speed Duplication.
- 1982 January, Northwest Listings. Mixing Consoles. Grateful Dead's Studio. Lindsey Buckingham.
- 1982 February, Southeast Listings. Digital Synthesizers. Dave Edmonds. John Meyer.
- 1982 March, Northeast Listings. Car's Studio. Microphones. Phil Ramone.
- 1982 April, Video Focus. A/V Studio Listings. Video Music Satellite. Mike Nesmith. Legal Issues in Video.
- 1982 May, Southwest Studios. Quarterflash. Charlie Pride's Studio. Digital Recording. Fantasia Digital Soundtrack.
- 1982 June, Concert Sound & Remote Recording. Drum Machines, Part 2, Keyboard Artists Forum, Video Legal Issues.

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MILAM AUDIO

Mr. G. C. "Jeep" Harned
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1982 has been another very successful year, with increased MCI sales and installations of 14% over 1981, with indications for even higher growth before year end. The upgrading of present facilities accounts for most of the major sales, but new rooms are also on the increase.

Of the many great Mid-West cities where professionals profitably use MCI products, one of our Chicago clients has recently ordered his 50th major piece of MCI equipment. His incredible testimony is representative of the vast number of our clients that own MCI products in quantity.

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MCI's philosophy, to protect its valued clients against early obsolescence by releasing new products, only when the latest technology, serviceability, and cost are in proper alignment, is evident in the tremendous acceptance of your products.

As MCI's oldest U.S. dealership, we remain appreciative of your dedication and belief in the Mid-West pro audio market, and we look forward to our continued success as your Mid-West representative.

Sincerely,



Jerry Milam

(continued from page 34)

of use in the digital age," he said. Studio owners can more easily afford to buy analog equipment which can eventually interface with digital than to invest heavily in digital when the demand is not that high.

Orden also said the recording business is beginning to see more high-tech equipment at a lower cost. For example, in 1981, Lexicon introduced their third generation digital reverberation unit at the New York AES for \$7,500 to \$8,300. Ursa Major's 8x32, a comparable unit, came out in 1982 for about \$6,000. So costs are coming down and Midwesterners can expect more upgrading by existing studios and new smaller studios cropping up. "You don't need that \$1,000 microphone anymore to get that good sound," said Jonathan Lipp of Full Compass Systems in Madison, Wisconsin. "Price isn't everything," added Milam. "Equipment needs backup. People should be cautious and concerned to meet their needs while avoiding overbuying."

Lower costs mean expansion for many studios. And many are directing that expansion toward remote recording. Relatively new on a mass scale in the Midwest, its popularity continues to grow. "It's catching on, although it's found more on the coasts and in the South," said Henry Root of Hy James in Ann Arbor, Michigan. Since few top-level recording artists locate in the Midwest, demand is down. But it seems like everybody, including local acts, wants a live recording, so more and more studios are considering building remote trucks.

Depending on the format, a remote truck could cost from \$20,000 to \$200,000 according to Orden of AVC. This presents a problem for most studios because, again, cost-effectiveness must be proven to make the initial investment. Many don't even offer remote recording because of the hassle of preparation. "I rent a truck (for remotes) and will continue until there is enough business where it's more economical," said Rich Goldman of 5th Floor Studios in Cincinnati.

Remotes are popular and profitable for the ones which work well, said Kirk Yano of After Dark Studios in Cleveland, Ohio. Not only is remote recording more business for a studio, but a form of advertising. Musicians tend to notice equipment and the technicians behind the equipment, remembering them for future reference. The Recording Connection from Cleveland has made a name for itself all over the Midwest through its remote facility. But remote owners warn that a thrown-together operation can hurt a studio's

(continued on page 38)

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reputation.

TRC has recorded about a dozen acts with its remote unit in the past two years, according to Symons. AVC, who recently outfitted Full Sail Remote (see *Mix* June cover), has also taken notice of the surge of remote units. "It's definitely going places," said Orden.

Certain equipment has been going hand-in-hand with remote units, most notably the Otari MTR series tape machines. Dubbed "the most reliable tape deck I've ever seen," by Orden, the MTR series seems to be setting the precedent for remote owners. Its size has little to do with it, yet it can fit into most vans without tearing the door off. Otari has combined a free software update with micro-processor control and a port on the back for communication with a computer, preparing it well for interfacing. "It's one of the most popular items in the Midwest," said Jon Bormann of the Minneapolis AVC outlet. "Otari is also beginning to be recognized with an excellent product by many major studios," he added.

Another hot item, the Lexicon 244 digital reverberation unit, is helping move the industry more toward digital both in the studio and on stage.



Above: FutureSound Studios, a sixteen track operation in Beverly Shores, Indiana, offer their clients a full gamut of media services including studio and location recording and mixing, studio musicians, composing, arranging, jingle writing, soundtrack library, lead sheets, copyrights, BMI publishing, promotion packages, record pressing, photography, film and video tape production, sound stage/live concert facility and consultation services.

Michael Franklin, an engineer whose credits include the Elektra/Asylum release "Reggae Tribute/Sunplash '81, A Tribute to Bob Marley," is the owner and operator of FutureSound. He is one of the founding members of the Dunes Jazz Quartet, a group that tours with the 1950's Rock and Roll Show featuring Little Anthony, The Drifters, The Coasters, The Platters, Dell Shannon and Bo Diddley.

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DIGITAL AUDIO IN SPOTLIGHT AT MIDWEST MUSIC EXCHANGE

Musical performers, studio musicians, and recording producers and engineers were introduced to digital audio recording technology at The Midwest Music Exchange, July 25-27 at Chicago's Bismarck Hotel. An on-site digital taping of The Music Exchange's talent competition winners live in concert was one highlight of the three-day event.

The Midwest Music Exchange is the first Midwest-based music industry career development conclave for young professionals. According to Mitsubishi's Lou Dollenger, National Sales Manager for Professional Digital Audio, it was the first face-to-face encounter with the new technology for most of the meet's approximately 500 registrants.

Dollenger said the highlight of Mitsubishi's involvement was its taping of five acts selected through the Exchange for appearances at ChicagoFest, August 4-15. The live concert was taped in the huge, gilded Bismarck Hotel Pavilion, one of the largest halls in downtown Chicago. Heard in the recording are Byron Motley, The Gus Papellis Band, The Darrell Thomas Band, Stranded, and Chicago's Own Band.

Also involved in the Exchange were heads of leading Midwest record labels, studios and sound companies, along with invited music industry executives from around the country. According to Dollenger, keen interest in digital recording was expressed. "One thing that impressed me particularly," says Dollenger, "was the curiosity of the many young performers and sound engineers and the sense that the industry can't stand still technically and that digital is here to stay."

Paul Kelly, Elmhurst College's Music Business Program Director, is one of the organizers of the Exchange. "We were delighted that we could showcase the newest form of sound recording, effectively completing the picture of where business is heading," Kelly said,

The live showcase recording was engineered by Dollenger, with

mixing by Jerry Church and consulting by Marty McCann of Peavey and Toby Sali of Fostex. According to Kelly, a limited edition promotional pressing from the edited tapes will go to all registrants at this year's Exchange and to members of the performing groups. The album is scheduled to be mastered by Chicago's Hedden West Studios and will be pressed in St. Louis by Midwest Custom Pressing, another exhibitor at The Exchange.

Bormann calls it "the hottest thing on the market." Studios wanting a little better quality have gone to that unit despite skepticism in a pre-digital age. It has 0.5 to 70 seconds reverb time and an 86dB dynamic range, plus two, four or six reverb programs and 255 ms of pre-delay. The 244 and 244x coupled with Lexicon's Super Prime Time digital delay unit (the first micro-processor based signal processor) have helped Lexicon make its mark in the Midwest.

Another recording trend in the Midwest has been half-inch two track

(continued on next page)

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(continued from page 34)

in the Suite, all in the same day."

Needless to say, it was essential that the room changes be made very smoothly." Dolan elaborates, "While rhythm tracks were still being laid down, the assistant engineer was setting up for an overdub of 16 strings, 10 horns and 6 reeds in Music I. He also duplicated the cue mixes, monitor mixes and external patches on the console. This allowed the producer up to the minute time with the rhythm section, and enabled him to walk into a room with readied musicians which ensured an efficient start to the orchestra overdubs. I have found that these room changes not only save time, create more available studio time, but also can rejuvenate long sessions."

In contrast, for long "one-room" sessions, both Music I and Music II have lounges, kitchens and shower facilities in order to make any session comfortable.

Recording consoles in all three studios are Harrisons at this time. Music I has a 4032C, Music II has a 2824, and the Suite a 4032B series. Music I and Music II come standard with a complement of outboard gear consisting of Gain-Brain Limiters, Kepex's, Digital delay lines (MXR, Lexicon, Eventide), UREI Limiters, Pultec Equalizers and Orban Parametric Equalizers. The Suite is equipped with all of the above and with a few added goodies, like the Lexicon Prime-Time, Scamprack with Auto-panner and the Harrison Autoset Automated Mixing System.

The studios have MCI-JH24's and 3M79's, which can be used for 24 to 24 track transfers and potential 46 tracks sessions using the BTX SMPTE synchronizing system. The studios are all equipped with dbx 216 Pro-systems with the 310 Dcard except in the Suite, where there is also 24 channels of Dolby A Noise Reduction. Music I and Music II both have Century 3 with White 1/3 octave equalizers and Auratones for monitoring systems. The Suite has the same but also houses Tannoy 12's and offers the space for any supplementary monitoring a client would want.

Streeterville's post production services include expedient but high quality 16mm and 35mm Mag transfers, mono and stereo dubs in all track formats, and cassettes. The studio has a very specialized mass duplicating system of 1/4" tapes with such clients as Sears, True Value Hardware and other major accounts.

The staff at Streeterville Studios consists of ten engineers, and four office personnel. The engineer breakdown is four music mixers, three production mixers, two assistants and one tech. All the mixers are capable of doing any of the work, which is very beneficial in handling the clientele. "We do a lot of speed sessions around here," says one engineer, "and the temperment for doing that kind of work separates the men from the boys. Mixing is easy, but how not to turn a client away is something else."

tape. The concept is not new, but the enthusiasm is. Many studios are talking about it as well as using it. Several tape machines, including the MTR-10 series, can be used with it simply by changing the head stack. And the result can please even the most fanatical dB-minded engineer or artist.

"The days of noise reduction are over," claimed After Dark's Yano. Now that noise has become virtually inaudible, people are looking more toward larger dynamic ranges and better signal-to-noise ratios. Half-inch two track, with its increased surface area (200 ml), provides a signal-to-noise ratio of about 93dB, theoretically 6dB better than quarter-inch at 30 ips, according to Hy James' Root. "The high end response is phenomenal," he added.

The studios now using half-inch two track couldn't be happier. "We get two track quality approaching digital," said Jim Bosken, studio manager for Cincinnati's QCA Recording Studios. Robert Martens of Solid Sound calls it a great "alternative to digital," and Symons of TRC noted its advent all over the Midwest. Hy James' Root said, "there seems to be a lot of optimism (toward that tape format) especially with rock bands."

Any given number of people will give you the same number of ideas about trends. It does seem, though, that half-inch two track, along with remote recording, will continue to be the trend for the Midwest. Digital? Video? They are both on their way, but skepticism and a tight economy will stifle their progress. ■

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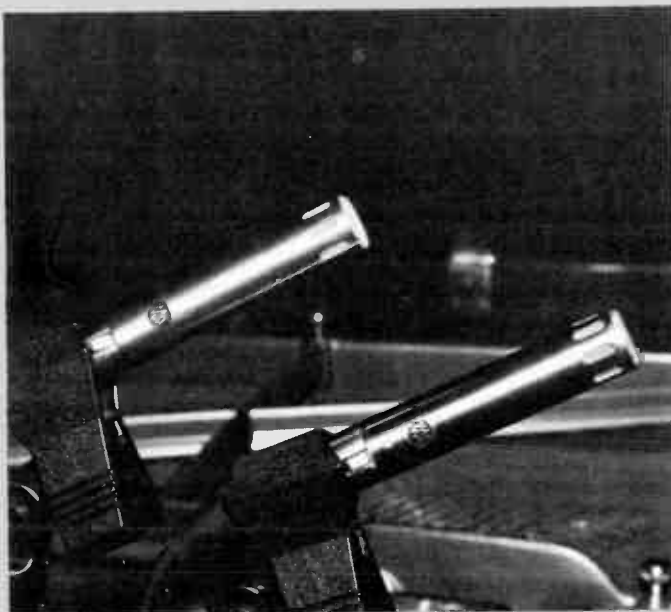
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STUDIO LOCATION INDEX

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with the studios directly. The Mix does not take responsibility for the accuracy of the information supplied to us by the studios.

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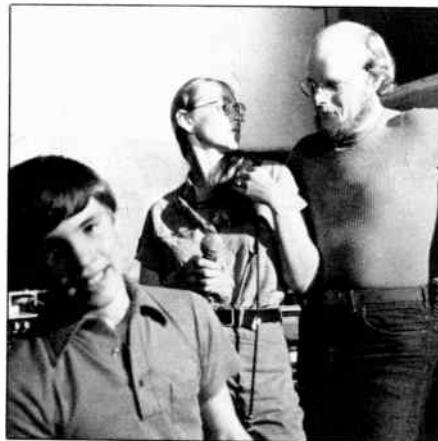
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Engineers: Craig Hardin, Colleen Watson, Mike Gemmer, independent
Dimensions of Studios: Studio A, 9' x 14' Isolation Booth 9' x 11'
Dimensions of Control Rooms: Control Room 9' x 14'
Tape Recorders: Ampex 44X 8 track (2) Otari, 5050R 2 track

Owner: Paul Rosenstein
Engineers: Paul Rosenstein
Dimensions of Studios: Remote recording only
Tape Recorders: Otari MX 5050B MK VIII 8 track Otari MX 5050H 2 track Tascam Porta Studio 4 track
Mixing Consoles: T.A.C. Amec 16 B 2 16 in 8 2 out
Monitor Amplifiers: Crown & Dynarm
Monitor Speakers: EV Sentry 100
Echo, Reverb, and Delay Systems: Grovit Brast, Sfrana reverb DelatLab DL4 & DL2, DDL's
Other Outboard Equipment: MXR Pitch Transposer Orban De Esser Orban stereo parametric EQ dit x .61 compressor X Tapco 10 band EQ (stereo)
Microphones: Sennheiser 441 421 X 3 Crown PZM EV RE 20 Neumann KM 84 Shure SM 81 X3 Countryman BM 101 UHF 1/2" stereo boxes
Instruments Available: Roland MP 600 electric piano Roland "Vocoder plus" Roland TR 808 "Rhythm Composer" Yamaha YC 45D organ Yamaha Leslie type amp ARP Duetra Fenler Precision Bass Fender Stratocaster (**) Roland SH 5 synthesizer Acoustic 470 instrument amp Ludwig 9 piece drum kit Takamine 12 string guitar
Miscellaneous Equipment: JOPF Whirlwind 16 channel 100 slave chromatic tuner Technics cassette Gold Line PTA
Rates: dependent on type of job (call for rates)

•• **ANDOVER AUDIO**
 also **REMOTE RECORDING**
 2387 S. Coon Creek Drive, Anoka, MN 55303
 (612) 757-6589
 Owner: Don G. Erickson
 Studio Manager: Don G. Erickson

•• **ATOM SMASHERS UNLIMITED STUDIO**
 also **REMOTE RECORDING (2 & 4 track)**
 Ferndale, MI
 All mail to: Silver Stone-Arrow Productions,
 P.O. Box 21054, Detroit, MI 48221
 (313) 584-8111 (Mon-Wed, Fri-Sat 12-6 p.m.), (313) 341-4227 (after 5 p.m. or after 12 noon Thu., Sat. & Sun.)
 Owner: John Annusser
 Studio Manager: John Annusser
Engineers: John Annusser, Jill Anne Hart, Robert Hartme
Dimensions of Studios: 32' x 23' x 15' and 20' x 15' x 10'
Dimensions of Control Rooms: 14' x 10' x 10'
Tape Recorders: TASCAM 408 8 track TASCAM 404 4 track Ampex 800 2 track Sony TC 602 2 track DuKoper JUBO 2 track Concord 776D 2 track
Mixing Consoles: Ramp 641 16 + 4 x 16 x 4 out TFAC Tascam 5 1/2 x 8 4 out two TFAC Tascam 4 1/2 x 14 4 out
Monitor Amplifiers: Custom XXSPA 600w. Incoon Challenger 100w Lafayette LA2525 and 25wch. Acoustic 200 slaves Dynaco 60w stereo
Monitor Speakers: Jensen JBI Precision Electro Voice flat wall range
Echo, Reverb, and Delay Systems: 40' x 20' x 15' echo room HH Electronics echo Maestro Flexbox Univox reverb AHI 800 8 channel reverb some other echo or reverb units available newest addition Koru Analog delay and doubler unit
Other Outboard Equipment: Four Soundcraft stereo 10-band equalizers 2 stereo TFAC ANFO Dolby units Phase linear A correlator model 1000 Electro Harmonix clone theory and chorus effect, complete reverb and monitoring systems patch bays Whirlwind 16 channel 100 slave custom 6 and 12 input snakes flanger over drive units distortion and many other special effects available
Microphones: Shure Audio-technica Electro Voice Sony and others available
Instruments Available: Mason Hamlin studio upright acoustic piano Hohner electric piano Yamaha YC 10 electric organ w Leslie Harisa combo compact w flanger Univox Multi Man string synthesizer w special effects, Univox Minikora K1 & K2 synthesizers Koru guitar synthesizer 1964 Fender jazz bass guitar Holter Beale bass guitar 6 string bass guitar 4 strings saxophone clarinet Ludwig drum set, congas tambourines and other instruments available
Video Equipment & Services: not in house
Rates: 2 & 4 track \$15/hr 8 track \$25/hr. We offer an 8 track special which costs \$150 and includes 7 hrs of recording time mix downs and complete use of elec. instruments and studio facilities. We don't charge for set up and first sound check either.
Extras: 1/2 tape provided at 50% below retail cost, we offer complete personnel musicians, composers lyric writers producers and director upon request Food stores and lodging facilities within one mile radius right on bus lines. Custom guitar repairs upon request, concert sound system and equipment rentals available w soundmen provided
Direction: We specialize in producing only high quality recordings and also provide recording industry recovery services. ATOM SMASHERS UNLIMITED STUDIO has the reasonable rates and casual atmosphere that every musician or producer needs to get the best airable or pressable sound in the lowest price. We independently produce TV and audio video shows which are not in use facilities. Special recognition goes to our management SILVER STONE ARROW PRODUCTIONS partnership company MOLECULAR MUSIC and THE EARTHMEN band.

•• **AUDIO GRAPHICS SERVICES**
also REMOTE RECORDING
 1516 Ferris Ave., Royal Oak, MI 48067
 (313) 544-1793
 Owner: Audio Graphics
 Studio Manager: Susan Wolfrum

•• **AUDIO HOUSE**
also REMOTE RECORDING
 Box 219, Lawrence, KN 66044
 (913) 843-4916
 Owner: Larry Miller
 Studio Manager: Bruce Laddell

•• **AUGGIE BOY STUDIO**
 12113 S. 72nd Court, Palos Heights, IL 60463
 Owner: Michael Phillips
 Studio Manager: Thomas M. Griffin

•• **BGD RECORDING**
 1601 Oakton, Park Ridge, IL 60068
 (312) 698-3644
 Owner: Bill G. Demis
 Studio Manager: Bill G. Demis

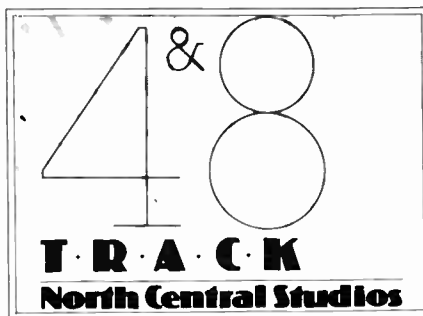
• **BARWIG RECORDING CO.**
 5254 W. Agatite Ave., Chicago, IL 60630
 (312) 283-2820
 Owner: Roy E. Barwig
 Studio Manager: Roy E. Barwig

• **BOULEVARD RECORDING STUDIOS, INC.**
 641 Madison St., Oak Park, IL 60302
 (312) 386-5388
 Owner: Hal Kutschick & Eleanor Kutschick
 Studio Manager: Hal Kutschick

•• **BREEZEWAY RECORDING STUDIO**
 363 W. Main St., Waukesha, WI 53186
 (414) 781-4493
 Owner: Lee & Marylee Crooks
 Studio Manager: Lee Crooks
 Engineers: Lee Crooks, Marylee Crooks
 Dimensions of Studios: 4' x 18'
 Dimensions of Control Rooms: 18' x 15'
 Tape Recorders: Otari MX 7800, 8 track, Otari 5050B 2 track,
 Technics RS MHS cassette, Sony TC D5M cassette
 Mixing Consoles: Solid State Logic Series 40 16 in x 8 out
 Monitor Amplifiers: AB Systems UREI Crown
 Monitor Speakers: JBL 4410 MDM 4 Auratone
 Echo, Reverb, and Delay Systems: Ecoplate II, Ursa Major 8 x
 4, Lexicon Prime Time, DeltaLab DL 2
 Other Outboard Equipment: dbx 180 noise reduction (on 8
 track) dbx 165 limiters, UREI LA 4 compressor limiters, Valley
 People DynaMite comp expand/noise gates, MXR flanger
 doubler, Orban 674A stereo para-graphic EQ
 Microphones: Neumann U89 U47 tube AKG 414B Senn
 heiser 441's 421's Electro Voice RE 20's, Shure SM81's 57's
 58's, PZM's, Sony C-48
 Instruments Available: Kimball baby grand piano, Hammond
 B 4 w Leslie, Rhodes electric piano, Sequential Circuits
 Prophet-5 Pro One synthesizers, Fender Precision Bass, Vintage
 Telecaster & Super reverb amp, Ovation 12-string guitar, Music
 Man amp, Ludwig drums w Zildjian cymbals
 Rates: Please call for low rates
 Extras: Video recreation, studio musician contracting, complete
 LP & 45 production, no extra charge for all instruments & out
 board equipment in house rehearsal halls
 Direction: Engineer Lee Crooks was the recipient of the Southern
 Wisconsin Music Association's Album Production of the Year
 award for his work on the debut album by the popular Milwaukee
 group Arroyo. During 1983 Breezeway will be expanding to
 16 tracks, this offers a full jungle production capability while still
 providing low cost, master quality demos in their 8 track facility

•• **BUCKEYE RECORDING SERVICE**
also REMOTE RECORDING
 109 West Main Street, P.O. Box 126,
 Van Wert, OH 45891
 (419) 238-4793
 Owner: Ray Tanner
 Studio Manager: Ray Tanner

•• **CAVE RECORDING STUDIO**
 1275 East Miner Road,
 Mayfield Heights (Cleveland), OH 44124
 (216) 449-3511
 Owner: Richard S. Cohen
 Studio Manager: Rick Cohen



• **THE COAL ROOM STUDIOS**
ONLY REMOTE RECORDING
 1413 W. Main St., Crawfordsville, IN 47933
 (317) 362-9605

Owner: Steve and Mary Pruitt
 Studio Manager: Steve Pruitt
 Extras: Exclusively a mobile facility, owned by born again Chris
 Tins. The Coal Room Studios serves schools, churches, and music
 groups with the following two fold guarantee: 1) Our prices are
 guaranteed to be the lowest available for recordings of this quality.
 2) We offer our services on a no risk basis. If not absolutely
 satisfied with our results, you pay nothing. Through an affiliate, we
 can provide complete convention recording services, including
 professional on site tape duplication. (The Coal Room Studios
 reserves the right to refuse its services to any group or individual
 presenting material deemed to be morally or religiously objection
 able by our standards.)

•• **CUSTOM RECORDING STUDIOS**
also REMOTE RECORDING
 3829 Scott Ave. No., Minneapolis, MN 55422
 (612) 535-2587
 Owner: Jim & LaVern Reynolds
 Studio Manager: Jim Reynolds

•• **FAITH RECORDING STUDIO**
also REMOTE RECORDING
 4252 Bingham, Dearborn, MI 48126
 (313) 581-7400
 Studio Manager: Anthony Amore

•• **FAITHFUL SOUND STUDIOS**
 712 W. Clark St., Urbana, IL 61801
 (217) 328-5065
 Owner: Antipode Arts, Inc.
 Studio Manager: Kirk Little

•• **GROUP EFFORT SOUND STUDIO**
 8317 Beta, Cincinnati, OH 45231
 (513) 931-TAPE
 Owner: Wayne A. Hartman and Dan T. Murphy
 Studio Manager: Dan Murphy
 Engineers: Wayne Hartman, Dan Murphy, Jerry Lane, Gary
 Bates
 Dimensions of Studios: 43' x 24', Piano Room 16' x 14', Iso
 Room 8' x 7'
 Dimensions of Control Rooms: 21' x 12'
 Tape Recorders: Otari MX5050 Mark III, (1) TEAC A 3440 4
 track, (3) Sony TCC cassette decks, Ampex AG-440B 2 track
 Mixing Consoles: (2) Tascam Model 5 modified & cascaded 16
 in x 4 out
 Monitor Amplifiers: Esoteric Enterprises modified Phase Linear
 400, JDM Headphone system
 Monitor Speakers: JBL L 166, Auratone 5C
 Echo, Reverb, and Delay Systems: Audicon Plate, Orban 111B,
 Fisher (2) DeltaLab DL 4 DL 2, Lexicon PCM 41, DeltaLab
 Memory Module DL 5 Harmonic computer
 Other Outboard Equipment: (2) Technics Parametrics, Audio
 Control C 22, UREI 550A, 565T, (2) Orban 245E, (3) MXR 13
 octave EQ, (4) Access Noise Gates, Spectra Sonics 610, Fair
 child De Esser, Systech & MXR Flangers, dbx 163, EXR Exciter,
 dbx & BEL Noise Reduction all JDM direct boxes, UREI LA4A's,
 IVP preamp, JDM distribution amp for cassette decks
 Microphones: AKG, Boyer, Electro Voice, Neumann, PZM,
 Sennheiser, Shure, Sony
 Instruments Available: Ludwig drums, Zildjian cymbals, Ham
 mond B 3 w 122 Rhodes, ARP Odyssey, Kora, Crumar Orchest
 rator, Fender amps, 5'8" Ellington baby grand
 Rates: \$30/hr, block rates available

•• **GST MUSIC PRODUCTIONS**
 17 Ponca Trail, St. Louis, MO 63122
 (314) 821-8432
 Owner: Greg Trampe
 Studio Manager: Alan Shalon

•• **HANF RECORDING STUDIO**
also REMOTE RECORDING
 1825 Sylvania Avenue, Toledo, OH 43613
 (419) 474-5793
 Owner: Ruth C. Hanf
 Studio Manager: Jim Thomson

•• **HOLY TRAX!**
also REMOTE RECORDING
 P.O. Box 2785, Livonia, MI 48151
 (313) 522-8463
 Owner: The Lord's House Livonia MI
 Studio Manager: Casey Bakker
 Engineers: Casey Bakker, Terry Lynch, maintenance, Keith
 Kestel, Mike Alderman
 Dimensions of Studios: 12' x 8' isolation booth, 7' x 5' drum
 booth, 14' x 12'
 Dimensions of Control Rooms: 14' x 12'
 Tape Recorders: Tascam 808 w/dbx, Tascam 35 2Bw dbx
 Tascam 122 cassette, TEAC 4400 1/4 track, Pioneer 9191, Otari
 4050 C2 stereo cassette copier
 Mixing Consoles: Tapco 7416 16 x 16 x 4
 Monitor Amplifiers: Phase Linear 700B, Crown IX 700, Crown
 D 60 (cue)
 Monitor Speakers: JBL 4411's, Auratone 5C's, Jensen Tri-axial
 car speakers
 Echo, Reverb, and Delay Systems: Lexicon Prime Time DDL,
 Tapco 4400H Spring, Roland space echo, tape delay
 Other Outboard Equipment: EXR Aural Exciter, UREI LA 4's
 compressor limiters, Symetrix keyable gates (4), Orban three
 channel De Esser, Lexicon Prime Time DDL, Loft Analog delay
 Biamp 4 channel limiter, UREI 325 D1's, Tapco 2201 EQ's (2)
 Microphones: Neumann U87, Sennheiser 421's (4), Crown
 12M's (4), Shure SM 58's (5), Shure SM 57's (5), Audio Technica
 ATM 11's (2), ATM 13, AKG D 190E (2), D 200F (2), EV PL 76's
 (4)

Instruments Available: Kawai 6 foot grand, Hammond A 1,
 Fender Twins (2), Sunn Tube bass amp, 1956 Gibson Les Paul,
 Gibson L56 bass, assorted percussion items including LP congas,
 Gato drums, Afuche, Vibraslap, etc., Yamaha 8 piece drum set
 Any unlisted items available upon 24 hours' notice

Video Equipment & Services: Scoring only
 Rates: \$25/hr., block time (10 hrs. up) \$15/hr. Special programs
 available. Remote rates \$500/day + tape, 200 mile radius. Call
 for more information.

Extras: World's coldest water fountain (42.5°) showers, coffee
 machine (free), free pop. Accommodations can be supplied for
 out of town clients. Any equipment not listed available in 24 hours
 or less!

Direction: Holy Trax! is a Christ centered ministry with an accent
 on creative ability. We strive for the best possible production. We
 feel we have the world's most outrageous drum sound. If you need
 a studio that can take your ideas and make it a viable, marketable
 reality, Holy Trax! is the studio where your creative ability is put
 on tape to glorify the Lord and edify believers. Mastering by Bob
 by Hata at Warner Bros. (platinum by Sheffield Lab Matrix and
 pressing by Hambo in Santa Monica). Call 24 hours for more info
 at (313) 522-8463

•• **JABAUGHN STUDIOS LTD.**
also REMOTE RECORDING
 3147 Snowhill Road,
 Washington Court House, OH 43160
 (614) 335-6519
 Owner: Bob West
 Studio Manager: Bob West

• **DuWAYNE KLOOS RECORDING**
WESTMARK CUSTOM RECORDS/CASSETTES
 8345 Duluth Street, Golden Valley, MN 55427
 Owner: DuWayne Kloos
 Studio Manager: Joann Kloos

•• **KNIPEKAMP PRODUCTIONS**
 31 N. Prindle, Arlington Heights, IL 60004
 (312) 398-1637
 Owner: Alberto Kniepkamp
 Studio Manager: Alberto Kniepkamp
 Extras: Custom music and sound effects, A/V presentations, in
 dustrial films

•• **L-M RECORDING ENTERPRISES**
 206 Locust R.R. # 1, Americus, KN 66835
 (316) 884-5181
 Owner: Lee C. Muller
 Studio Manager: Lee C. Muller

•• **LRS RECORDING STUDIO**
also REMOTE RECORDING
 107 Elmwood Place, Athens, OH 45701
 (614) 592-1939
 Owner: Louis Ralph Stevens
 Studio Manager: Louis Ralph Stevens

•• **LAB RECORDING STUDIO**
also REMOTE RECORDING
 2908 Parkway Drive, Highland, IN 46322
 (219) 838-0747
 Owner: Neophon Productions
 Studio Manager: Larry A. Brechner

•• **LAKESIDE RECORDERS (FORMERLY TIN EAR)**
 1937 W. Howard St., Chicago, IL 60626
 (312) 274-8999
 Owner: Bill Landow
 Studio Manager: Charles Johnson

•• **LOST NATION SOUND RECORDING STUDIO**
also REMOTE RECORDING
 State Route 329, Box 125,
 Guysville, (Athens) OH 45735
 (614) 662-5701
 Owner: Dave Aiken
 Studio Manager: Nancy Aiken

•• **M Y RECORDING STUDIO**
also REMOTE RECORDING
 4519 South Hills, Cleveland OH 44109
 (216) 884-0650
 Owner: Dennis Yurich Tom Moller
 Studio Manager: Dennis Yurich

•• **MAGNETIC STUDIOS, INC.**
 4784 N. High St., Columbus, OH 43214
 (614) 262-8607
 Owner: John Fippin
 Studio Manager: John Fippin

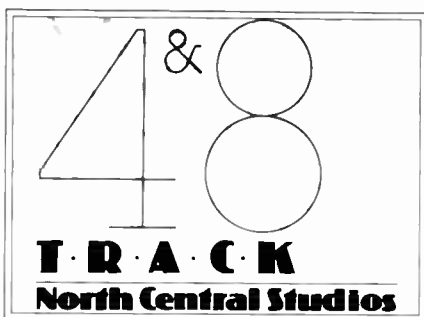
•• **MIXED MODES PRODUCTIONS**
 254 Durand St., East Lansing, MI 48823
 (517) 351-3340
 Owner: Dennis G. Jablonksi
 Studio Manager: Wendy J. Duch

•• **NORTHSIDE RECORDING**
 3946 Spring Grove Ave., Cincinnati, OH 45223
 (513) 541-6811
 Owner: Northside Recording Ltd
 Studio Manager: Gus Ross

•• **PRANGE SOUND STUDIO**
also REMOTE RECORDING
 25436 Mary St., Mt. Clemens, MI 48045
 (313) 949-5816
 Owner: Steven Prange
 Studio Manager: Janet Prange

•• **PYRAMID RECORDING STUDIO**
 5637 Mayfield Road, Suite #9, Cleveland, OH 44124
 (216) 461-6337
 Owner: Paul C. Miller
 Studio Manager: Ray Fister

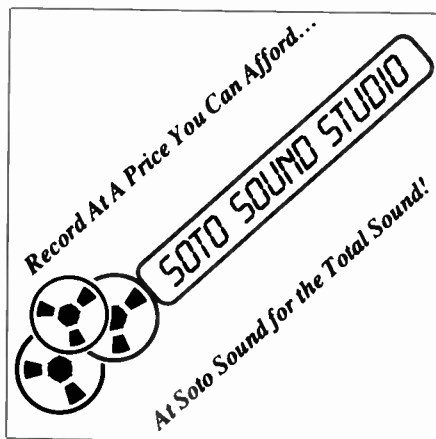
•• **RPM RECORDING & SOUND**
also REMOTE RECORDING
 6730 S. Pulaski, Chicago, IL 60629
 (312) 735-9476
 Owner: Rich Morford, Mike Podgorny
 Studio Manager: Rich Morford, Mike Podgorny, Debra Morford
 Engineers: Rich Morford, Mike Podgorny, Steve Morford, Neal Paskavan
 Dimensions of Studios: 22' x 15' x 10'
 Dimensions of Control Rooms: 10' x 13' x 9'
 Tape Recorders: Tascam 808 w/dbx 8 track, TEAC C-3 cassette, Technics RS1500 1/4" 1/2 track
 Mixing Consoles: Tangent Series 4 (modified) 16 in x 8 out Biamp 1682 16 in x 2 out
 Monitor Amplifiers: Metron M 400, Biamp TC QSC (phones)
 Monitor Speakers: Cerwin Vega 215S, Auratones JBL 4412
 Echo, Reverb, and Delay Systems: Sound Workshop stereo reverb, MXR digital delay
 Other Outboard Equipment: Biamp EQ210 Graphic EQ, Symetrix limiters, Systech studio flanger, Altec Lansing tube limiters
 Microphones: Neumann, Sennheiser, Shure, Electro-Voice, Audio-technica
 Instruments Available: Oberheim OBX, Fender Rhodes Crumar T1 organ, ARP Odyssey Synth, Fender Twin reverb amps, Rickenbacker bass, Fender Aria, Yamaha guitars. All instruments by appointment
 Rates: \$20/hr. basic rate. Call for special block booking and project rates



•• **RAINBOW RECORDING STUDIOS/SOUND SYSTEMS**
also REMOTE RECORDING
 2322 S. 64th Ave., Omaha, NB 68106
 (402) 554-0123
 Owner: Nils Anders Erickson
 Studio Manager: Tom Ware Jeff Jensen

•• **RON ROSE PRODUCTIONS, LTD.**
 29277 Southfield Rd., Southfield, MI 48076
 (313) 424-8400
 Owner: Ron Rose
 Studio Manager: Don Wooster

•• **THE SOLUM SOUND LABORATORY**
 2428 Dupont Avenue South, Minneapolis, MN 55405
 (612) 377-5040
 Owner: Steve Solum
 Studio Manager: Steve Solum



*Soto Sound
 Evanston, IL*

•• **SOTO SOUND STUDIO**
also REMOTE RECORDING
 931 Sherman Ave., Evanston, IL 60202
 (312) 475-9556
 Owner: Jerry & Claudine Soto
 Studio Manager: Claudine Soto
 Engineers: Jerry Soto
 Dimensions of Studios: 30' x 30' w vocal booth
 Dimensions of Control Rooms: 15' x 25'
 Tape Recorders: Tascam Series 70 B track, two TEAC 2340 4 track, Otari MX5050 1/2 track, Ampex PR10 1/2 track, Pioneer RT710 1/4 track, TEAC & Sharp cassettes, two TEAC, two Hitachi cassette decks
 Mixing Consoles: Tascam Model 10 12 in x 4 out, Tascam Model 5 B in x 4 out, Tascam Model 2 A 6 in x 4 out, Tascam Model 1 8 in x 2 out
 Monitor Amplifiers: Phase Linear 700 QSC 51 Technics SU730, Altec 128B
 Monitor Speakers: Altec Valencias, Bir Venturi Formula 4's Auratones Realistic 40-1247's Transistor radio
 Echo, Reverb, and Delay Systems: Roland Space Echo RE-201, MXR flanger, Tapco reverb, MXR pitch transposer
 Other Outboard Equipment: dbx 160 161, compressor limiters, Symetrix CL 100 compressor/limiter, dbx noise reduction, Soundcraftsman RP 2201 R graphic equalizer, Gerard Zero-100 turntable, MXR noise gate, dbx 164 stereo compressor limiter, Technics SL 20 turntable
 Microphones: Sennheiser, AKG, Shure, Electro-Voice, Audio-technica
 Instruments Available: Guitar, keyboard & bass amps, Ludwig drums, Hammond B 2 organ (w/percussion), two Leslie speakers, Fender Rhodes Moog Prodigy Synthesizer, Wuritzer baby grand, Space Drum, asst percussion, guitar, voice box, Gibson

Les Paul "Gold top," Epiphone bass, acoustic guitar, rhythm machine, click track, Roland organ/string
 Rates: 1 4 trk/\$20/hr, 2 8 trk \$30/hr or 6 hrs \$135, lyrics set to music \$175/song 2 songs/\$275
 Extras: Studio musicians available, guitar, keyboard, arranging or production services available by Jerry Soto
 Direction: We're the only studio in this region to our knowledge that can arrange your lyrics in music, record your voice on your song and more. We record virtually every type of music and also handle projects for Warner Bros. & ABC TV. We have secured contracts with blues labels in London, England and Vienna, Austria, as well as with recording blues greats Buddy Guy, Phil Goy, Brewer Phillips, Leahy Dazz, Eddie Clearwater and others. In closing, we're proud to say through hard work and dedication we've become one of Chicago's most popular studios. We also thank our clients who have made this dream a reality.

•• **SOUND DOCK**
 102 2nd St., Beach City, OH 44608
 (216) 756-2277, 456-7912
 Owner: Ken Barkan
 Studio Manager: Joe Ferrara

•• **STARBEAT RECORDING STUDIOS**
also REMOTE RECORDING
 9 East Larkdale Drive, Deerfield, IL 60015
 (312) 945-3555
 Owner: Steve Cronen
 Studio Manager: Steve Cronen

•• **STUCKY AUDIO SERVICE**
also REMOTE RECORDING
 1412 W. 5th St., Newton, KN 67114
 (316) 283-7597
 Owner: Homer Stucky
 Studio Manager: Homer Stucky

•• **STUDIO G RECORDING**
also REMOTE RECORDING
 214 S. Bemiston Ave., St. Louis, MO 63105
 (314) 727-0770
 Owner: Greg Glazier
 Studio Manager: Greg Glazier
 Engineers: Greg Glazier, Al Bissen, Eric Nilser, David Hoille, local independents
 Dimensions of Studios: 10' x 14'
 Dimensions of Control Rooms: 14' x 18'
 Tape Recorders: MCI JH 110 B 8 track, MCI JH 110 B 4 track, Ampex AG-440 B 2 track, Ampex AG 440 B 1 track, Nagra 4 2 1 1 track, Otari MX 5050 B MKII 2 track
 Mixing Consoles: Neotek Series II 12 in x 8 out, Sela (Location Mixer) 2880 BT, 4 in x 1 out
 Monitor Amplifiers: McIntosh 2100, Dynaco ST 120's (Cue & Talkback)
 Monitor Speakers: Mastering Labs "Big Reds" (604E's), JBL 4311's, JBL 4301E's, Auratones
 Echo, Reverb, and Delay Systems: Sound Workshop 262 B, MXR digital pitch transposer, MXR digital delay, good ol' tape delay works too
 Other Outboard Equipment: UREI 1176's, UREI 565T, Omni Craft GT-4 Noise Gates, Dolby 361's, dbx, two Technics SL 1200 turntables, Technics RS-MR5 cassette deck, two custom A/V Impulsers, TEAC A 3440 1/4 4 track, 15mm Interlock system w 5 dubbers, 2 pickup recorders & one projector, AVL Eagle II A V Computer
 Microphones: Neumann U 89, Shure SM 81's, SM 57's, SM-5, Sony ECM-50's, Sennheiser MKH 415, MKH 815, AKG D 202's, D 200's, D-900 & D 160's
 Instruments Available: Comb & tissue paper, kazoo, slide, whistle & taxi horn
 Video Equipment & Services: 16mm Interlock re-recording & mixing to picture, Sync & Wild transfer to 16mm mag film
 Rates: 1 & 2 track \$35, 4 track \$45, 8 track \$55, 16 mm transfer \$40, 16mm mix \$70. Location recording, cassette duplication and other services by quotation. Please call
 Extras: Music libraries, KPM, Bruton, Network, Major, Parry, Themes International, SFX libraries, BBC, Flektra, Environments, Major & original SFX
 Direction: Our facility is especially designed to cater to the Audio Visual, Advertising & Motion Picture production community. Providing fast, efficient, high quality service in a comfortable, producer oriented environment.

•• **STUDIO 66**
 66 Sycamore, Wyandotte, MI 48192
 (313) 281-6662
 Owner: Allen Bates and George Milkovich
 Studio Manager: Al Bates

•• **THIN AIR RECORDING**
also REMOTE RECORDING
 410 Allen St., Maumee, OH 43537
 (419) 893-0337
 Owner: Ben Solomon
 Studio Manager: Manan R. Overbera

T.J. SOUND

T.J. Sound Productions
Warren, MI

•••• T.J. SOUND PRODUCTIONS, INC
27040 Ryan Rd., Warren, MI 48092
(313) 751-7476
Owner: Jeff Briggs, Tom Linn, John Harp Hasselstein,
Adam La Rose
Studio Manager: Jeff Briggs

•• TOUSANA RECORDING STUDIO
also REMOTE RECORDING
8825 So. Oglesby Ave., Chicago, IL 60617
(312) 731-6297
Owner: Tom Tousana Jr.

•• TRACKS ON 5th
250 East 5th Street, Suite #106, St. Paul, MN 55101
(612) 228-9096
Owner: Michael M. Kern
Studio Manager: Michael M. Kern

•• RON WHEELER ENTERPRISES
also REMOTE RECORDING
202 West Plum Street, Robinson, IL 62454
(618) 544-7898
Owner: Ron Wheeler

•• WILBUR-SCHWARTZ PRODUCTIONS
also REMOTE RECORDING
123 Indiana, Suite C, Salina, KN 67401
(913) 827-3009
Owner: Tom Wilbur, Don Schwartz
Studio Manager: Don Schwartz

•• WILDWIND SOUND STUDIOS
also REMOTE RECORDING
6285 W. Reynolds Rd., Haslett, MI 48840
(517) 339-1049, 339-3329
Owner: Marvin Hall, Doug Monson & Glenn Brown
Studio Manager: Doug Monson

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I enclose \$_____ (includes postage, handling & California sales tax).

Quantity desired:

_____ Male _____ Female (French cut)
S _____ L _____ S _____ L _____
M _____ XL _____ M _____ XL _____

Please Print Legibly

Name _____
Address _____
City _____ State _____ Zip _____

Mail to:
Mix T-Shirts
P.O. Box 6395,
Albany, CA 94706

T-Shirts for your
staff and customers?
10% discount on orders
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T-Shirts available in black & white only. Allow 6-8 weeks for delivery.

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See p. 110
for more information

T · R · A · C · K

North Central Studios



Audioloft Studios
Macks Creek, MO

••• **AUDIOLOFT STUDIOS**
P.O. Box 7-11, Old Hwy. 54, Macks Creek, MO 65786
(314) 363-5432
Owner: H.J. Carnahan
Studio Manager: H.J. Carnahan, Brad Edwards
Engineers: Brad Edwards, H.J. Carnahan
Dimensions of Studios: 20 x 40
Dimensions of Control Rooms: 14 x 15
Tape Recorders: TFAC 85 16 track TEAC 808 8 track
TEAC A7000RX 2 track TEAC A7300 2 track TEAC 440S 4
track, Pioneer & Nakamichi cassette decks
Mixing Consoles: Tangent 4216, 4.5 x 16 out
Monitor Amplifiers: Bose Crown
Monitor Speakers: JBL Klipsch Auratones Beyer D11 100 head
phones
Echo, Reverb, and Delay Systems: AK 1 BX 10 Tapco 4400
Lexicon Prime Time
Other Outboard Equipment: dbx 160 limiters Sony turntable
mixer and Dolby Noise Reduction FXB Exciter
Microphones: Beyer 160 88 101 201 500 Shure SM 57's
AKG 451's, PZM's, AKG D1000, UREI Direct Boxes, Neumann
U87
Instruments Available: Fender Twin Reverb Fender Bassman
Slaterina drums Fender Rhodes Kawa grand piano Lester
Tack piano Fika String Machine several assorted guitars bass
She Her postal steel
Rates: Call for rates

••• **BODDIE RECORD MFG & RECORDING**
also **REMOTE RECORDING**
12202 Union Avenue, Cleveland, OH 44105
(216) 752-3440
Owner: Thomas B. Boddie
Studio Manager: Louise Boddie

••• **BROWNWOOD STUDIOS**
1512 C.R. 90, Gibsonburg, OH 43431
(419) 665-2112
Owner: Robert Brown
Studio Manager: Robert Brown

••• **CHAPMAN RECORDING STUDIO**
228 West 5th, Kansas City, MO 64015
(816) 842-6854
Owner: Charles Chapman
Studio Manager: Chuck Chapman

••• **CHICAGO TRAX RECORDING STUDIO**
2656 N. Wayne Ave., Chicago, IL 60614
(312) 525-6565
Owner: Ben Hyam Tom King A. Upton
Studio Manager: Ben Hyam, Tom King
Engineers: Paul Kinsler, Harry Brothman, Steve M. Carthy
Chief Engineer: Al Ursini
Dimensions of Studios: 20 x 20 Isolation Booth 4 x 4 x 5
Isolation Booth: 4 x 4 x 5
Dimensions of Control Rooms: 12 x 10
Tape Recorders: Otari MT-9 AWA 4000 16 track TEAC
T-10 16 track with noise reduction 2 track Otari MT-9
with 2 track AWA #6900 cassette deck Pioneer BT 70 16
track
Mixing Consoles: Tangent 3616 4.5 x 16 out
Monitor Amplifiers: UREI 6250 Crown D 56A Crown D 5
Monitor Speakers: JBL 471's JBL 10's Auratones MCM
4
Echo, Reverb, and Delay Systems: EMT 220 Lexicon
Prime Time Digital Delay Crown D 56A
Other Outboard Equipment: UREI 1171 4.5 x 16 out
processors Eventide 9.0 Harmonizer UREI 645 Harmonizer
Equalizer Tube EQH Program Equalizer UREI 1171

••• **AUDIO MIXERS RECORDING COMPANY, INC**
740 North Rush Street, Chicago, IL 60611
(312) 943-4274
Owner: A.M.R.C. Inc.
Studio Manager: Steve Schwartz



Audio Services Co.
Mishawaka, IN

••• **AUDIO SERVICES COMPANY INC**
also **REMOTE RECORDING**
3016 Home Street, Mishawaka, IN 46544
(219) 255-5198
Owner: Audio Services Company Inc. President: Phil
O'Connell
Studio Manager: Phil O'Connell
Engineers: Jim Brecht, Cind. Harfield, Jerry Hayes, Jeff
Buhars, Bill Milan, Bruce Mor, Cindy Harfield
Dimensions of Studios: 15 x 15 x 4
Dimensions of Control Rooms: 12 x 10
Tape Recorders: Scully 100 MK II 2 track 1/2 in. MK II 2 track Cr. w/
100 2 track Ampex 440 mono Telex replicator
Mixing Consoles: M. T. 4 4.5 x 16 out, Tangent 4216
Monitor Speakers: FVPI 15 15 x 10 out, Sony 00 Auratone
Echo, Reverb, and Delay Systems: Lexicon digital delay
Other Outboard Equipment: dbx noise reduction, Kingress
limiters, Tapco 4400
Microphones: Heil Voice Shure RCA AKG Crown PZM
Instruments Available: 6 Kawai grand Rhodes piano
ARP Org. 1, two guitars, 2 Fender Syc. Wood Man
Rates: 10 hrs. \$150, 12 hrs. \$180, 16 hrs. \$240

••• **AUDIO VILLAGE RECORDING STUDIO**
also **REMOTE RECORDING**
1000 West 17th Street, P.O. Box 291,
Bloomington, Indiana 47402
(812) 332-7475
Owner: Wayne Gutz
Studio Manager: Wayne Gutz



Audio Media
Fargo, ND

••• **AUDIO MEDIA**
also **REMOTE RECORDING**
Suite L127, Manchester Building, Fargo, ND 58102
(701) 237-6863
Owner: Audio Media Corporation
Studio Manager: Lee Missey
Engineers: Dave Hanson, Tony Rheault, Doug Gestin, Curt
McGowan
Dimensions of Studios: Studio A: 22 x 14 Studio B: 21
x 18 x 13b
Dimensions of Control Rooms: Studio A: 10 10 x 1 6
Studio B: 10 x 15 11
Tape Recorders: Scully 100 4 track Scully 28 2 track w/
Otr. MX5050 2 track Rev. x A7 2 track TEAC A7300 1
track
Mixing Consoles: Tangent 4216 4.5 x 16 out Otari 600 A 1
16 x 4 out
Monitor Amplifiers: Crown 1D150A 1D150 1D50
Monitor Speakers: JBL 471's Auratones
Echo, Reverb, and Delay Systems: MICOM Mixer Room
Super C 4 MXR digital delays
Other Outboard Equipment: 2 UREI 1171 compressors limiter
Spectra 5 noise 10 compressor Crown 16 out 1 Parametric
Terno equalizer dbx 154 noise reduction dbx 57 stereo noise
reduction Pioneer Sharp and TEAC cassette decks
Microphones: 2 Neumann U87's 2 Neumann 2 1/2" 1/2"
Neumann 1142 2 Electro-Voice RE-201 Shure SM 57's
SM 58 4 AKG 4014 2 Neumann U44 HME 22 HF
wireless system AKG F10
Instruments Available: Fender Telecaster Mini Moog
Synthesizer Mini Moog II wah wah electric guitar Minimoog
Synthesizer Fender Rhodes
Video Equipment & Services: RCA 16mm camera Sony BVH
16mm recorder wall & Control panel 16mm 1/2" camera
with fully all function extras
Rates: Available upon request

Finalizers: Orban Stereo Synthesizer, Roland stereo flanger, SBR 425

Microphones: Neumann U87s, AKG 414 EB's, D20/E, Crown PZM's, Electro Voice RF 20's, Sony ECM 22's, ECM 51's, Boyer M20's, Audio Technica AT3, Shure SM 81's, 57's, RCA 77 DX, Sennheiser 421's, 441's

Instruments Available: 6' grand piano, Rodger drums w/4 mares, Fender Traynor, Ampeg & Yamaha guitar amps, Keyboard synthesizer

Rates: 16 track recording: \$45/hr, 82 track recording: \$45/hr special after midnight rates \$30/hr

*** CORNERSTONE RECORDING STUDIO

703 S. Second St., Milwaukee, WI 53204

(414) 643-0879

Owner: Harrie Bevel

Studio Manager: Dave Sieber



Crosstown Recording
Kalamazoo, MI

*** CROSSTOWN RECORDING

601 East Crosstown Pkwy., Kalamazoo, MI 49001

(616) 343-7972

Owner: Brandon Wade

Studio Manager: Gene Boyd

Engineers: Brandon Wade

Dimensions of Studios: 35' x 40'

Dimensions of Control Rooms: 16' x 16' (7 sided windowless control room)

Tape Recorders: MCI JH114 16 track, MCI 110 2 track, AM 64 24 track, Nakamichi cassette recorders

Mixing Consoles: Soundcraft 16/24 24 in x 24 out

Monitor Amplifiers: K&W

Monitor Speakers: UREI 813, JBL 431, B, Auratones, Alter-Mode, 19

Echo, Reverb, and Delay Systems: Echoplex, MICMIX Master Room, Eventide Harmonizer delay

Other Outboard Equipment: UREI 11176, Teletronix LA 2A, Gun Brain, Kexix, Eventide instant flanger, Peterson Strobe Tuner

Microphones: Neumann 87, H4, 47, Sennheiser 441, 421, AKG 414EB, 451, Shure SM57, SM81, Electro Voice RF 20, RF 16, RF 11, JML DX 74, Sony ECM 50, Countryman 101, Crown PZM, Direct boxes by Countryman, AxMax, Sessom, and Westlake

Instruments Available: Baldwin SD 10.9 concert grand, Hammond B4 with Leslie, MESA Boogie instrument amplifiers, Fender Super reverb, Lab Series 16 bass amp, Ampeg B 15N Bass Amp, Sonor and Ludwig studio drum sets, Fender "P" bass, Telecaster Les Paul Special, Gibson Southern Jumbo, Silver Dobro, and Fender Rhodes

Rates: 16 track: \$60/hr, \$350 per 7 hr block, 2 track: \$40/hr

*** CRYSTALL RECORDERS

333 Brewster, Lombard, IL 60148

(312) 495-9019

Owner: John Gilleran, Chuck Prazma, Steve Paganellis

Studio Manager: John Gilleran

*** ELEPHANT RECORDING STUDIOS

also REMOTE RECORDING

21206 Gratiot Ave., East Detroit, MI 48021

(313) 773-9386

Owner: Al Aboud, John Givner

Studio Manager: John Givner

*** FUTURESOUND

P.O. Box 398, Beverly Shores, IN 46301

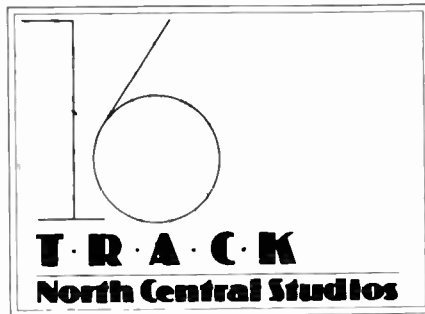
(219) 879-6436

Owner: Michael Franklin

Engineers: Michael Franklin, Mark Piotrowski, Tim Franklin,

Jay Goodman

Dimensions of Studios: Studio A: 40' x 20' x 15', Auditorium



150' x 75' x 4'

Dimensions of Control Rooms: 25' x 10'

Tape Recorders: Tascam 85 16 track, TEAC Tascam 40 4 track, Landberg TD 20 A half track, ON KYO WHH cassette recorder in a 16 track

Mixing Consoles: Neotek Series 1 Custom 24 in x 8 out, Tascam Model 10 24 in x 4 out, TEAC Tascam Model 8 24 in x 4 out

Monitor Amplifiers: Crown D12A, B, D, 100

Monitor Speakers: JBL 431, B, Auratone 5BC, FV, Sh 15 2

Echo, Reverb, and Delay Systems: Tapco 44 X reverb, MXR 120 44 X reverb, 11 11 11

Other Outboard Equipment: DBX D x 16A, D x 4, MXR dual 15 band eq, multilimiters, Doly y r, Shure SE 31 11 11, compressor limiter

Microphones: Sennheiser 421's, 441's, Shure SM 58, SM 7, SM 63, 545D, F V 608, Audio Technica AT 81 4's, AKG D 100, F D 202, D 140, Sony ECM 51, 50

Instruments Available: Kawai concert grand piano, Koro Tricent MK II, Mono Poly Lambda Delta, SM 70, KH 55B, CX, Fender Rhodes

Extras: Baseball diamond, basketball court, lounge — video movies, beach — located on Lake Michigan trails

Direction: Futuresound has done spots for General Tire, United Way, Yamaha, Mackay's and many others. Record: Sunsplash RE, a tribute to Bob Marley, on Electra Asylum, was recorded live in Kalamazoo. Sunsplash performers included Third World, Black Uhuru, The Waiters and others. Futuresound Studio has

produced recordings for Danny and the Juniors, The Drivers, Cory Siegal and many others. The owner, Michael Franklin, has done many arrangements or performances for Little Anthony, Lou Christie, Wollman Jack, Dick Clark, Bo Diddley, The Coasters, The Shirelles, The Chryetals and Al Green. Futuresound is complemented with staff arrangers, narrators, studio musicians and original solo track artists. Futuresound is situated on 7 acres in the Dunes National Lakeshore, near Lake Michigan.



Futuresound
Beverly Shores, IN

*** GATTUSO BROTHERS RECORDING

also REMOTE RECORDING

1300 Market Ave., Canton, OH 44714

(216) 456-2806

Owner: Gattuso Music Center

Studio Manager: Michael Lamr

Engineers: Michael Lamb, Brad Stinton, Rick Gattuso

Dimensions of Studios: 26' x 22'

Dimensions of Control Rooms: 18' x 22'

Tape Recorders: AM M 79 16 track, Otari 5050B 16 track, TEAC 3300 SX, Tascam 40 in 5050 HC 8 track, Otari 5050 HQ 24 track

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Mixing Consoles: Sound Workshop 24 in x 16 out
Monitor Amplifiers: Yamaha P2200, Phase Linear A30, BGW 100
Monitor Speakers: JBL 4333, JBL 4311, Little David 500, Auratone 5C sound cubes
Echo, Reverb, and Delay Systems: Orban Parasound IIIIB, Delta Lab DL 2 w/memory module Lexicon PCM41 Yamaha E1010 analog

Other Outboard Equipment: Symmetrix Dual noise gates U1X 165, EXR Exciter, White 4005 Equalizer MXR Pitch Transposer Eventide Harmonizer White 4001 Equalizers MXR flanger doubler, MXR DDL

Microphones: Neumann U 87 AKG 414 Sennheiser 441 & 421, AKG D12 E V PL20, Shure SM7 SM82, SM57

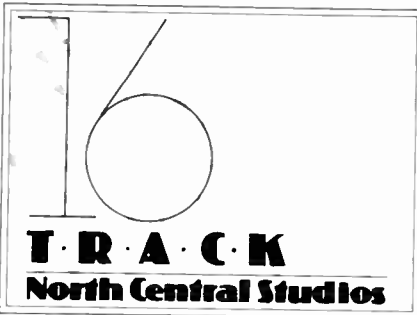
Instruments Available: Yamaha CP-80 GS2 CS80 Hammond B3 complete drum kit Hohner Clavinet LP congas & percussion instruments variety of amps and guitars

Rates: \$50/hr flat rate Special package rates are negotiable
Extras: Game room studio musicians video demos cassette duplication refreshments 24 hr recording arrangements production 45's, albums, radio jingles Instruments are supplied for free

Direction: Gattuso Brothers' Studio—the first professional 16 track 2" studio in the AkCan area At Gattuso's you'll find a unique facility, a professional studio within a full service music company Known throughout northeastern Ohio as The Musician's Choice the studio was designed for musicians by musicians A fantastic selection of instruments, electronic effects and synthesizers are provided absolutely free An easy going atmosphere professional people to work with, and affordable rates makes Gattuso Brothers Studio your #1 choice for all of your recording needs Call or write today for further information about this fine facility

••• **GRAPHIC RECORDING**
 123 1/2 W. Pine, P.O. Box 83, Warrensburg, MO 64093
 (816) 747-2933
 Owner: David H. McQuitty
 Studio Manager: Dick Brown

••• **HIGH FIDELITY RECORDING, INC.**
 also **REMOTE RECORDING**
 1059 Porter, Wichita, KN 67203
 (316) 262-6456
 Owner: Corporation James Stratton Pres
 Studio Manager: James Stratton Pres
 Engineers: Jim Stratton, Jim Wedel Nancy Stratton Newton



Grabber John Salem
Dimensions of Studios: 25' x 28' x 11 x 6
Dimensions of Control Rooms: 15' x 25'
Tape Recorders: IEM 2 transports w 64 pt search to cue 2 for mat 14" reel capacity 16/30 tracks, Ampex ATR 102 w/search 2 track Otari 1/2" Mark II 4 4 track 7) Crown Recorders 800 series full tr 2 tr 1/4 tr, IEM location system 14" reels 16 track Ampex MM 1000 8 track and numerous cassette & 8 track cart deck TEAC 3340

Mixing Consoles: Custom record console 28 in x 21 out, Custom mixing console 33 in x 2 out Tapco 6200 w phantom for 2 tr location video

Monitor Amplifiers: I.F. & Control room 4 ea 270 wa"ts/8 ohms (HF horns) 2 ea 30 wa"ts/16 ohms, (headphones) 2 ea 55 wa"ts/8 ohms (fast slew & 002 THD)

Monitor Speakers: Control Room JBL 4315 components w passive Studio similar but is biamped Auratones FV In-Phase 3

Echo, Reverb, and Delay Systems: EMT plate Lexicon Prime Time digital delay Lexicon PCM 41 digital delay MXR digital delay

Other Outboard Equipment: Noise Reduction 2) Dolby A301 2) 461, 320 stereo "B" System Compressors 2) dbx 160 2) 161 162 165 4 custom Variable speed API Minimax synchronizer (modified to reduce lock-up time) Stereo synthesizer Orban 254E De Esser custom 2 ch Orban 51hEC 3 ch Outboard EQ Orban 6/2B parametric 2 ch (infinite notch av) 2 ch low cut (5th order butterWorth), 4 ch shelving EQ

Microphones: Steinway 7 ft grand Hammond B4 organ

Mellotron Bell Lyra Synares
Instruments Available: \$50/hr week days, \$60/hr evenings & week ends Video \$125/hr with two 3 Satcon cameras TBC character generator & all studio equipment (includes crew) Lora ton Audio \$75/hr 4 hr minimum Video location ask

••• **KINGSMILL RECORDING STUDIO**
 1033 Kingsmill Pkwy., Columbus, OH 43229
 (614) 846-4494
 Owner: Kingsmill Recording Studio, Inc.
 Studio Manager: Don Spangler

••• **LAKE RECORDING**
 418 Lake Street, Maywood, IL 60153
 (312) 344-8760
 Owner: Robert Kaider—Kurt Reetz
 Studio Manager: Robert Kaider

••• **LIVONIA SOUND RECORDING**
 also **REMOTE RECORDING**
 15018 Beatrice, Livonia, MI 48154
 (313) 522-7274
 Owner: Henry Vartanian
 Studio Manager: Ed Moon

••• **MARITZ COMMUNICATIONS CO. SOUND**
 also **REMOTE RECORDING**
 1315 N. Highway Dr., Fenton, MO 63026
 (314) 225-2768
 Owner: Maritz Communications Co.
 Studio Manager: David B. Dister

••• **MASTERPIECE SOUND STUDIOS**
 also **REMOTE RECORDING**
 1611 Webb Street, Detroit, MI 48206
 (313) 867-7874
 Owner: Sylvia Moy Productions Inc.
 Studio Manager: Sylvia Moy

••• **MULTI-TRACK RECORDING STUDIOS INC.**
 also **REMOTE RECORDING**
 25533 Five Mile Rd., Redford, MI 48239
 (313) 535-3950
 Owner: Nicholas G. Canzano
 Studio Manager: Brock S. Warren

••• **PEARL SOUND LTD.**
 2705 Provincial, Ann Arbor, MI 48104
 (313) 971-2414
 Owner: Ben Grosse
Studio Manager: Ben Grosse
Engineers: Geoff Michael Ben Grosse
Dimensions of Studios: Studio 14 x 20' Secondary recording space 25 x 15
Dimensions of Control Rooms: 10 x 10
Tape Recorders: MCI JH 100 16 track Otari MTR 10 2 track, Otari MX 5050R 2 track Otari MX 5050 2 track, Technics cassette machines
Mixing Consoles: Quantum Gamma A 24 input x 8 buss 24 tr monitor out
Monitor Amplifiers: Crown & McIntosh
Monitor Speakers: JBL 4311B, Auratones
Echo, Reverb, and Delay Systems: Audicon large plate reverb Urso Major digital reverb live chamber Lexicon Prime Time Phaser Instant flanger Loft delay flanger Valley People Kepex 11s EXR Exciter Teletronix LA 2A tube limiters (3), DLC Dual limiter Omnicraft noise gates Orban Parametric EQ Orban De Esser Biamp Graphic EQ (6), dbx noise reduction
Microphones: Neumann U87 U47 KM84 AKG 414s 451s D12 Shure SM56 SM57s RCA DX77 ribbon mikes Sennheiser 441 421s EV FR 20s PZM's Sony C37A (tube mic)
Instruments Available: Yamaha piano amps, Marshall Fender V x Univox custom made vintage guitars available Tama drums Hammond M4 Leslie
Rates: 16 track \$55/hr block rate (10 or more hours) \$45/hr 8 track \$40/hr 2 track \$35/hr

••• **PIONEER RECORDING STUDIO, INC.**
 also **REMOTE RECORDING**
 4238 Ramsgate, Bloomfield Hills, MI 48013
 (313) 855-1466
 Owner: G. Husari
 Studio Manager: Chris Russaro

•• **O & R RECEIVING STUDIOS**
 1307 Ridge Avenue, Evanston, IL 60201
 (312) 864-6655 or 6656
 Owner: O. Brown
 Studio Manager: Steve Rashid

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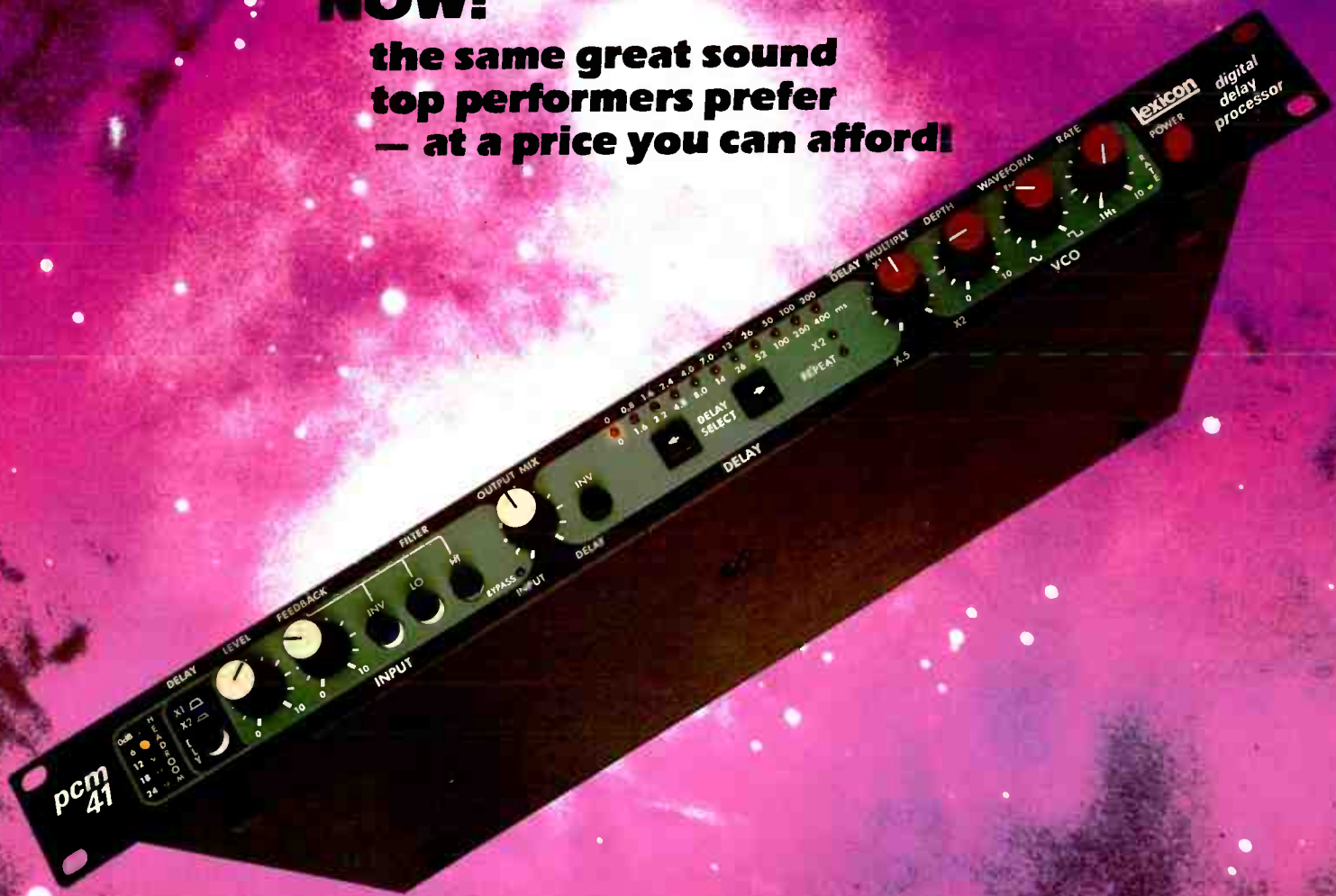
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Try one and A/B it against your current favorite. You'll notice the **sound**—remarkably smooth and natural over a wide range of control settings—even at high compression ratios where apparent loudness and punch are significantly enhanced. It's no accident: The unit is a direct descendent of our super-popular, second-generation OPTIMOD-FM broadcast limiter. So it exploits our years of experience in making an AGC device sound natural on diverse program material without critical re-adjustments. Yet full versatility exists for special effects in production.

A bonus is a smooth, natural de-esser. It's independent of the compressor/limiter section so you can simultaneously compress and de-ess vocal material without compromise. You can even de-ess sibilant vocals which have been mixed with other program.

The icing on the cake is unique gating and "idle gain" functions which prevent unnatural noise-producing gain variations during pauses and abrupt gain changes when the unit is switched in.

Our new Model 424A (dual channel) and 422A (single channel) are destined to become the new industry standards in dynamic range control. Prove it to yourself. Contact your Orban dealer today.

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

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RAMSA

The Ramsa WR-8112 is a 12x4x2x1* mixer that embodies a whole new concept from Ramsa: one mixer that is not only a high-performance, multitrack recording mixer, but also a high-performance sound reinforcement mixer.

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PA or Recording Sends

Ramsa engineering. One set of circuits actually performs as two. Functions like stereo tape monitoring are switchable to become stereo

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The Ramsa WR-8112 gives you the flexibility of switchable turnover

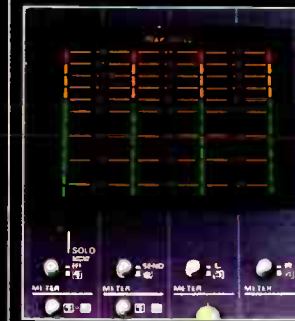
frequencies for high and low EQ as well as continuously variable frequency for the midrange.



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The metering 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 -10 db or +4 db (nominal) to interface with either semiprofessional or professional equipment.



Versatile LED Metering

But perhaps the most remarkable thing about the WR-8112 is that it offers the same clean, transparent sound quality as our larger, fully modular mixers, at a more affordable price.

And if your needs are strictly recording, we recommend the highly affordable Ramsa WR-8210.

So whether you are recording, gigging, doing A/V production or anything in between, why get two ordinary mixers when you can get one exceptional Ramsa. The WR-8112.

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

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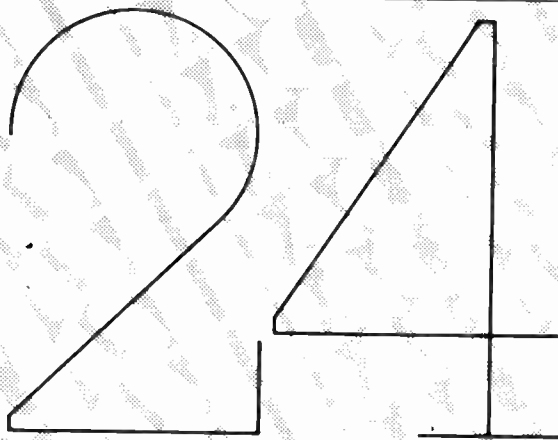
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North Central Studios

•••• A & R RECORDING STUDIOS
 also REMOTE RECORDING
 P.O. Box 871, 2700 Ford St., Ames, IA 50010
 (515) 232-2991
 Owner: Steve Monroe
 Studio Manager: Denny Allen

•••• ALPHA RECORDING CO.
 515 W. Harrison, Lombard, IL 60148
 (312) 495-2241
 Owner: Bobbie F. Thomas
 Studio Manager: Corinne Karpiak

•••• AMBIENCE RECORDING INC.
 also REMOTE RECORDING
 27920 Orchard Lake Road, Farmington Hills, MI 48018
 (313) 851-9766
 Owner: Jerome A. Silecchia, "President"
 Studio Manager: Gerard Smerek

•••• A SQUARE STUDIOS
 3691 Morgan Road, Ann Arbor, MI 48104
 (313) 434-2141
 Owner: Robert June Jr., Al and Dee Hurschman
 Studio Manager: Al Hurschman
 Engineers: Al Hurschman-Chief Engineer; Dee Hurschman
 Dimensions of Studios: 60' x 40' Main Room, Isolation rooms
 10' x 20' & 12' x 18'
 Dimensions of Control Rooms: 18' x 18'
 Tape Recorders: MCI JH-24 24 & 16 track, MCI JH 110A 2 track,
 MCI JH-110B 2 track, Scully 280B 2 track
 Mixing Consoles: Neotek Series III 28 in x 24 out
 Monitor Amplifiers: Crown DC300A; SAE P-50, 501, 301, Crown
 D-60, McIntosh 275
 Monitor Speakers: JBL 4311A, Auratone 5C, UREI 813A
 Echo, Reverb, and Delay Systems: EMT 140, Eventide Harmonizer,
 Marshall Time Modulator, Delta Lab DL-2, Sound Workshop 262, Time Tech,
 Acoustic Chambers (2), Lexicon 224X
 Other Outboard Equipment: dbx 165, UREI 1176 LN, Teletronics
 LA2A, 208 dbx noise reduction (all channels) Orban Limiter, Ornu
 Craft Gates, Scamp Rack, EXR
 Microphones: Neumann U47, U89, U87, KM84, KM56, EV RE-20,
 RE-15, CS-15, RE-55; Shure SM58, SM57, SM81, SM54, AKG C-28,
 414 EB, 452, 109, 190.
 Instruments Available: Steinway grand piano, Thierry Upnigt
 grand piano, Hammond B3 organ with Leslie, extensive drum kit,
 several amplifiers
 Rates: \$110/hr base rate, packages available
 Extras: Guest houses, game room, producers lounge, swimming
 pool, Jacuzzi Whirlpool and sauna all located on a five acre music
 complex.

•••• AUDIO RECORDING STUDIOS, INC.
 also REMOTE RECORDING
 601 Rockwell Ave., Cleveland, OH 44114
 (216) 771-5112
 Owner: Audio Recording Studios, Inc (Corp)
 Studio Manager: Mary Anne Rettger

•••• AUDIO TRAK INC.
 also REMOTE RECORDING
 1025 West State St., Rockford, IL 61102
 (815) 968-2902
 Owner: Stan Valulis
 Studio Manager: Stan Valulis
 Engineers: Joe Guarino, Jim Guarno, Stan Valulis
 Dimensions of Studios: 33 x 39—five isolation rooms
 Dimensions of Control Rooms: 18' x 21'

Tape Recorders: MCI JH-114 24 track, MCI JH-110A 2 track; Scully
 280B 2 track, Revox A77 2 track
 Mixing Consoles: MCI JH-536C 28 in x 24 out
 Monitor Amplifiers: BGW 750, 250, Crown DC300's
 Monitor Speakers: UREI 813's, JBL 4311, Auratone 5C's
 Echo, Reverb, and Delay Systems: Echo Plate, Live Chamber,
 Eventide H-949, Delta Lab DL-4, Marshall Time Modulator, Pandora
 Time Line
 Other Outboard Equipment: 24 track dbx noise reduction, UREI
 LA-4's, 1176LN Peak Limiters, ADR Expander Gates, S-300's,
 S-36's, Dual Gates, Kepex Gates, Orban Silbance Controllers
 Microphones: AKG 414's, 452's, D12E's; Neumann U87's, Electro-
 Voice, Shure, etc
 Instruments Available: Steinway B, Oberheim Polyphonic, Pearl
 drums, various amps and keyboards
 Rates: \$75 00 24 track, \$35 00 2 track, set up time free
 Extras: Comfortable working atmosphere, lounge game room,
 package prices available including rooms, food, and transportation
 Direction: We are committed to achieving the highest quality re-
 cordings for all our people no matter what the size of the project. We
 also give pre-production consultation to musicians unfamiliar with
 studio work. A full jungle production company is also based out of
 our studio

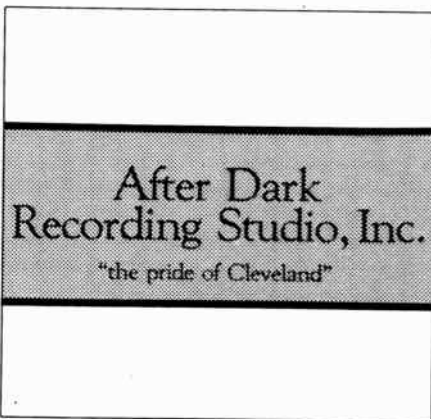
•••• AUDIOCRAFT RECORDING CO.
 also REMOTE RECORDING
 915 West Eighth St., Cincinnati, OH 45203
 (513) 241-4304
 Owner: E T Herzog, Jr



Bison Recording

•••• BISON RECORDING
 394 Mt. Vernon Ave., Columbus, OH 43215
 (614) 228-2228
 Owner: J D Blackfoot
 Studio Manager: J D Blackfoot
 Engineers: Gary Hedden, Robin Guicher, Robin Jenny
 Dimensions of Studios: 57' x 34'
 Dimensions of Control Rooms: 21' x 21'
 Tape Recorders: Otari MTR-90-II 24 track, (2) Otari MTR-10 2-2
 track, (3) Aiwa 3800
 Mixing Consoles: Sound Craft 2400 28 in by 24 out
 Monitor Amplifiers: (6) Haller
 Monitor Speakers: Fostex LS3, Fostex LS2, MDM-4, JBL 4435,
 Auratone
 Echo, Reverb, and Delay Systems: 8' Echo plate, (2) Lexicon
 PCM 41; Eventide H-910, dbx 906 flanger
 Other Outboard Equipment: dbx 900 rack, includes 902's and
 903, Omnicraft GT-4
 Microphones: Neumann U-89, KM-84, Sennheiser 421; AKG 414
 and 452EB, Shure SM 57, SM-2
 Instruments Available: Yamaha piano 74", Ludwig drums, Ham-
 mond B3, Crate guitar and bass amps
 Rates: \$115 00/hr

•••• CHICAGO RECORDING COMPANY
 528 North Michigan Avenue, Chicago, IL 60611
 (312) 822-9333
 Owner: Alan S. Kubicka
 Studio Manager: Jo Sturm & Susan Divita
 Engineers: Chris Sabold, Hank Neuberger, Dennis Anderson,
 Phil Bonanno, Tommy Hanson, Mike King, Tim Butler, Bill Kovach,
 John Titak, Gary Hedden
 Dimensions of Studios: A 27' x 45'; B 23' x 35'; D 35' x 67';
 Studio C-1, C-2, E & H designed for voice-over & production
 Dimensions of Control Rooms: A 19' x 20', B 22' x 22', D
 26' x 26'
 Tape Recorders: MCI 24, 8, 4, 2 track and mono
 Mixing Consoles: Cadac Series E 36 in x 32 out, MCI JH-532C 36
 in x 32 out, Neve 8068 Mark II 32 in x 32 out, Flickinger Model D 32
 in x 24 out
 Monitor Amplifiers: Crown
 Monitor Speakers: Cadac, UREI 813's, Westlake/Eastlake
 Echo, Reverb, and Delay Systems: ETM-251, EMT-140's, tube



After Dark Recording

•••• AFTER DARK RECORDING STUDIO INC.
 also REMOTE RECORDING
 5510 Pearl Rd., (lower level) Cleveland, OH 44129
 (216) 845-5455
 Owner: Kirk Yano
 Studio Manager: Kirk Yano
 Engineers: George Sipl, Kirk Yano
 Dimensions of Studios: A 24' x 16', B 14' x 16'—Live room
 Dimensions of Control Rooms: 19' x 15'
 Tape Recorders: MCI 114 24 24 track, MCI 110-2 2 track, Otari
 5050B-2 2 track, Sony 854-4 4 track, Technics M-65 2 track
 Mixing Consoles: MCI 424 (modified by Randy Blevins, Nashville,
 Tenn) 24 in x 24 out. (5534 chips & light meters)
 Monitor Amplifiers: BGW 750, Crown D 60, Marantz 140
 Monitor Speakers: JBL 4343, 4311, Auratone cubes, 6' x 9' car
 spks
 Echo, Reverb, and Delay Systems: Eventide 910 Harmonizer,
 949 Harmonizer w/De-Glitch Card, Lexicon Prime Time, Cooper
 Time Cube, Delta Lab Digital Delay, Tape Echo, Lawson 8 ft Echo
 Plate.
 Other Outboard Equipment: Allison, Kepex, Gain Brains, UREI
 LA-4 limiters, Pultec Tube EQ, Trident Parametric EQ, UREI 10-band
 EQ, UA 17B Tube limiter, MCI Mono tube limiter, EXR Exciter,
 Vocoder, Graphic Equalizer
 Microphones: Neumann U-87, U-67 (tubes), Sennheiser 441, 421,
 Sony 377P, 22P, Shure SM-57-58-59-81, EV-RE-15-666; AKG 414,
 452, 451, D-12; PZM, Electro-Voice RE-20, RCA Ribbon
 Instruments Available: Yamaha grand piano, Fender Rhodes,
 Ludwig drums, Prophet V, Roland, VOX guitar amps, ARP 2600,
 PRO soloist, Stingingman, Marshall Super Lead, 100 4' x 12" lab
 Video Equipment & Services: Sony 3/4" video - 1800 camera,
 4800 portable machine, Sony monitors, off line editing, special ef-
 fects
 Rates: \$75/hr—24Trk; \$30/hr—2Trk.

EMT 140's, EMT 240's, AKG BX 20, Master Room, Eventide Harmonizers & Digital Delay, Lexicon Prime Time & digital delay, Marshall Time Modulators

Other Outboard Equipment: All ancillary equipment available we are a true world class studio (Automation, SMPTE Time Code, Video Sweetening, etc.)

Microphones: Neumann, AKG, Schoeps, Sennheiser, Sony, Shure, Electro-Voice, RCA, Altec, plus many classic tube microphones.

Instruments Available: Hammond organ, Fender piano, Steinway grand piano, Fender Rhodes, Clavinet, Harpsichord, Hammond organs, Sonar & Rogers drums, Minimoog, Polymoog, ARP 2600, ARP Omni, ARP String

Video Equipment & Services: Continually in video sweetening utilizing Sony & Panasonic VHS video cassette recorders with RTX SMPTE Time Code Headers, generators, synchronizers, and controller.

Rates: Studio A & D \$205/hr, Studio B \$155/hr, Production Studios \$55-\$110/hr, rates available for block bookings.

Extras: 46 track recording, automation, SMPTE Time Code, video sweetening, the best working environment in the city.

Direction: Since we opened our doors in 1975, we have been Chicago's true world class facility. Our staff is considered the best in the city, and we service our clients to the very hilt. Recent record clients include Ramsey Lewis, Jerry Butler, Todd Rundgren, Marshall Tucker Band, The Ohio Players, Styx, Cameo, Steve Goodman, Dee Dee Sharp, and Gambler. Commercial jingles to our credit include hundreds of spots for McDonald's, Coke, United Air Lines, Wrigley's Gum, Schlitz, Sunkist, Kellogg's, and Sears. It can be done. C.R.C. is known as the studio that can do it.



Chicago Recording Co.
Chicago, IL

**** CASTLE RECORDING COMPANY

also REMOTE RECORDING

P.O. Box 168, Americana Resort Hotel,
Lake Geneva, WI 53147

(414) 248-2400

Owner: Vern Castle



Castle Recording Company

Castle Recording Co.
Lake Geneva, WI

**** CLOUD BORN PRODUCTIONS, INC.

18000 Mack Ave., Grosse Pointe, MI 48224
(313) 882-0566

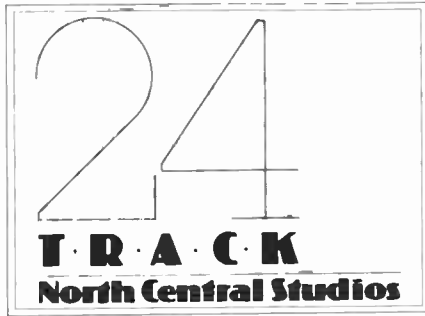
Owner: Gary Price

**** CREATION AUDIO RECORDING, INC.

5002 West Old Shakopee Road, Bloomington, MN 55437
(612) 881-6020

Owner: Terry Grant, Steve Wiese

Studio Manager: Terry Grant



**** CREATIVE AUDIO

705 W. Western Ave., Urbana, IL 61801

(217) 367-3530

Owner: Michael Day, Dana Walden, Leon Reeder
Studio Manager: Roger Francisco

**** CYBERTEKNICS

also REMOTE RECORDING

1953 East Third Street, Dayton, OH 45403

(513) 258-2463

Owner: Philly Mehatley

**** THE DISC

14611 E. Nine Mile Rd., E. Detroit, MI 48021

(313) 779-1380

Owner: Corporate

Studio Manager: Greg Reilly

Engineers: Greg Reilly, Robert Dennis, John Jaszer, Dave Huxer

Tape Recorders: Ampex MM1000 24 track, 3M 566 16 track

Ampex ATR102 2 track, MCI JH110B 2 track

Mixing Consoles: Automated Processes Custom 32 in x 24 out

Equipped with Allison Research Computer Mix System

Monitor Amplifiers: McIntosh Crown PAS

Monitor Speakers: D.C. ACU's modeled after Bio Reds, IBI Century 100's, A.ralones

Echo, Reverb, and Delay Systems: (2) EMT Stereo Plates 140

DeltaLab DDL1, PCM41 (Lexicon)

Other Outboard Equipment: Lexicon delay lines, Telonix mix compressor, Voxco phase shifter, ATE parametric equalizers, Orban Parametric EQ, Eventide Harmonizer, D.C. Limiter, P. Dubs equalizer

Microphones: Neumann (U87, U91, and U81), Electro-Voice RE-10, RE-15, RE-19, RE-95, 635A, Sennheiser MK421's

Instruments Available: Premier drums, Kamball baby grand piano, Hammond B3, chimes, tympanes, orchestra bells, marimbas, vibes

Video Equipment & Services: Multi-track audio sweetening using Sony 4850 & 4860 and 24 track using RTX Synthesizer and Controller

Rates: \$175 40 track system including \$145 24 track \$125 16 track, \$150 12 track system

Direction: Bob Seger, Mitch Ryder, Parliament Funkadelic, Roger Troutman, Taj Mahal (Work That Sucker To Death), Ohio Players, Sly Stone

**** 5TH FLOOR RECORDING STUDIOS

517 West Third Street, Cincinnati, OH 45202

(513) 651-1871

Owner: Richard Goldman & Ellen Goldman

Studio Manager: Rick J. Goldman

Engineers: Gary Platt, Rick Levine, 5 B.I. City exclusive remote recording

Dimensions of Studios: 20 x 25

Dimensions of Control Rooms: 20 x 15

Tape Recorders: MCI JH 114 24 track, Studer B67 2 track, Ampex 44B 2 track, Scully 2402 2 track, Sansui SC1110 cassette, 2 track Tascam cassette deck

Mixing Consoles: Shure Eclipse A 28 in x 24 out

Monitor Amplifiers: B&W 500, B&W 250

Monitor Speakers: JBL 912, time aligned JBL 4311 A, studio

Echo, Reverb, and Delay Systems: Lexicon 24 Digital Reverb, Echo Plate, Lexicon Prime Time Digital Delay, Marshall Time Modulator, Cooper Time Cube

Other Outboard Equipment: Carver 22B Parametric EQ, UREI 1176 LN Limiters, UREI LA3A limiters, dbx 160 limiters, dbx 160 De-esser, dbx noise reduction, 26 channel Audiotronics LA2A limiters

Microphones: Neumann tube 1147's, 1187's, FM 84's, FM 46's, Shure 57's & 58's, EV RE 20, RE 16, 666, RCA 77's, Beyer M500

Schroeps AKG 414's

Instruments Available: Steinway 7 grand, Fender Rhodes, Rogers drums, synthesizers available by appointment

Rates: Available upon request



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- 100Hz full power bandwidth @ 60dB gain
- 100dB common mode rejection
- Input stage immune to RF interference
- Onchip full wave rectifier peak detector
- LED driver outputs for proper level clipping
- Low cost - minimum external component count
- Pop free turn on

ISM 2012 - Voltage Controlled Amplifier
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- 100kHz bandwidth
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- Low cost - minimum external component count

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Recording & Mixing Equipment:
Neotek Series I 24 channel mixing console.

See our equipment list in the 16 track listings on p. 51.

By appointment only:
Michael Franklin

FUTURE SOUND

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Beverly Shore, Indiana 46301
(219) 879-6436

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516 N. Milwaukee Ave.
Wheeling, IL 60090
(312) 537-8211

Circle #040 on Reader Service Card

24 T·R·A·C·K North Central Studios

•••• GERIM RECORDING INC
2120 S. Michigan, Chicago, IL 60616
(312) 326-5450
Owner: Gerald Sims, Kathleen Newman
Studio Manager: Kathleen Newman
Engineers: Harry Berman, Gerald Sims
Dimensions of Studios: Studio A 24 x 41, Studio B 20 x 31, Studio C 20 x 31
Dimensions of Control Rooms: A 10 x 15, B 10 x 15
Tape Recorders: MCI 14 track, MCI 24 track, Otari 24 track, TEAC 24 track
Mixing Consoles: Amax 24 in x 24 out, TEAC Model B
Monitor Amplifiers: B.W. Larson
Monitor Speakers: UREI Century III, JBL
Echo, Reverb, & Delay Systems: Echo Train, MICMIX
Other Outboard Equipment: Voxalator, or many more
Microphones: Neumann, Shure, Sennheiser, Electro-voice, AKG, RCA, Sony
Instruments Available: Kawai grand, Fender Rhodes, Hammond B3, Hammond
Rates: Studio A, 4 track, \$100; Studio B, 2 track, \$50; Studio C, 2 track, \$50

•••• HEDDEN WEST RECORDERS
1200 Remington Road, Schaumburg, IL 60195
(312) 885-1330, 885-9378
Studio Manager: Michael Freeman

•••• HUBBARD STREET STUDIOS
also REMOTE RECORDING
11 East Hubbard St., Chicago, IL 60611
(312) 670-0110
Owner: Fred Reynolds, Jim Pouloson
Studio Manager: Fred Reynolds, Jim Pouloson

•••• JEWEL RECORDING STUDIOS
also REMOTE RECORDING
1594 Kinney Ave., Cincinnati, OH 45231
(513) 522-9336
Owner: Rusty York
Studio Manager: JH Bennett
Engineers: JH Bennett, Rusty York, Roger Sorel
Dimensions of Studios: 30 x 31
Dimensions of Control Rooms: 10 x 16
Tape Recorders: MCI JH 14 with QUICKEE 24 track, MCI JH 10A, 2 track, 12) Scully 280 2 track, Scully 280 4 track
Mixing Consoles: Spectrasonics 10, 4, 4, 4, 4 x 24 out
Monitor Amplifiers: Spectrasonics
Monitor Speakers: Spectrasonics, Altec, Electro-Voice, Kapsch
Echo, Reverb, and Delay Systems: EMI stereo plate, Audicon stereo plate, MXR digital delay, Sequencer (studio only)
Other Outboard Equipment: Comtech 411A2A (1) Pultec EQ (2) Lang EQ
Microphones: Neumann U47, U87, KM84, AKG 414, RCA 44 & 77, Audio Technica, IZM, etc. (1) mic in all
Instruments Available: 9 Baldwin studio Fender Rhodes, Hammond, Hammond organ, guitar, amps, etc.
Video Equipment & Services: 14 Umatic, VTR & color camera
Rates: Special package rates. Prices on request.

•••• K & R RECORDING STUDIO
also REMOTE RECORDING
29111 Greenfield, Southfield, MI 48076
(313) 574-2080 & 557-8276
Owner: Ken Glaza
Studio Manager: Pat

Extras: Our new studio C (at a location) to be announced or completed will be on the order of a sound laboratory whose live end dead end design will lend itself to the creating of music. No others have combined 16 & 24 track punch rollerless machines, post production facilities w/ qualified writers, musicians & producers (our present specialty), non EQ'd monitors (they ask a lot of questions), non compressed mix board, mood cross selection of mics, including ribbons, dynamics, condensers, old & new. Instruments, cassette duplication, pressing service, successful marketing & packaging services plus 14 years of audio technical knowhow will always provide high quality & reliability so you can be sure of our LP, commercial & video

sound work cut in Studio B you can get a real "what is it" home. Ask any of our clients about our business. Check out Best of Sound Award proven quality.

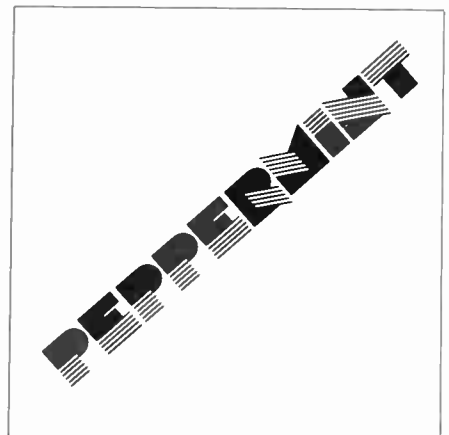
•••• KBK EARTH CITY SOUND STUDIOS, INC
also REMOTE RECORDING
4288 Rider Trail, Earth City, MO 63045
(314) 291-4840
Owner: Ken & Marilyn Kesterson
Studio Manager: Marilyn Kesterson

•••• LANSING SOUND STUDIOS, INC
also REMOTE RECORDING
2719 Mt. Hope Rd., Okemos, MI 48864
(517) 351-6444
Owner: Bob Kuckin
Studio Manager: David A. Laskyn

•••• MCCOY RECORDING COMPANY
also REMOTE RECORDING
7018 West Warren Avenue, Detroit, MI 48210
(313) 361-2444
Owner: Edward H. McCoy
Studio Manager: Chrylynn McCoy

•••• MONTAGE
2657 N. Mildred, Chicago, IL 60614
(312) 883-1600
Owner: Jeff Palmer

•••• PARAGON RECORDING STUDIOS, INC
also REMOTE RECORDING
9 East Huron St., Chicago, IL 60611
(312) 266-0075
Owner: Martin J. Felman
Studio Manager: Nancy Gardner



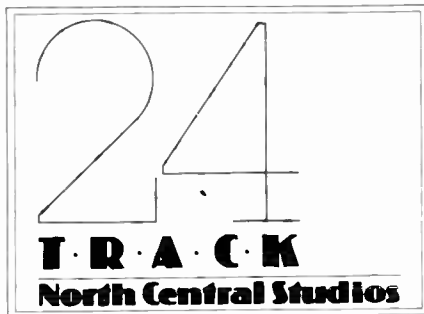
Peppermint Productions
Youngstown, OH

•••• PEPPERMINT PRODUCTIONS CORP
also REMOTE RECORDING
803 East Indianola Ave., Youngstown, OH 44502
(216) 783-2222
Owner: Gary I. Rhamy
Studio Manager: Brenda Circle
Engineers: Gary Rhamy
Dimensions of Studios: A 40 x 30, B 20 x 15
Dimensions of Control Rooms: A 30 x 10, B 10 x 7
Tape Recorders: Scully 284 B 1/2, 16, 24 track, Ampex 441 A, 4 track, Ampex 451 1 track, Technics 1500
Mixing Consoles: Custom containing UREI A11, more 1100, 1100 components, 24 in x 24 out, Custom Universal Audio, etc. components, 11 in x 4 out
Monitor Amplifiers: Crown McIntosh
Monitor Speakers: JBL 4320s and custom, Autek Voice of the Theatre
Echo, Reverb, and Delay Systems: EMI stereo plate, Eveready Instant Flanger, Acoustic Echo Chamber, Sound Workshop, Tape Echo, Doherty delay
Other Outboard Equipment: Eventide Harmonizer, variable speed on all machines, interlock between studio A & B
Microphones: Neumann UH7, U67, KM84, KM84, Telefunken 25, Shure, Sony, EV, RCA, Sennheiser 421, EV BF 20, Crown P7M, etc.
Instruments Available: Steinway piano, Hammond C3, radio studio ensemble tympanus xylophone, music percussion instruments, some instruments available upon request
Video Equipment & Services: Moviola editing table, Canon 16mm camera with crystal sync, Nagra tape recorder, Magna sync dabbler, Botamox VTR with time code reader, musical library
Rates: 4 track \$75 hr, 16 trk \$65 hr, 8 trk \$55 hr, 4 trk \$45 hr

•••• PIERCE ARROW RECORDING
1911 Ridge Ave., Evanston, IL 60201
(312) 328-8950
Owner: Sam Lynn & Frank Seater
Studio Manager: Larry Savoie
Engineers: G. S. Mossler, Paul Klingenberg
Dimensions of Studios: 2400 sq. ft.
Dimensions of Control Rooms: 23 x 23
Tape Recorders: Ampex 1200 24 track, Ampex ATR 102 2 track, Ampex ATR 104 4 track
Mixing Consoles: Neve w/ Neacm 8078 computerized 40 in x 48 in
Monitor Amplifiers: Crown 800
Monitor Speakers: Hidy TM 11, JBL 4311s, JBL 4333s
Echo, Reverb, and Delay Systems: AKG BX 20, F. hoplat-FMI 240, Lexicon 224
Other Outboard Equipment: Allison Gain Brains, Kexexs, dx 160 limiter, Lexicon Harmonizer, Eventide Digital Delay, Eventide Flanger, UREI Parametric Equalizer, LA 3A limiter
Microphones: Neumann, AKG's, Boyer, Electro Voice, PZM, Sennheiser, Shure & Sanyo
Instruments Available: Piano & Hammond B 3 organ
Rates: Call for rates

•••• PINEBROOK RECORDING STUDIOS
also REMOTE RECORDING
P.O. Box #146, State Road #9 South,
Alexandria, IN 46001
(317) 724-7721
Owner: Bill Gauthier, Bob MacKenzie
Studio Manager: Randy Hummel

•••• PRISM RECORDING STUDIOS
also REMOTE RECORDING
16036 Union Ave., Harvey, IL 60426
(312) 339-8015 Booking & Info. Studio: (312) 339-8145
Studio Manager: JoAnn Sura
Engineers: Bob Vukoblich
Dimensions of Studios: 40 x 10, 15' x 15'
Dimensions of Control Rooms: 15' x 20'
Tape Recorders: Otari MTR 90 24 track, (2) Otari MX 5050B 2 track
Mixing Consoles: Neotek Series III 28 in x 24 out
Monitor Amplifiers: (2) Crown PSA 2, (1) Crest 2001, (2) Crest 1000
Monitor Speakers: (4) Electro Voice Sentry III, (2) E.V. Sentry 100, (2) Auratones



Echo, Reverb, and Delay Systems: Lexicon Prime Time, Eventide H-44, Ursa Major Space Station, MXR Digital Delay, Transposer and Flanger, Doubler, Delta 1, dB DL4, and DL2, Master Room XI 405, Echo Plate, Delbalab DL 5
Other Outboard Equipment: Omnicat Noise Gates, UREI and dx 160 limiters, Orban Equalization, Orban Stereo Synthesizer, Stamp dx 900 Series rack, EXR EX III
Microphones: Neumann, Electro Voice, Sennheiser, Crown, PZM, AKG, Shure, Sony, PML
Instruments Available: Hammond C 3, Rhodes RH, Kawai 6 piano, ABI Strings, Kora BMB5, Ludwig 9 piece kit, w/ cymbals, Slingerland by 200 kit, w/ cymbals, complete permission, 1 sh Series amps, complete studio instrument rental service (all brands)
Rates: \$24/trk, \$75/hr, 2/trk, \$45/hr

•••• PUMPKIN RECORDING STUDIOS
6737 W. 95th St., Oak Lawn, IL 60453
(312) 598-3045
Owner: Gary Louzo
Studio Manager: Gary Louzo

•••• QCA RECORDING STUDIOS
2832 Spring Grove Ave., Cincinnati, OH 45225
(513) 681-8400
Owner: Edward H. Bosken
Studio Manager: Jim Bosken

•••• THE RECORDING CONNECTION, INC.
also REMOTE RECORDING
23330 Commerce Park Dr., Beachwood, OH 44122
(216) 464-4141
Owner: Arnie Rosenber



Red Label Receiving Studio
Winnetka, IL

•••• RED LABEL RECEIVING STUDIO
552 Lincoln, Winnetka, IL 60093
(312) 446-1893
Studio Manager: Fred Breitherr



Solid Sound Inc.
Ann Arbor, MI

•••• SOLID SOUND, INC.
1289 N. Dixboro Rd., Ann Arbor, MI 48105
(313) 662-0667
Owner: Robert Martens
Studio Manager: Robert Martens
Engineers: Will Spencer, CE, Bob Martens
Dimensions of Studios: 28 x 23 plus isolation room of 12 x 12, 12 x 5, ceilings trapped, rows to 10
Dimensions of Control Rooms: 17 x 17
Tape Recorders: MCI JH 114 24 track, MCI JH 110H 2 track, Otari 5050 (2) track, Nakamichi, (2) SMD cassettes
Mixing Consoles: MCI JH 636 42 in x 42 out
Monitor Amplifiers: Crown, Butler
Monitor Speakers: JREI 81, JBL 4-11, 4-1, Rogers LS-5A, Auratones
Echo, Reverb, and Delay Systems: Lexicon 224, F. hoplat II, Lexicon Prime Time, Delta 1, dB DL 4, Fobair Chorus, Eventide
Other Outboard Equipment: dx 900 rack, UREI LA 3A, dx 160s, 165s, Eventide Harmonizer, and Instar Flanger, EXR EX limiter, JREI 546, (2) channels, in x Lexicon PCM 4
Microphones: Neumann U 67, U 87, AKG 414, 451 (w/ omni & variable D 12 D 1000), Sennheiser 44, 40, Shure SM57, SM58, SM8, Crown PZM, Airo, S26, 925, EV HF 15, HF 20
Instruments Available: Baldwin 9 concert grand, Prodec 89, APP 2000 Wurliwer electric piano, Ludwig drums, Marpa 6 by 2, 12 in drums, various horns and Yamaha amplifier, Asc ARF C mini
Rates: \$45/hr studio hour, Several discount packages available: Extra 1 hour for SMPLE Video, lock up
Extras: As a side line we offer 160 cassettes and well as tape-to-whole sale. In addition, Solid Sound maintains an in-house production company and a large pool of talented musicians and arrangers to assist with all studio production needs. Available color coordination services near major transportation routes. Both butler and fluxity room. In addition, as available, studio technician for the day and night.

MIX READER PROFILE

Guy Costa

OCCUPATION:
Motown Vice President and
Managing Director

BACKGROUND:
Nearly 20 years of active involvement in the recording industry as an engineer and manager of one of the most active studios in the country, Motown Hitsville U.S.A.

RECENT PROJECTS:
Equipping the studio for digital mixdown and mastering assistance

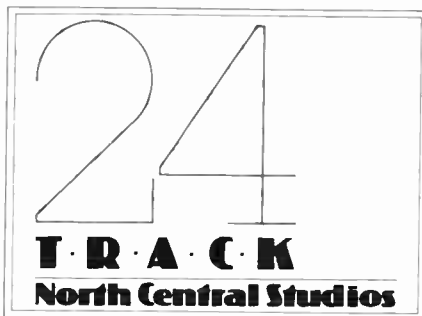
ABOUT MIX:
"Mix Magazine provides me with a window through which I can view the ongoing developments and operating techniques taking place in our industry."



•••• SOLID SOUND RECORDING STUDIO, INC.
2400 W. Hassell Rd., Suite 430,
Hoffman Estates, IL
(312) 882-7446
Owner: Judd Saqer
Studio Manager: Judd Saqer Mike Fraser Gary Whitson

••••SOUND 80 INC.
also REMOTE RECORDING
4027 I.D.S. Center, Minneapolis, MN 55412
(612) 339-9313
Owner: Herb Pilhofer
Studio Manager: Herb Pilhofer

••••SOUND PATTERNS DXM
also REMOTE RECORDING
38180 Grand River, Farmington Hills, MI 48018
(313) 477-6444
Owner: Dan D. Dallas
Studio Manager: Pelly Dallas
Engineers: Dan Dallas Jeff Miller
Dimensions of Studios: Studio A 31 x 42 asymmetrical
Studio B 19 x 36
Dimensions of Control Rooms: Studio A 15 x 26
asymmetrical Studio B 15 x 19
Tape Recorders: Auto-tac Custom made 16/24 track (2)
AmpeX A644 8 track AmpeX 351 2 track Scully 280 2 track
Tascam TFA-1 Revox and TEAC 1/2 and 1/4 formats
Mixing Consoles: Custom built w/parametric equalizers (Studio
A) 4 in x 4 out Audio Designs (Studio B)
Monitor Amplifiers: McIntosh (3)
Monitor Speakers: Speaker Lab (custom) Cizek, DXM Tone
Cubes Altec 604F Altec A 700 AH3 A
Echo, Reverb, and Delay Systems: EMT 140S Loft Fairchild
Orban tape
Other Outboard Equipment: Eventide Phaser flanger Lot
DeltaLab EXH Exciters UREI 1176LN limiters, Teletronix LA-3A
UREI Filter dit x Limiter Outboard Parametrics Orban, De Esser
Microphones: AKG 414 Neumann KM86 PZM (8) AKG 451
EV RE 20 Shure SM81, Sennheiser, Beyer, RCA, Altec and
more
Instruments Available: Poly Moog Minimoog Kanabe grand
piano Hohner D6 Clarinet, Deqaan marimbas, Slingerland drum
set Hammond B3 w Leslie and tone cabinet amps AmpeX B15
Fender, Music Man, and Peavey



Sound Patterns DXM
Farmington Hills, MI

Rates: \$30-\$140 per hour
Extras: Motel accommodations across the street, many restau-
rants, 1000 ft sauna pool bowling bars in immediate vicinity 15
minutes to Mt. Brighton. Located 25 minutes from Metro Airport
Direction: Sound Patterns is the leading music studio in the metro
Detroit area and has many satisfied customers over the past 12
years since its inception. It is one of the first studios in the country
totally designed asymmetrically. Headed by Danny Dallas, Sound
Patterns records rock jazz country gospel commercials jingle
radio and TV Program Services training films pulsing disk cut-
ting tape cassette duplication etc.



Sound Recorders
Kansas City, MO

•••• SOUND RECORDERS, INC.
also REMOTE RECORDING
3947 State Line, Kansas City, MO 64111
(816) 931-8642
Owner: Don Sears affiliated with Sound Recorders Omaha
Nebraska
Studio Manager: Jim Wheeler
Engineers: Chris Bauer Mark Weddle
Dimensions of Studios: Studio A 40 x 40 B 16 x 20 C 8
x 9 Video Soundstage w/hard CYC 44' x 44' Video Insert
Stage 12 x 16
Dimensions of Control Rooms: A 14 x 21 B 15 x 20 C
10' x 12' Video Edit A 15' x 15' Video Edit B 15' x 15'
Tape Recorders: MCI JH 114 4 track Otari 1 inch 8 track
Scully 80R 4 1/2 & 1 track Sony PCM Digital System PCM1600H
with Editor 2 track RCA TR200 1 inch C Format Video
Recorder
Mixing Consoles: MCI 1H 62H automated 28 in x 28 out
Audionics 501 26 in x 16 out Tascam 5 8 in x 4 out Grass
Vidley Gro up Video Switchers CMX automated video editing
Monitor Amplifiers: Phase Linear 2000 & 4000 Crown ICA 300A
BGW 600
Monitor Speakers: JBL 4350 4330 4311 4301 &
Auratonics
Echo, Reverb, and Delay Systems: Eventide Harmonizer Model
H949 w/De glitch modification Harmonizer H910 Moog 12
Stage Phaser, MXR flanger, UREI 1176 limiters, Ecoplate
Other Outboard Equipment: FCO three port SMPTE Time
Code synchronizer for Interlock king 24 track to Video 1/2 1/4
inch formats, Digital Recording with Sony PCM system Quantel
Digital Video effects
Microphones: Crown PZM Teletronix M250 Neumann U64
U67 U87 & KM 84 AKG C 12 C 50 414 & 452 Sennheiser
421 RCA 44 & 77
Instruments Available: Steinway & Kimball grand pianos, Tama
drums access to synthesizers harpsichord & large Pipe Organ
Rates: \$125/hr 24 track Audio \$175 hr Digital Mixing \$180/hr
Video Interlock w/24 track SMPTE Block rates available upon re-
quest

•••• SOUND SMITH RECORDERS, INC
5210 E. 65th St., Indianapolis, IN 46220
(317) 842-4905
Owner: Mark Copenhaver and Mark Dodds
Studio Manager: Mark Copenhaver
Engineers: Mark Copenhaver Mark Dodds Mike Graham Al
Thompson
Dimensions of Studios: 45 x 20
Dimensions of Control Rooms: 22 x 18
Tape Recorders: 4M 56 24 track Scully 280 B stereo Otari
MX5050B Stereo Scully 280 B mono
Mixing Consoles: Neotek Series III 28 in x 24 out
Monitor Amplifiers: Crown DC 400A BGW 750
Monitor Speakers: TV 5 sub III 151 441 441M 4 A 500
5C
Echo, Reverb, and Delay Systems: EMT 140S Master Room
XI 305 Lexicon Prime Lim 129
Other Outboard Equipment: UREI 1176N limiters (3) Eventide
Harmonizer Eventide Flanger A.L.O. Design 4 Boxorling
(Simp) Pan effects module Parametric EQ (2) Expander Gate



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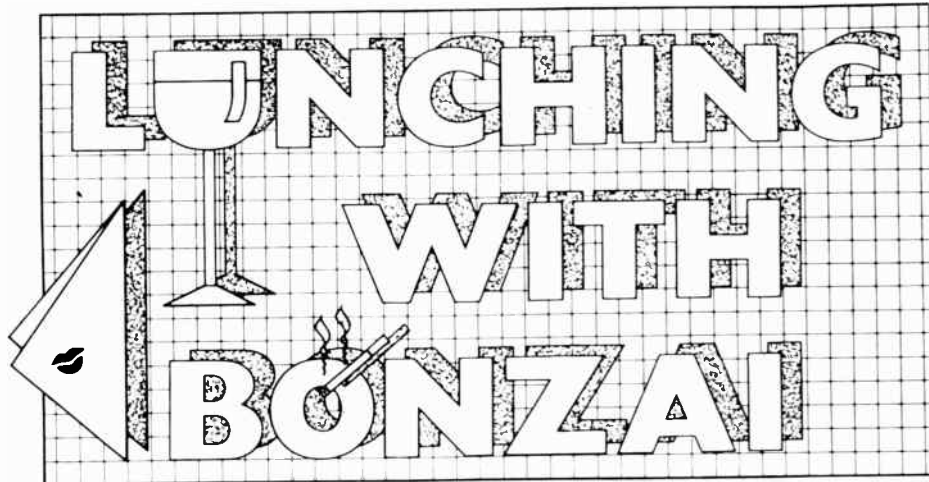
We offer low package prices especially tailored to the independent on a tight budget. Call or write us for more information.

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by Mr. Bonzai

DEVO is a concept band with an enigmatic image. They have created their own music, films, videos, and a mail order business to dispense their disposable space suits and futuristic accessories. Using the tools of the media, they wield their image synthesizers like cattle prods. They have incorporated modular costumes, drill team choreography, effects generators, and electronic signatures to communicate their lyrical philosophy—but what is at the heart of DEVO?

This lunching took place at L.A.'s famed Cherokee Studios where the band was completing their new album, with Roy Thomas Baker producing. Since lunch breaks are verboten in the DEVO regimen, I just brought along some beaujolais and Cracker Jacks for a little surprise snack. After my arrival was announced, Mark Mothersbaugh stepped into the reception area. He was wearing the ultimate "off the rack"



seconds."

After the synthesizer was whipped into shape, Mark and Jerry Casale introduced me to their producer. The album was being recorded on his custom-built Stephens 40-track which he hauls around the world in Anvil flight cases.

"I've been using the Stephens

and I think they can sound even more powerful. One of the heaviest things they've done was "Whip It," but it seemed like a one-off thing. The task is to put all their ideas on tape but increase the impact and depth."

The engineer on the project was Gordon Fordyce, who Roy had just recently worked with as executive

DEVO SPEAKS

50's sharkskin suit with the tag still sewn on the sleeve and the pockets and vents sewn shut with diagonal stitching. He motioned me into the inner chambers and asked that I wait patiently while he formulated a synthesizer program.

I sat in front of the console on a theater seat bashed from too many balcony necking sessions. Sunken down, I was invisible to the crew and soaked up the session chatter. One of the engineers was reading aloud from a newspaper account of a cocaine bust where the user had a \$6000 a week habit.

"\$6000 a week—how could anyone have a habit like that?"

Mark suggested, "He must be one of those guys who can't do it through his nose anymore. They wear these special rubber knee boots and pour a couple of thousand dollars worth in their boots and just walk around getting high."

Mark fiddled with his cavalcade of synthesizers and informed the engineer, "I'll just reprogram it down a step and we'll be ready to roll in thirty



L. to R.: Bob Mothersbaugh, Alan Myers, Mark Mothersbaugh, Bob Casale, Jerry Casale

for the past four years," Roy explained. "It has computerized control, better transient response than most machines, and the frequency range and signal-to-noise is better than most 24 tracks. It also has no capstan, so you not only have the extra tracks but you can do as many overdubs as you want without wearing out the tape.

I uncorked the wine, poured us all a glass, then lured Roy off to the side to elicit some comments:

"DEVO has a lot of good ideas

producer on a re-mix project for a local L.A. band, "Motley Crue." "I don't mind lending a hand on these projects—I enjoy it," he explained. Consequently, Gordon was hired for the new DEVO album.

While the synthesizer parts were automatically fed into the multi-track, there was a lull in the session momentum. Mark donned a Hitler mask and picked up an unusual portable electronic instrument, the Omnichord. Built by Suzuki, it is like an electronic autoharp with a strumming ribbon. Mark explained in a muffled,

mock-German accent that it was sent over by his brother, who is a research scientist for the Roland Corporation. A softspoken lad, he assumed a demento attitude with the disguise and began to improvise a little song:

"Everything is beautiful—in its own way.

Like a starry sky—or a blitzkrieg in May."

As the beaujolais flowed, I was introduced to Mark's fraulein, Anna Rosa, a slim Teutonic beauty with an

even thicker accent than his bogus one. As he serenaded her, she smiled and said, "Ya, ya, das ist schon."

"Love is everything, is it not, Mr. Bonzai?" he asked me with the visual irony of a rubber Fuhrer.

Meanwhile, Jerry had entered the studio to lay down a scratch vocal for a new song, "Deep Sleep."

"I've been walking in a deep sleep . . ."

I just woke up from a deep sleep . . ."

Mark continued to strum the Omnichord, providing a most un-DEVO accompaniment to the pulverizing rhythms blasting out from the studio monitors. Roy asked about the Cracker Jacks, which he had never seen before. "Oh, they've been around for eighty years," I told him. "What—*this* box?" Sampling one of the morsels, I realized they had been sitting on the shelf awhile.

After the vocal was completed, we got down to the meaty DEVO philosophy. Bob, their manager, brought in a load of correspondence, some bumper sticker offers, photographs, and a box of strange glasses which Mark had ordered from the Anderson Novelty Company. He explained, "People think my glasses are fake and are always ripping them off. I have to buy these to protect myself."

HOW WOULD YOU DESCRIBE THE SOUND OF THE NEW ALBUM?

MARK: It's evil clown music—funny and scary. We like to scare the shit out of them little kids.

WHAT ARE SOME OF THE SONG TITLES?

MARK: "Peek-a-boo" is the single and there's "I Must Do What I Must Do," which is about genetic encoding.

JERRY: It's DEVO's version of "My Way."

WHICH OF YOU WRITES MOST OF THE LYRICS?



MARK: It depends on the song. There are some where I write most of the lyrics and some where Jerry does.

JERRY: Another song on the album is "Big Mess," which is about your above average psychos—the Hinkleys, the Chapmans.

COULD YOU ELABORATE ON THE SOUND OF THIS ALBUM?

JERRY: Electronic circus progressions that are circular and relentless, and like many DEVO things, designed to loosen the bowels of the little techno-creeps. We have a thoroughly Eisenhower era right here in the Eighties, with a techno-facade of Apple computers and high-tech. When the big bands are "Haircut 100" and "Orange Juice," you know you're in an arch conservative time. The kids that are part of the mainstream culture today are more anal retentive, tighter and more bloodless than their parents.

DOES YOUR MUSIC HAVE A COLD VISION OR WOULD YOU DESCRIBE IT AS A ZEN BREEZE?

MARK: A Lysol breeze.

DO YOU CONSIDER YOURSELVES ALIENATED?

JERRY: No. Alienated is when you want to be part of the club and you're not—and you're pissed off. In that sense we have never been alienated. We gladly walked away from the club and didn't want part of it to begin with.

MARK: When those recomb DNA labs get it together, we're going to look for alternative life forms.

JERRY: Life on the planet is boringly uniform—totally predictable. The same things are always happening, the same balance is always being applied.

HAVE WE REACHED OUR ULTIMATE STAGE OF HUMAN DEVELOPMENT?

JERRY: That's the problem: people thinking this is it. They make that true.

We create our own reality, there's no doubt about it and that's what we have now. Look around and you see the reality that humans have chosen to create. These needn't be the rules: pollution and suffering and mindless tribal warfare; men and women fighting, getting divorces, possessive and jealous. It's not the necessary state of affairs on the planet.

WHAT WILL THE PLANET BE IN THE DISTANT FUTURE?

MARK: We can think of the real or the ideal. It will probably be like "Planet of the Apes," but that wouldn't be our choice.

WHAT WOULD YOUR CHOICE BE?

MARK: We'd like to see a world where love and hate are things of the past.

BUT AREN'T THOSE DYNAMIC ELEMENTS NECESSARY FOR OUR CHANGE AND GROWTH?

JERRY: No, that's only a rap. It's the



trap that people find themselves in. They have created a supposition that they believe in and the rest of their lives are acted out in making it come true. It's self-fulfilling and it's not in fact true. I'd rather see a more protoplasmic existence with a realization of the body as a transmitter/receiver—massive protoplasm experiencing sensation and information in harmony as much as other organic matter is in harmony with itself.

BUT WHAT ABOUT INDIVIDUALITY?

JERRY: That's not even an issue. When I see what's called individuality, I wouldn't mind losing it. It's a trap that people get into.

MARK: Picking out your own brand of designer jeans.

JERRY: People are always subconsciously or consciously running away from individuality. There is a greater force in the human spirit to reunite.

They know that there is one force that they all came from and even in the most sick ways, like designer jeans, they want to get back to it in real ways. People do anything to simulate a group experience again. Concerts are not the least of that.

MARK: What reason is there to go? Most of the concerts are horrible. The music sounds worse than it does on the albums; the sound systems are terrible, the bands have no kind of show. The only reason people are there is to be together.

JERRY: They don't know why. They are obviously looking for something to happen inside of them, and then because they pay money, they believe something happened to make themselves feel better. When something really does happen, everybody knows it.

WHAT IS SOUND?

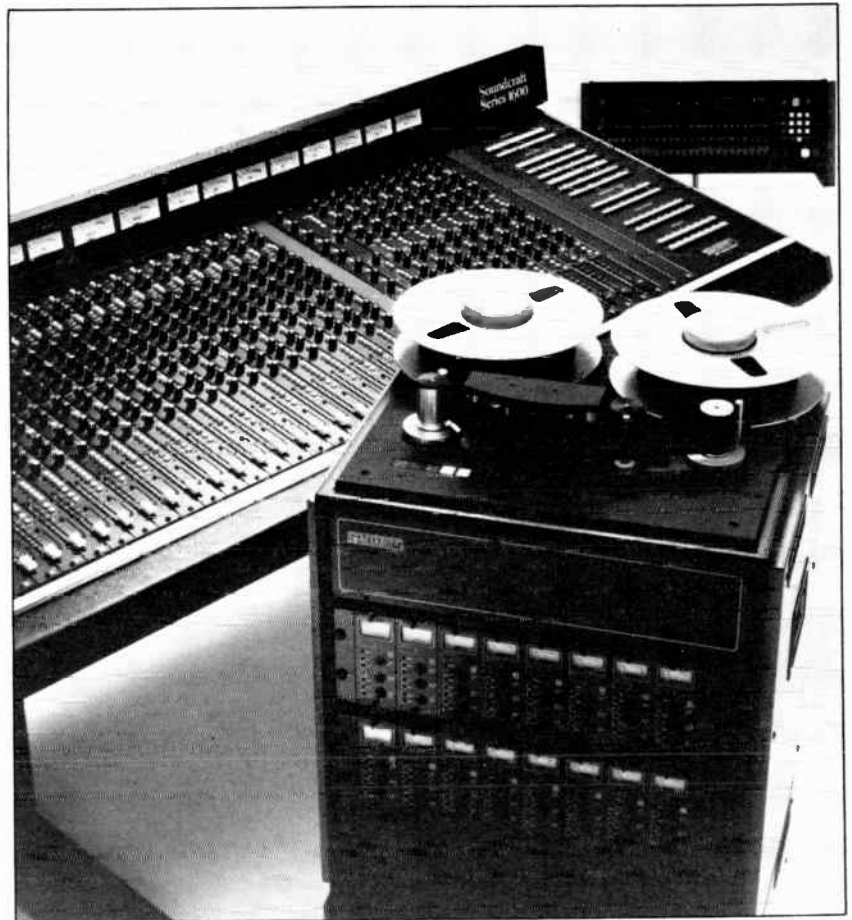
JERRY: Sound is an irritant, but not in a pejorative sense. It's designed in

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In today's world of technical confusion, features, performance and reliability may not always go hand in hand. Since 1973, Soundcraft has been building products for ruggedness, flexibility and maximum performance in a compact package. No hype/no compromise/realistic value.

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such a way that the body reacts in a positive or negative fashion. There are pleasant irritants. If a young girl is rubbing your nipple, it's being irritated in a pleasant fashion. If somebody is pinching it, it's unpleasant—it's negative. Same irritation.
WHAT'S YOUR FAVORITE LOVE SONG?

MARK: I like the Bufferin commercial where the lady tells her husband "No" because she has a headache. Then she takes the Bufferin and the music all of a sudden goes "bloo-pud-a." It's a very good synthesizer piece. It's real short, lasts about five seconds, and repeats over and over again. Then they look at each other and smile. You can tell "tonight's the night."

WHAT MAKES A GOOD ENGINEER?

JERRY: Engineer boots—that's really important. If an engineer's boots are worn out, you shouldn't use him. A good engineer never leaves his seat. His boots are shiny and the heels aren't worn.

DO YOU REMEMBER YOUR FIRST RECORDING SESSION?

JERRY: Yes, we still have that tape and it's probably the purest you'll ever hear DEVO. We did it at a 16 track studio in Cleveland.

MARK: Wasn't it Audio Logic?

JERRY: They don't go for Indian names for studios back there. There weren't any "chateaus" or "ranches." We worked with a friend, Bill Cavanaugh, who was an engineer, a producer, and also played music.

MARK: And his boots were in really good shape.

HOW DO YOU THINK OHIO SHAPED OR MIS-SHAPED YOUR CONSCIOUSNESS?

MARK: It made us determined never to live in a cold climate again.

WHAT IS THE THEME OF YOUR UPCOMING FEATURE FILM?

MARK: The big truth about de-evolution—life in Spud-dom.

IT SOUNDS MORE LIKE AN IDAHO IMAGE THAN AN OHIO IMAGE . . .

MARK: There's a difference. Idaho is famous for those little potatoes. Ohio raises 'em about five to six feet tall and they go out and get jobs and drive around in vans and take Quaaludes, get married.

ARE YOU LOOKING FOR ANY BIG STARS TO BE IN THE FILM?

MARK: I'd like Dana Andrews if he looked like he did twenty years ago when he was in "Hot Rods to Hell." He was always such a great, frustrated, middle class worried man—getting migraine headaches from juvenile

delinquents.

ARE YOU LOOKING FOR ANY LEADING LADIES?

MARK: Well, contrary to what you might think, our film is not going to be "The Five Stooges" picking up beautiful Hollywood starlets, although that might make a good scene.

WHO IS WRITING THE SCRIPT?

MARK: DEVO, with emphasis on Jerry.

JERRY: The theme is man's self-destructive and evil instincts winning out over ideals and virtue.

SOUNDS LIKE A BUMMER . . .

JERRY: No, it's never a bummer. People will be laughing as they die. It's a fable, a morality play where people with logic and intelligence are rewarded and then it proceeds to break down. They are attacked and tested to the point where they aren't strong enough and succumb to the darker side of man's nature and become the people they hate.



PHOTO: NICK ALLEN

WILL DEVO BE THE HEROES?

JERRY: As much as there is a possibility of heroes, yes.

TO GET BACK TO EVOLUTION, WHY DO WE HAVE PUBIC HAIR?

MARK: Because early homo sapiens used to ride around in those log cars where their legs went through the bottom. Mud would fly up from underneath and the pubic hair acted as protection for the genitalia.

JERRY: Now it's there to show people how to cut clothes. You've got to cut the fabric enough to cover it, so it determines the cut of clothing. Form follows function.

WHAT IS COMFORT?

MARK: It's hard to get comfortable nowadays.

JERRY: It's not an issue with us. It's like "What are happiness and love?" Those are trap questions—trick questions, because people start to focus on answering without breaking down the supposition behind the question. We are not here to fall in love, but to find

things out, and to be responsible in finding things out. If you look, and take risks, and make connections, then chances are you'll be happy. You'll fall in love, you'll be comfortable, but it cannot be a goal.

DO YOU HAVE ANY PREDICTIONS FOR OUR FUTURE?

JERRY: The world's gonna be a beautiful place. People will stop fighting, monorail systems will be built throughout America, cars will be eliminated, the air will clean up. You'll see beautiful vistas and horizons. Nuclear power plants will give way to solar energy.

MARK: We will experience hidden benefits from the nuclear ring of fire around our oceans.

DO YOU THINK OF YOURSELVES AS INTERNATIONAL?

MARK: International reporters.

JERRY: We have no allegiance to a country. They're all pretty foolish and they're all pretty foul. It's like "pick your evil." We say put all

the leaders in a great big ring and let 'em fight it out.

DO YOU HAVE ANY ADVICE FOR EXTRA-TERRESTRIALS?

JERRY: Stay away. Go back.

IF MUSIC WERE FOOD, WHAT DISH WOULD DEVO BE?

JERRY: Whipped potatoes.

At this point someone arrived at the studio with a present for Mark, a clown mask from the Ringling Bros. circus. He immediately put it on and became another character.

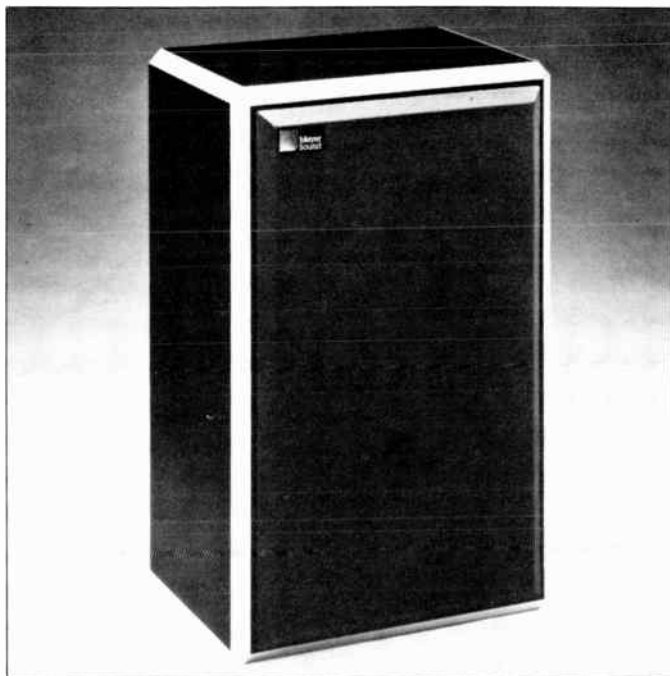
JERRY: Ronald, why haven't we seen

you on TV lately?

MARK (in a gruff clown voice): Well, I was gettin' suspicious, ya see, so I said, Carmen, let's go down to the factory and see what those burgers are made of. My god, the things they put in 'em. Those poor kids. I was appalled. No, I said, we're not gonna do this. I can't look those kids in the face—I can't even put one of those things in my face.

As the interview broke down and Roy and the crew were falling about, I thanked DEVO for lunching with me and told them I looked forward to seeing them in the future. Jerry said, "The next time you see us it will probably be on that national monorail system. We'll be wearing completely padded body suits with electronics built into them so we'll be able to play anywhere we go: laundromats, shopping centers, airports, monorail platforms. We'll meet you in your solar-powered condo at the base of the monorail station." (sic) ■

PREVIEW



MEYER SOUND 833 MONITOR

Meyer Sound is introducing the new 833 Studio Reference Monitor, a high-power, low-distortion loudspeaker system for critical studio applications. The system consists of two vented enclosures—each housing a single proprietary 15-inch cone low-frequency driver, passive crossover, and horn-loaded high frequency driver—and an active stereo electronics unit containing subsonic filter, frequency and phase response correction circuitry, and Meyer Sound exclusive Speaker Sense™ driver protection circuitry.

Typical system performance characteristics with a power amplifier rated at 250 watts per channel are: frequency response, 35-18,000 Hz ± 3 dB; system time delay (including electronics) ± 350 ms from 100 to 15,000 Hz; high frequency dispersion 80° horizontal, 40° vertical; and maximum sound pressure levels of 120 dB continuous, 130 dB peak. The loudspeaker cabinets measure 20"W x 32"H x 14¾"D, and are fitted with hardware to ease mounting in control room installations.

Available for delivery December, 1982.

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RANE HC 6 HEADPHONE CONSOLE

Rane Corporation announces the first of series of specialized professional products with the introduction of the model HC 6 Headphone Console.

The HC 6 contains six separate stereo headphone amplifiers which may be driven at independent levels from a pair of balanced stereo inputs. An additional unique feature

of the HC 6 is that each of the six headphone amps has its own separate balanced mono input which bypasses the main stereo inputs. By connecting these inputs to a monitor mixer or other source, the HC 6 will deliver a separate program to each headphone set. Or the HC 6 can be used as six separate amplifiers for remote monitoring, communications, educational labs, etc. The HC 6 also provides both front and rear panel outputs, to allow easy control room patching into each channel for cueing or level adjustments, while the unit is still in the rack. The HC 6 is housed in a 1¾" steel rack mount chassis, with separate signal present LEDs, level controls, master level control, stereo-mono switch and LED-indicated power switch. The suggested retail price for the HC 6 is \$349.

Circle #068 on Reader Service Card

NEW SAKI REPLACEMENT HEADS

Saki Magnetics has introduced its new generation of replacement recording heads with metal units designed for 3M M-79 two through twenty-four track recorders, Stevens sixteen and twenty-four track, MCI JH-100 sixteen and twenty-four track and TEAC 80-8 eight track. New ferrite two track heads are also available for the Otari 5050, MCI JH-110, 3M M-79 and Ampex ATR 100, the last two available in ¼" and ½" formats.

Circle #069 on Reader Service Card



PASSPORT ADDS "TURBO-TRAKS"™ TO SOUNDCHASER COMPUTER MUSIC SYSTEM

Passport Designs, Inc. announces the addition of Turbo-Traks™ to the expanding library of software currently available for the Soundchaser Computer Music System.

Turbo-Traks™ further expands Soundchaser's performance features. Included in the new software is a 16 track digital recorder that simulates an analog tape deck in software, variable number of oscillators per voice (up to 16), sync to tape or drum machine, and extended recording time. Turbo-Traks is a live performance synthesizer and low cost recording studio all rolled up in one low cost package.

Turbo-Traks™ joins the Notewriter™ and Music-tutor™ series of software support for the Soundchaser Computer Music System.

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PRO-AUDIO YEARBOOK 1982/83

Now in its second edition, the *Pro-Audio Yearbook* has been completely updated and revised. Published in hardback by Link House Magazines (Croydon) Ltd., the second edition of the *Pro-Audio Yearbook* contains 686 pages packed with information and photos dedicated to every aspect of professional recording and sound broadcasting, backed up by details of almost 1,200 pro-audio dealers and distributors in 80 countries worldwide.

The *Pro-Audio Yearbook 1982/83* is available in both Britain and the United States, and also in many other countries around the world. The price is 24 pounds or \$50 and it may be obtained from specialist bookshops, profes-

sional audio dealers or by mail order from Special Publications Group, Link House Magazines (Croydon) Ltd., Link House, Dingwall Avenue, Croydon CR9 2TA, United Kingdom. 2 pounds or \$4 postage should be added.

Circle #071 on Reader Service Card



AGFA INTRODUCES NEW U-MATIC VIDEO CASSETTE

The Magnetic Tape Division of Agfa-Gevaert, Inc. has introduced a new 3/4" U-Matic Video Cassette for broadcast and professional use.

The cassettes are available in three sizes, with recording lengths of 20, 30 and 60 minutes: KCS 20 mini-cassette for portable in-field use, standard KCA 30 and KCA 60 cassettes respectively.

Features include: a 3 dB advantage in each color signal-to-noise and video signal-to-noise, an RF output greater by 2 dB, and an extremely low drop-out rate when compared to the industry standard.

Circle #072 on Reader Service Card

SSM 2011 - MICROPHONE PREAMPLIFIER/LEVEL DETECTOR

The new integrated circuit from Solid State Micro Technology is an ultra low noise preamplifier primarily intended for high quality audio systems. The input stage uses optimized biasing and geometries to yield a 2.4nV per root Hertz voltage noise and a 110 dB common mode rejection ratio over a $\pm 5V$ input range. A single compensation capacitor provides a 200MHz gain bandwidth product ($G=1000$) and a 200 kHz full power bandwidth at $G=10$. The level detector section consists of a precision rectifier, two internally biased comparators, and two LED drivers. One LED output lights at 3 dB below a 5V peak output level while the other lights only when the signal is within ± 10 dB of nominal output level.

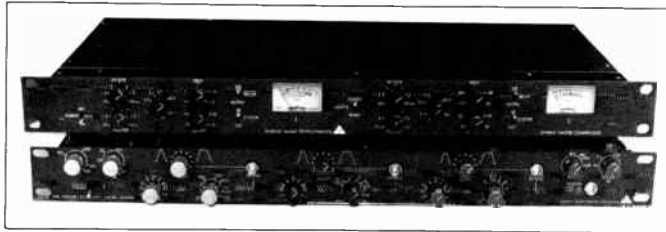
Circle #073 on Reader Service Card

RESTORATION INTRODUCES STILL STORAGE ACCESSORIES AND WAVE FORM ANALYZER

Restoration will be showing its new line of disc still storage accessories in Booth 1325 at this year's A.E.S. Convention. These accessories include absolute filters, pre-filters, disc and alignment packs and disc replacement heads (shown above) for Adda, Ampex, Harris and MCI-Quantel. Disc pack and disc head refurbishment is also available. Also

in the booth will be a demonstration of the Sencore, SC-61 Wave Form Analyzer. The SC-61 is the first integrated scope to use modern micro-processor technology to analyze distortion/amplitude/frequency and calibration test setups using one probe. The full line of Nortronic replacement heads and audio video tape recorder maintenance and accessory products will also be shown.

Circle #074 on Reader Service Card

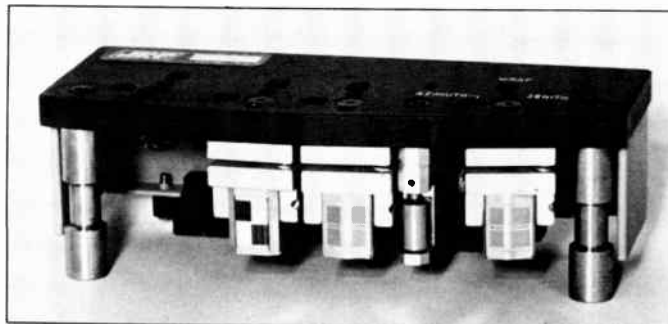


TRIDENT OUTBOARD EQUIPMENT

Trident (USA) has introduced their LC-1 limiter/compressor and CB9066 parametric equalizer. The LC-1 is true stereo with independent control of 2 channels. Continuous variable slope, attack and release settings for .03% THD at 20 dB limiting. Separate illuminated V.U. meters for gain reduction *and* output level metering. The CB9066 parametric equalizer has 3 band EQ, continuously variable frequency, amplitude, and "Q." Automatic compensation for all "Q" settings is built-in, as well as separate Hi- and Low Pass Filters and slope. Individual bypass switches for each of the ± 16 dB cut/boost bands are included.

LC-1 \$695.00; CB9066 \$650.00

Circle #075 on Reader Service Card



JRF NEW 1/2" 2 TRACK HEAD ASSEMBLIES

JRF Company, Inc. recently announced the development and availability of complete 1/2" 2 track head assemblies for MCI JH110A tape machines. Designed by JRF for retrofit applications, the new heads provide substantial improvement over standard 1/4" 2 track performance specifications.

In addition to MCI, 1/2" 2 track heads are also available for Ampex and Scully tape machines. JRF Company, known for its precision head relapping and assembly alignment services, offers premium quality direct replacement heads for most studio, mastering, and tape duplicating equipment.

Circle #076 on Reader Service Card

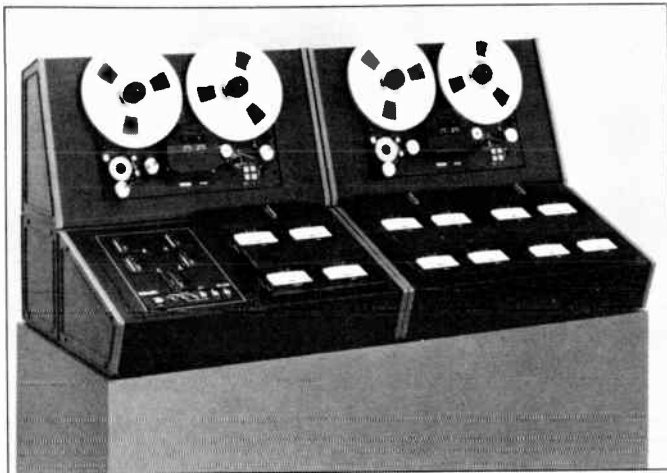
HARDY CO. MPC-500C MICROPHONE PREAMP CARD

The MPC-500C mic-preamp card is a direct replacement for the stock MCI series 500C preamp. It combines the 990 discrete op-amp with the new Jensen JE-16-B mic-input transformer. The JE-16-B handles signal levels 10 to 15 dB higher than the stock JE-115K-E, with greater linearity and less distortion, thanks to its lower impedance ratio

(matched to the 990) and larger size. The 990 offers significantly better sound and specs than the stock 5534. On-card regulation.

Basic specifications: Transformer: THD=.003% at 1 kHz, .06% at 30 Hz; Max. input at 1% THD: +12 dBv at 30 Hz, +17 dBv at 50 Hz. CMRR: greater than 85 dB at 1 kHz. 990 specs: THD=.003% typical, .06% max. at 20 kHz/75 ohm load. Max. output=+24 dBv/75 ohm load. Slew rate: 18v/uS at 150 ohm load, 16v/uS at 75 ohm load. Price: \$195.00 (single qty.).

Circle #077 on Reader Service Card



TELEX DUPLICATION SYSTEM

Telex Communications, Inc. announced their new model 6120 high speed audio tape duplicating system. The system consists of modules for cassette-to-cassette, reel-to-cassette or reel-to-reel duplicating. These modules can be mixed in any desired configuration and all simply plug into a central control module. The user can thus start with a basic system and add any modules as needed. Either half-track/two channel or quarter-track/four channel configurations are available, each with track selection and track transfer patch panels.

Reel modules accept both 7 and 10½ inch reels and operate at speeds of 60 and 120 inches per second. Cassette modules operate at 30 inches per second.

Circle #078 on Reader Service Card



REVOX INTRODUCES DOLBY C CASSETTE DECK

Revox has introduced the B710 MKII, an updated version of their microcomputer controlled professional cassette deck. The new MKII version incorporates both Dolby B and Dolby C noise reduction, and a new peak-reading bar graph meter reads up to +8 dB (instead of +6 dB as on the earlier version). Also, the internal programming clock has been changed to show a 12 hour cycle with AM/PM indicator.

By adding the Dolby C NR, the B710 is now able to

achieve a signal-to-noise figure of better than -72 dB (IEC weighted a 3% distortion) while maintaining a frequency response of 30 Hz to 20 kHz with either metal or chrome bias tapes. Wow and flutter is an extremely low 0.035% RMS. Suggested list price for the Revox B710 MKII is \$1,995.00

Circle #079 on Reader Service Card

AUDIO DOCTOR 810 EQUALIZER

The 810 EQ is unique in its concept. It has an eight band equalizer on the left side and a ten band equalizer on the right side. Both sides have 13 dB of cut and boost with IEC octave centers over the frequency range of 62 Hz to 8 kHz eight band side and from 31 Hz to 16 kHz in the ten band side. The bypass switches allow the operator to disconnect the equalizer's circuitry to allow equalized and unequalized comparison. The 810's toroid power transformer will operate from 85-135VAC. (220VAC optional.)

The eight band side is designed for stage monitor application or voice. The ten band is designed for house systems or overall response.

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OTARI MODEL 5050 MARK III/4

Otari Corporation has announced the availability of a new half-inch, four channel recorder to their 5050 Series.

The compact, tabletop console recorder features proprietary microprocessors which govern tape handling, including dynamic braking, motion sensing and transport logic. Additionally, an integral microprocessor controls a real-time electronic counter that features an LED display and zero-return. The capstan is under servo control and speeds are switchable between 15 and 7½ ips. The true, three head design machine also has a ±7% variable speed control, selective reproduce for overdubbing, a built-in dual frequency oscillator and a full complement of electronics adjustments for rapid test and set-up. Price: \$3,895.00

Circle #081 on Reader Service Card

LP 140 REVERB PLATE FROM B.A.E.

B.A.E., Inc. (formerly Blevins Audio Exchange) has announced the recent purchase of the manufacturing and sales rights of the Lawson L.P.II reverb system.

The improved unit, the LP 140, is hand-crafted for consistently smooth response. The external dimensions have been reduced, while maintaining the plate size through a re-



designed frame.

The LP 140 is shipped pre-tensioned and adjusted with no set-up required.

Output noise level: less than -71dBm ('A' weighted, input shortened). Decay time: 1 to 4 seconds.

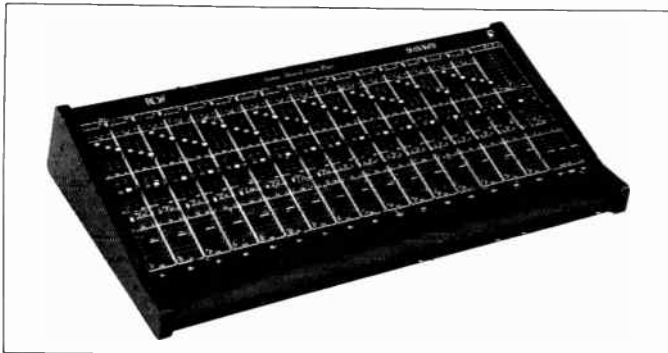
Circle #082 on Reader Service Card



NEW TENTEL TAPE TENSION METERS

Tentel has announced a new series of in-line tape tension meters. The new "B" series has miniaturized probes mounted in precision ball bearings. The instruments are designed for applications where the utmost tape tension accuracy is required for limited spaces. The new gauges can be utilized for various tape widths up to 1 inch; and are available in tension ranges to 20 oz. (600 gms). Prices range from \$425.00 up, depending upon options.

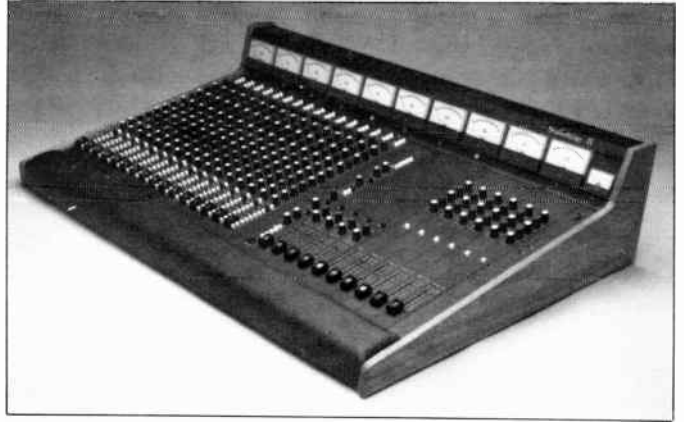
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ROSS INTRODUCES GRAPHIC MIXERS

Ross Systems, a division of Internation Music Corporation of Forth Worth, Texas, now offer their all new graphic system mixers. This system provides the operators with the advantage of being able to "scan" the board to determine the location of all settings. Features are self-cleaning faders, very low noise operation with trim control, 3 band EQ, 4 sends, pre-post aux. switching, sub assigns and cue switching on each channel. The real channel section features balanced inputs, line inputs and channel patching. The main, subs and monitor outs are balanced and unbalanced. The subs also include stereo in/out patching.

Circle #084 on Reader Service Card



STUDIOMIXER CONSOLE UPDATES

Amerimex, of Anaheim, CA, has announced six module updates in their Studiomixer II console series. Included among these retrofitable modules are TPR—a deluxe submaster module with recorder return, effects sampling, and monitoring provisions enabling the operator to send material being either recorded or replayed to the mixer's own, built-in headphone mix; and M16—a new input module which has full 16-way submaster routing for use in conjunction with the new TPR modules, allowing the console to expand to as large as a 32x16x4x2x2 for around \$10,000.

Circle #085 on Reader Service Card

E-STAT FROM KEITH MONKS AUDIO

Keith Monks Audio announced their appointment as sole distributors for E-STAT PRODUCTS from Lantor (UK) Ltd. from the United Kingdom.

E-STAT PRODUCTS are a range of static dispersal products for phonograph records manufactured from a carbon loaded, non-woven fabric: The effect of storing a disc in an E-STAT sleeve is to disperse any static charge that might be present, eliminating one of the root causes of sound interference. Also available is the new E-STAT turntable mat which disperses any static charge which may build up during the playing of a disc.

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SOUNDTRACS DISTRIBUTION WITHIN NORTH AMERICA

Soundout Laboratories Ltd. of London, England are pleased to announce the formation of a USA Sales/Distribution Center for their range of Soundtracs products. Located at 262a Eastern Pkwy, Farmingdale, NY 11735, Soundtracs Inc. will be responsible for the distribution of Europe's popular Sound Reinforcement boards, ranging from the 16-2 version retailing at \$2,534.00 up to the Omni 16 studio board at \$5,272.00.

Representatives are being appointed, and Dealerships are currently being negotiated. All inquiries should be made to John Carroll, Vice President Sales and Marketing at (516) 249-3669 at the Farmingdale offices.

Circle #087 on Reader Service Card

Artist Studios

SHOES



TECHNO-POP

by Cary Baker

Now that Shoes—the resourceful pop/rock and roll quartet from Zion, Ill.—have worked at the Manor in England, United Western Studios in L.A. and the Chicago Recording Company, it is inconceivable that they'd harken back to their roots once again and make an album at home?

It was such an out-of-nowhere product, after all, that won the unanimous favor of the critical community with their home-recorded, self-released LP, *Black Vinyl Shoes*.

"Oh, no problem," chirps guitarist/vocalist Jeff Murphy, one of three writers and self-styled recording craftsmen, with all the nonchalance with which one presumes he'd give an out-of-towner directions to Zion State Beach, short blocks from the group's un-named, unmarked recording studio.

"In fact, I think we do precisely that every time we get ready to go in and make demo's for our Elektra LP's. Of course, the process is a little more sophisticated now—we use a 20 x 4

mixer, for example, more equalization, echo and delay, flangers and we know how to use them better. But basically, we're not that far removed from *Black Vinyl Shoes*. We repeat that process every time."

The tale is too dear to be filed and forgotten in the "Cinderella Story" dossier. Four lifelong residents of the church-anchored Chicago suburb of Zion are ardent fans of the Beatles, T. Rex, Big Star and the Move. They're years and miles removed from the fanzine world—then busily trumpeting the proliferation of self-released records and "new wave" in general. They start to write songs and then figure they ought to learn some instruments on which to play their creations. Jeff Murphy and Gary Klebe take up guitar; Jeff's brother, John, bass; and a friend, Skip Meyer, on drums. Next thing they conclude is that the recording world may be a more effective medium by which to spread their naggingly-catchy pop than the usual burnout of live appearances. There was shyness to overcome; one thorough listen to their

otherwise-preppy *Present Tense* LP (Elektra) well proves with its otherwise contemplative, self-admonishing lyrics. So they set upon recording a few albums' worth of material, even giving these "LP's" names like *Un Dans Versailles* (recorded at home by the Murphy brothers to welcome Knebe back from a college architecture study program in France) and *Bazooka*. Finally, they forged a "sound"—breathy vocals at the forefront, sweeping '60s pop sensibility done up in '70s and '80s style. It was their third attempt—recorded in the kitchen of Jeff Murphy's Zion coach-house, appropriately dubbed Short Order Studios—that begat *Black Vinyl Shoes* and its swarm of international acclaim.

Signed by Elektra in 1979, Shoes set upon recording a pop masterpiece, *Present Tense*, which found itself unjustly neglected in that year's Christmas rush. Under the tutelage of producer Michael Stone (Journey), these "small town" Heartland boys returned to Zion as seasoned pro's in the studio. Never again would low bud-

gets cramp their style. Few recording artists before them approached state-of-the-art with such a fundamental understanding of the craft of recording. Further, they're the first to concede they didn't follow any logical path—their methods are improvised, bastardized and patently Shoes.

"A \$200 flanger might sound better to our ears than a \$1000 studio flanger," says Murphy. "In many cases, if we had \$1000 to spend on new out-board gear, we'd rather have two mediocre units for \$500 and have them for versatility than something top-notch."

Originally, Short Order Studios was equipped to handle recording without the equipment precluding use in a live appearance.

"Our mixer was originally meant for playing live, in fact," says Gary Klebe. "We started with a dual purpose, and that's the way we still strive for more than one potential application."

"Of course, it gets harder and harder because the higher the quality of the product, the more specialized it gets."

Today, Shoes' studio (they've dropped the Short Order) has moved to the basement of a gift shop on Zion's Sheridan Road "strip." The space is co-

opped with a Weight Watchers workshop. One would never suspect this was the think-tank and demo lab of an Elektra recording act. The studio isn't contoured, beveled or sculpted.

"It's more or less a lot of mobile equipment," says Klebe. "We could set it up inside of 24 hours—that's the way we built it. Everything is built into road cases so that we can move from room-to-room or building-to-building. It's just a square basement that is set up in any way that suits our purpose at the time."

This, in fact, is exactly what Shoes did when they went to Los Angeles' United Western Studios to track 1980's *Tongue Twister* with producer Richard Dashut. Although they were confident that the studio could more than accommodate their needs, they often chose their own equipment over the studio's to best replicate the model recorded in Zion. The situation was much the same when Shoes cut *Boomerang* at the Chicago Recording Company.

"We look at a professional studio as more variation on a theme," says Murphy. "There, you might have a built-in parametric EQ while here we have a two-band EQ."

The group worked at CRC six days a week, 6 p.m. until 6 a.m., to

complete *Boomerang*, their first totally self-released album since *Black Vinyl* five years prior. Assisting in all areas was engineer Hank Neuberger, but Shoes would often stay longer hours and seventh days to hone a harmony, perfect a guitar treatment, adept enough to work the boards themselves as well. Indeed, *Boomerang* is the product of a well-planned musical and studio concept. Synthetic guitars, once achieved by accident, are now a very conscientious staple. Drummer Skip Meyer's percussion is more precise than ever with a few electronics and special mikings adding new heartbeats. And bassist John Murphy makes a \$70 Casio synthesizer sound somewhere between Baroque and Badfinger, thanks to mikings, treatments, overdubs and a few spontaneous details.

It all originates after-hours at the studio under the gift shop which contains a far more equipped resource than the Sony TC-355 setup that *Black Vinyl* was recorded on. The new studio has a Tascam 80-8, two Crown 300 F's, Kinetic Audio and Auratone monitors, two dbx 160 compressor limiters, Delta Lab DL-2 digital delay, MXR delay, MXR flanger/doubler, three Roland echo units, Harmon-Kardon headphones and an assortment of microphones and other gear.

"There's more equipment than room," laughs Murphy.

Still, the process of making a new Shoes album begins at home.

"We do all our 'demo-demo's' at our respective apartments, then at Shoes' studio, then the 'real' studio," he adds.

The writers all own four-track TEACs and have various tempos of Meyer's percussion on tape loop, which according to Klebe, is more practical than expecting the drummer to play for hours at a time, or to explain "two beats here, two beats there."

Although the sound still comes out pure pop, quite removed from the ostensible high-tech sound of Kraftwerk or Human League, Shoes acknowledges their debt to the technology.

"There wouldn't even be a band if it weren't for the acquisition of our first four-track tape machine," says Klebe. "We didn't even play live until two years later, and we sure wouldn't have refined our musicianship without it."

"We just evolved differently from most bands. Instead of going from players to technicians, we went from technicians to players. It started as a vehicle with which to sharpen our skills," says Jeff Murphy. "This is the first LP we've played live before we recorded the songs. And I think our studio experience gave us the confidence to take the detour we did." ■

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World Radio History

Maurice White



by Bruce C. Pilato

"I have had better days," says Maurice White with a slight laughter in his smooth voice. White, better known as the talented and dynamic leading force behind Earth, Wind & Fire, was referring to his daily tennis

game. "I played one of the lesser players in the band today. Normally, you know, I play one of the better players . . . but they were all playing each other, so I had to play one of the lesser players and that kind of dragged me because there was no competition. You know what I mean?"

Competition is something Maurice White knows all too well. From his humble beginnings in Memphis, through many rough years as a struggling session drummer, until he finally reached the musical plateau where he sits today, he has worked hard for what he has. And it has paid off, since next to Stevie Wonder and Lionel Richie, White and his band are R&B's most successful contemporary artists. He has remained consistently at the top of the charts, both pop and R&B, often pushing off names like The Rolling Stones, Kenny Rogers and others.

Being at the top as a performer, writer, musician and producer, and having the fame and fortune that go with, do not constitute White's primary objectives. Aside from the quality of his music, he has focused his energy on improving the entire scene for everyone, especially other black artists who have not yet penetrated the market still dominated by white rock and roll.

White has made his greatest achievements in the field of producing. Although E, W & F consist of outstanding musicians, and their material is often infectious, it is Maurice White's sparkling and energetic production that gives their records such vitality. By putting the accent on the rhythm, just as Motown first did in the early 1960s, White's studio creations have

continually crossed over on the charts without ever losing their solid R&B base.

Part of White's success might be due to his very open attitude towards music in general. He has said in the past, "I know American music. I could write you a country western song or a rock and roll thing. I know where all this music came from. It came from black music." Or more generally speaking, from the black rhythm, whereupon White also builds his musical and production ideas.


Born 37 years ago, White started in music in the same place that many of his contemporaries did: in the church, singing gospel. By the age of 11, White was playing drums with a fellow schoolmate, Booker T. Jones. In 1960, he moved to Chicago and enrolled in the Chicago Conservatory of Music to study percussion and composition.

From 1963 through 1966 he moved on to work in recording studios as a session drummer for Chess Records, working with such artists as Chuck Berry, Etta James, Jackie Wilson, The Impressions, The Dells and others. It was during this period in his career that White first became interested in record production. The next four years were spent as the drummer for the Ramsey Lewis Trio and included a steady diet of touring and recording.


White went through a few more groups before forming Earth, Wind & Fire. After two unsuccessful LPs on Warner Brothers, the group signed with Columbia in 1972. Three years and as many albums later, he and the group hit it big with *That's the Way of the World*. From that album on,

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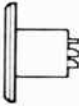
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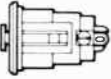
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Maurice White and Earth, Wind & Fire have been mostly double and triple platinum.

With the success that followed, including such #1 hits as "Shining Star," "After the Love Is Gone," "Can't Hide Love" and "Get Away," White's reputation as a producer flourished and the offers came pouring in.

In 1974 he repayed a favor and produced Ramsey Lewis's *Sun Goddess* LP. Soon after he formed Kalimba Productions and then later ARC Records (distributed through Columbia Records), and began actively producing outside artists, such as The Emotions, as well as continuing his duties with E, W & F.

White produced The Emotions #1 hit, "The Best of My Love" before giving them up to another producer. He has done this with other artists on the ARC label, as well. "I don't produce them anymore. You see, I'm really just into getting groups started or getting singers started and then I move on," said White. Although he usually just gets behind artists at the onset of their careers, his idea behind ARC is one of dedication. "The reason for the record company in the first place was to bring together a label that could more or less appeal itself to

the people who were serious about their careers, rather than just the ones who were just looking for the automatic success. We tried to pick artists who were really, really dedicated to their craft." The label recently had one of the nation's biggest hits with Deniece Williams' "It's Gonna Take a Miracle."

White recently was one of the founders (along with engineer George Massenburg) of The Complex, a large audio-video facility in Los Angeles. Although he is no longer associated with that project, the studio did further open his eyes towards more innovative recording techniques and the increasing importance of video.

"What I'm doing at present is facilitating myself towards video. I feel, of course, that film and video are the next marketplace for expression. So I am working on that behalf right now."

Although White believes the conventional audio record still has a long time to go before becoming obsolete, he sees its place in the market getting smaller and smaller. Video very shortly, he feels, will become just as important to music fans as records. "Yes, I do feel that way, because I think the media will

take it there."

Video is going to also replace a large portion of live touring, White also feels. "That's it. I think that will eventually happen with most of the acts. I think a lot of the major acts will be the only ones that will be able to tour and I think those tours will be short, too, because of the economic factors that are existing now."

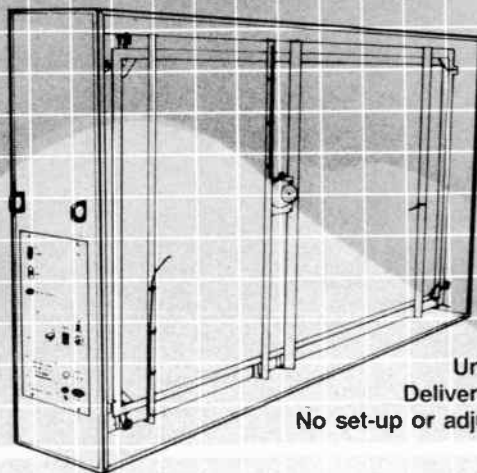
With his track record of hits and with his increasing involvement in record and video production, it seems more desirable for White to stay off the road and conduct his career from a series of studios. "Sure, I get faced with that all the time. But once I get out, it's okay because I love performing. I like both, so I have to take a shot at both."

White is currently hard at work on the Earth, Wind & Fire follow-up to 1981's *Raise* LP, after which he plans to resume touring with them. At the same time, he sees his involvement with producing outside artists increasing. "I will probably do more, but at the same time, I've been producing for a long time and it hasn't interfered with my Earth, Wind & Fire activities. I don't think it will. I think I will just continue to do things the way I've been doing them all the time." ■

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MARK IV™ MONITOR

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MARK IV™ MONITOR MIXER

First, the musician must be satisfied with the blend and balance of the on-stage monitor mix. In most concert type situations, the musicians may demand anywhere from two to six separate monitor mixes. Our new Mark IV™ Monitor Mixer can supply this need with up to eight individual monitor mixes.

The Mark IV™ Monitor Mixer is available in 16 x 8 or 24 x 8 configurations and features transformer balanced inputs and outputs, 8 unbalanced outputs, PFL/Solo headphone system, 10-segment LED ladder displays for each of the 8 outputs, auxiliary inputs and low-cut controls for each mix and a unique PFL/Solo patch. The PFL/Solo patch is a highly desirable feature that enables the monitor engineer to patch any of the mixes back into the switched inputs so that externally equalized or processed signals can be monitored. This is a feature which is not usually found on custom-made monitor mixing systems costing \$15,000 or more.

Each channel of the Mark IV™ Monitor Mixer features LED status indication of -10 dBV and +10 dBV, an input gain control, 4-band equalization, built-in mic splitter, phase reversal switch, PFL and mute switches, and 8 color-coded rotary level controls which correspond to color-coded slider level controls in the output section.

To make the most out of the Mark IV™ Monitor Mixer's capabilities, we have equipped the mixer with two separate built-in communication systems. By utilizing our optional headset or "gooseneck microphone," the monitor mix engineer can communicate with the musicians through any of the 8 separate monitor mixers. This

talkback system will help alleviate the problems musicians sometimes have in establishing the proper on-stage mix, especially if a previous sound check was not possible.



A second communication link can also be established by the monitor mix engineer between the stage crew and lighting personnel by utilizing the optional Talk/Comm "slave" units. The Mark IV™ Monitor Mixer's front panel utilizes an LED indicator to alert the engineer as a call function and also shows when intercom is active.

MARK IV™ MIXING CONSOLE

Next, the house (main) system must be able to deliver crystal clear, noise-free sound reproduction to the associated equalizers, power amps and horn/loudspeaker enclosures. For the main PA, our new Mark IV™ Professional Mixing Consoles offer the sound engineer the necessary performance, flexibility and functions to do almost any sound job.

The Mark IV™ Professional Mixing Consoles are available in 16 or 24 channel versions (16/24 x 4 x 1) and feature transformer balanced inputs and outputs, PFL headphone system, 10-segment LED ladder display for all outputs, channel and sub output LED indication (-10 dBV and +10 dBV), internal reverb and effects/reverb return to the monitors. The console also utilizes a 24 volt phantom

power supply, variable low-cut controls on each sub (20 Hz to 500 Hz), and in-line patching facilities between the sub outputs and the sum.

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For complete information on the Mark IV™ Series write to: Peavey Electronics Corp., P.O. Box 2898, Meridian, MS 39301.



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INDUSTRIAL SHOW SOUND SYSTEMS

by Patrick Maloney

As more and more music groups are touring less and less these days, it would behoove those of us in the concert sound business to look for additional markets in which to lend our expertise and rent our equipment. One of the areas that still seems to be going strong in today's economy is the "Industrial," an often elaborately staged production put on by a company or organization for the benefit of its salesmen, employees, members, or shareholders.

Large industrial shows involving lasers, color video projection, multi-image slide shows, and high quality stereo sound are being staged all over the country at annual conventions and tradeshow. If you are an independent engineer or concert sound company with a little extra time and equipment on your hands these days, you might be tempted to bid on a few of these shows. But be prepared! Unless you've had a little experience in this field, you may be in for a few surprises.

Having worked on a multitude of Industrials over the last fifteen years, I'd like to point out a few differences you might encounter. Recently I worked on a typical show put on by the John Deere Equipment Co., manufacturers of tractors, combines, harvesters, and other farm oriented vehicles. The event was staged on the floor of the Louisiana Superdome in New Orleans, although the actual audience area only took up about 1200 seats in one of the lower rollout bleacher sections. The complete production was to be staged on three separate days for three sets of John Deere dealers and the task of providing audio for these folk was handled by Mike Neal of McCune Sound, San Francisco. When Mike contacted me to assist him, he pointed out that we had three full days in which to hang two small speaker clusters, mike up a band, and run a few backstage paging systems. Four days of tech run-throughs and rehearsals would follow before we would put on the first real show. Those of you new to Industrials might think this to be an inordinate amount of time to prepare for a show. Well, it's not! Any resemblance to a typical concert sound installation ends with the band's miking chart.

An Industrial is more like the opening night of a theatrical presentation than a concert. Sets are custom designed and often assembled for the first time right at the hall. It is during the actual on-site installation therefore, that

the show's producers discover all the hidden problems. What looks good on paper doesn't always translate to reality when the actual physical pieces are finally brought together. For this reason, the sound installation time on one of these shows can often take considerably longer than you might normally allow—days more!

As an example, it took two full days just to get our six speakers hung because the riggers were late arriving and took longer than expected. Lighting trusses had to be permanently placed before we could lock down our speaker hand positions or else we might end up in each other's pattern. As it turned out, a lighting truss on stage right was rehung later on and partially blocked the high end from our speaker cluster. Three days passed before they corrected the problem and they then had to refocus. So it's important to pay attention to what everyone else is doing. It helps to write up a good checklist of everything that has to be done, so partially completed projects can be noted and finished once the hindering factors have been removed.

Cooperation and careful pre-planning with the heads of each department *before* the production blueprints are drawn up can help cut down on installation time and mistakes. Plenty of time is a great defense against unforeseen problems. And so is plenty of extra equipment!

Extra equipment prepares you for the changes and additions that *will* inevitably come, as actual show conditions are difficult to fully anticipate before the event. For instance, it wasn't until the first show was underway that the producer realized he hadn't provided for a way to call stragglers back into the arena after coffee break. We had brought along several "Just In Case" speakers and amps for just this kind of situation but, in the interest of time, decided instead to hook into the Superdome's own hallway paging system. A quick call to the house soundman got the speakers connected to another output of the house console before the next break. As you can see, a flexible console with more than the normal number of subgroups and outputs is desirable. Furthermore, I always take 50% more cable than I ever think I'll need and usually end up using all of it. Longer than normal cable runs are usually necessary due to last minute restrictions imposed by the set—you never know where they'll put in a doorway!—as well as the need to hide the cable from the audience's view. A neat and clean appearance is mandatory on Industrials; dented and stenciled black bins and boxes are not too welcome.

You'll also find that a good deal of emphasis is placed on director/cast/crew communication on these trade-

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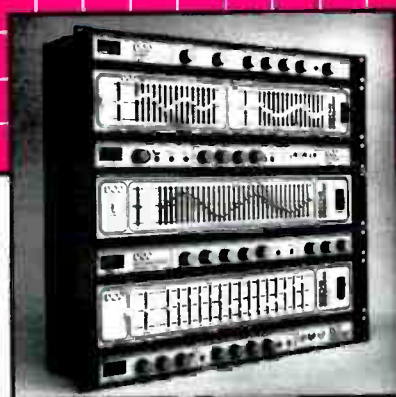
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The DELAY 1 and DELAY 2 switches engage each of the delay lines; therefore, at least one must be "in" to produce a delayed signal. The INPUT jack goes directly to the input level pot, so there is no input stage to overload. The CLIP indicator begins to light at about one-half of the actual clip point to allow for more headroom in the program material. The A MIX and B MIX controls are two identical mix circuits that go to separate output jacks. When using two amplifiers, the mix controls may be set differently for greater presence.

Specifications

Frequency Response:
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 X2: 40Hz to 3KHz \pm 1db.
 Signal to Noise Ratio:
 Dry 95 db un-weighted.
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Input:

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Outputs:

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 Delay 2: 25 ms to 250 ms.
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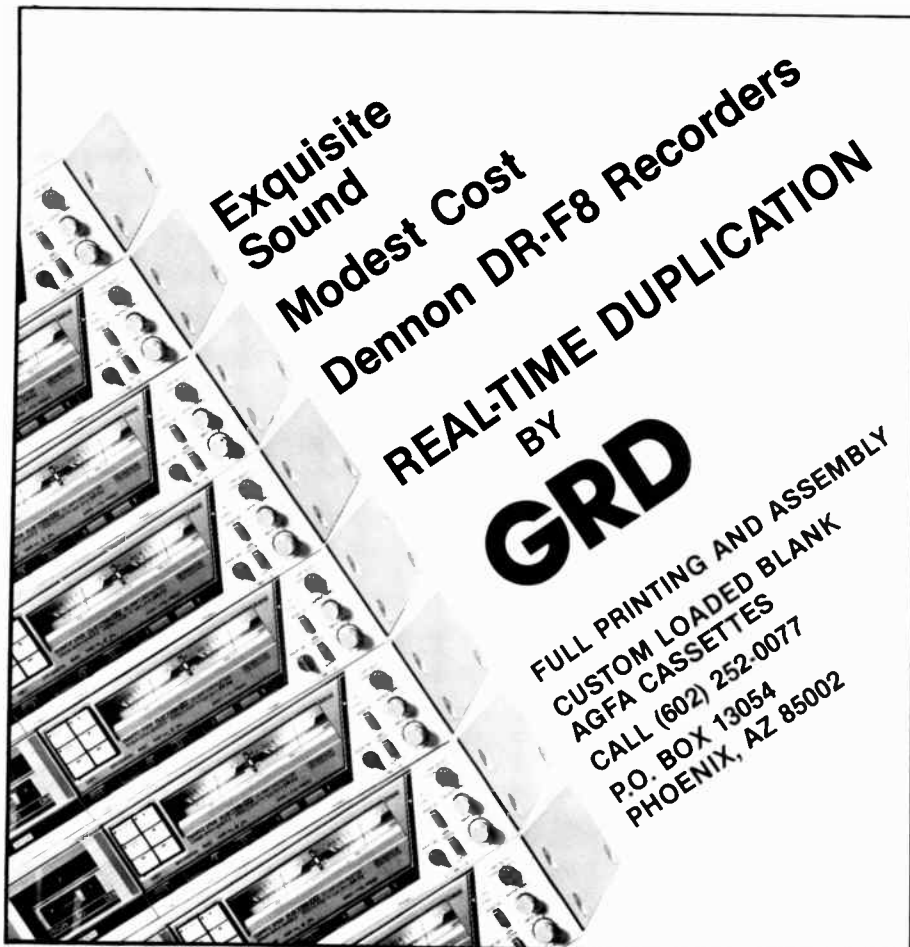
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SOUND ON STAGE

shows. For instance, there were over 40 intercom positions necessary to connect the director to all the tech locations required. An eight channel intercom switcher was used by the director to contact any or all departments... which included lights, sound, conductor, laser operators, slide projector operators, video director/cameramen and stage manager. Additionally, a paging and program foldback system was necessary to cue the actors, dancers, and equipment handlers. So a separate network of small speakers was run off of a 70 volt line that allowed the director to override normal program playback with the flick of a switch on her paging mike.

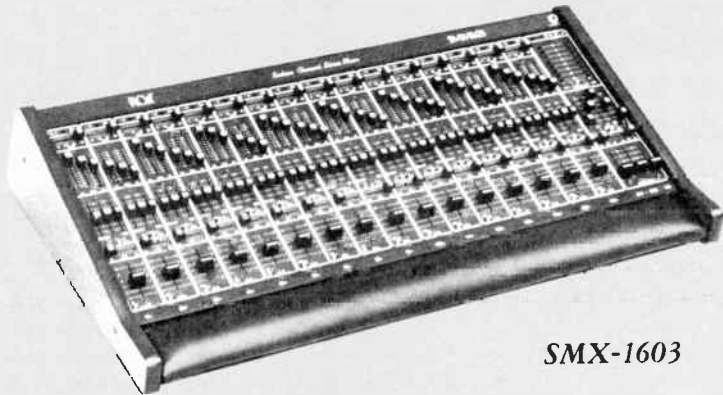
On this show the singers and dancers usually lip-sang to a pre-recorded vocal track with live accompaniment from the band and therefore needed to hear the program even though they were behind the PA clusters. In order to keep wiring runs and acoustic delay problems (an important consideration in a hall the size of the Superdome) to a minimum, the dancers' monitor speakers were hung at the rear of the clusters and aimed back toward the stage.

An additional output buss was needed to provide the orchestra conductor and his rhythm section with a clicktrack, program, and rhythm mix in one ear and the director's paging mike in the other.

You should allow extra time to check out any show tapes that were specially prepared, as they may be out of sequence, have varying levels, or include unleadered backup copies. An unleadered backup is no backup at all since you can't quickly advance to the desired cut. All of the above happened on this show so it was a good thing we had a full week to get the show up and running! Mike Neal's years of experience with providing sound for this type of show was evident in a request he had made of the show's producers early on in the production planning stages: he asked them to provide a tape that had the lead vocal on a track separate from the backing vocals and/or musical accompaniment. This gave him more control over the final mix so he could better tailor it to the sound of the hall. As one might expect, what sounds right in the environs of a studio control room can be very inappropriate when played back in the acoustical space of a building the size of the Superdome!

And by the same token, what might seem appropriate for a typical concert sound installation could quite possibly fall somewhat short of the mark on an Industrial show. So look before you leap!

EYE and EAR



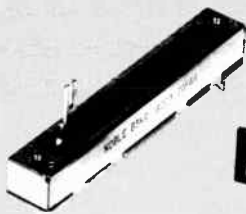
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Self Produced

MASTERS ○ OF ○ THEIR ○ FATE

by David Gans

"Production is kind of a lost art," says Huey Lewis. "There aren't that many great *producers* around these days—most of them seem to be engineers."

Whether or not Lewis's assessment is correct, recent years have seen a blurring of the distinctions between roles in the recording studio. The economics of a dwindling record market have caused instinct to give way to calculation, and engineers have come to the fore as producers. This is at least partly because a producer who can engineer his own sessions costs less than two separate bodies, and it's easier for an experienced engineer to become a producer than vice versa.

A phenomenon that has accompanied the rise of the engineer/producer is that of the artist/producer. In the face of decreasing management awareness of the *art* of making records, successful artists such as Bruce Springsteen, Paul Simon, Rodney Crowell, Fleetwood Mac and

others are demanding more control over their own vinyl destinies and producing—or at least co-producing—themselves as well as other artists.

Marshall Crenshaw and Huey Lewis and the News are two new artists who have been allowed to make their own records. Perhaps it's the economics of the situation—a neophyte artist/producer would cost less than an established hitmaker with a bigger piece of the royalty pie—or maybe it's the fact that nobody knows who's going to come up with The Next Big Thing and it's just as likely to be The Kid From Left Field as it is to be The Aging Hippie With The Big Budget.

Louisiana-based Le Roux, expe-

rienced studio players from The Studio In the Country in Bogalusa, has turned into one of the hardest-traveling road bands in the business. Bassist Leon Medica, who produces their albums, takes a more traditional approach to recording than either Crenshaw or The News.

Lewis, Crenshaw and Medica each work under a different set of musical and technical principles, and their methods—as well as the music in their respective grooves—are quite different. In the following interviews, each offers his unique perspective on the meaning of working both sides of the console.

HUEY LEWIS AND THE NEWS: Friends First

"The reason we did the second album ourselves was that it was a 'do-or-die' album. It was obviously going to have to be commercial, with a hit single—or two or three," says Huey Lewis. "I felt that if anybody was going to draw the line around commerciality and not lose the personality of the band, it ought to be us."

Conventional wisdom might indicate that a producer with a raft of hits to his credit be brought in for such a crucial session. "We tried out several 'top-flight Hollywood producers,'" Lewis concedes. "It's not that they weren't good, but we are a live band first, and I've always felt that the record should imitate the band and not vice-versa. With that in mind, I think that nobody knows better than the rest of us when a band member is doing his best."

Lewis notes that "it took four, five, six months of 'going to lunch in LA' to convince everybody—including ourselves—that we could produce it." But the results are evident to all: *Picture This*, produced by Huey Lewis and The News, has already yielded one smash single, "Do You Believe in Love," and the album is

Artists



PHOTO BY DAVID GANS

charting strongly in the U.S., Europe and Japan.

"I should emphasize that we produced it as a band," says Lewis. "Although maybe the buck stops with me, the fact is that the band produced

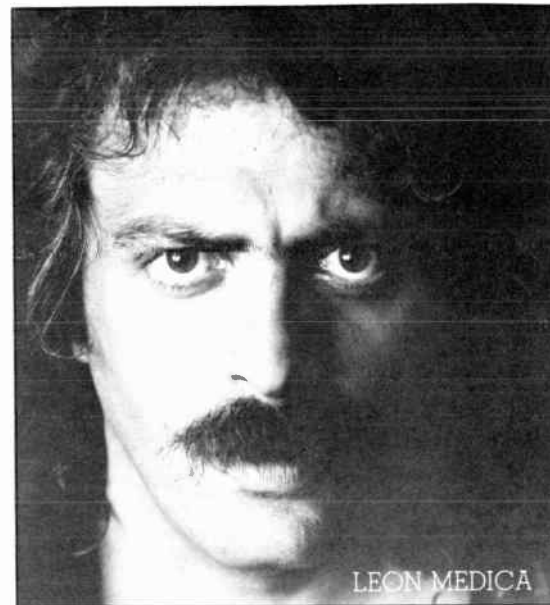
PHOTO BY DAVID GANS



it. We are friends first, and guitar player-bass player-drummer second."

The News worked up the songs at their garage studio in Marin County, north of San Francisco, and played them live at least a few times wherever possible. "When we record, we try to make it sound like you're just there listening to the band and there's no board at all," says Lewis. "That to me would be the perfect production. But unfortunately you can't just set up and turn the knobs on, because you do have this massive piece of technology between you and your audience. So what you must do is master that technology and play it so well that it's almost as if it isn't even there.

"We prefer to record the basics with the whole band. If you put down a bass-and-drum track and then have the guitar play to it through headphones, he's really playing to a click track—and an uneven one at that," Lewis explains. "If you're all in there together and looking at one another, and you can see the stick hitting the cymbal and see one another playing and bopping, then I think you'll play much more as a unit. And I swear you can hear it in the tracks." Vocals and solos were overdubbed, and "that's pretty much it, except for the odd rhythm instrument and handclap,



LEON MEDICA

and a synthesizer groan here and there."

Certain tracks on *Picture This* were more carefully produced with an eye toward radio play, Lewis notes. "People don't listen to the radio as much as they used to. The market has gotten smaller, and everybody's competing for it. Radio stations are playing fewer and fewer songs, and

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they're playing them over and over.

"Those records have to be *perfect*. No record was originally made to be heard one million times, but that's what's going on. I think that's unfortunate, because a perfect record is not what rock and roll is all about.

"The most important thing on any record, I think, is the personality in the performance—and that's a non-technological consideration. The second thing is the song, and the third thing is the sound."

Songs that were aimed at the radio have more overdubs, "and we made sure everything was in tune and in time, even though I like to leave a little mistake here and there. We said, 'Aw, Christ, we'd better fix that—this might be a single.' But the other tracks, like 'Workin' for a Livin' [which, ironically, has been released as a single] and 'Buzz Buzz Buzz,' were recorded live in the studio, essentially."

Picture This was engineered by Jim Gaines at the Automatt in San Francisco. "He let us sort of run our movie until we found what we wanted," Lewis observes. "He waited for us to articulate it, and then he got the sounds for us."

Bob Clearmountain mixed the album at the Power Station in New York. "The sound of the record is in large part the sound of the echoes," says Lewis. "Aside from a Harmonizer, it's all natural echo chambers. There's a little tile bathroom with a short slap that's marvelous; they have an elevator shaft that's eight or nine seconds long; and there's a sort of regular echo chamber that's really good.

"On the lead vocals, there's a little of all three echoes," Lewis continues. "That gives it the richness—the bathroom to give it a sound, a little bit of elevator shaft to give it length, and the medium thing just so the echo doesn't seem too long or too thin.

"The way Clearmountain blends his echoes is really his secret. He softens the edges and blends the whole sound together. He's a great mixer."

Mark Deadman, who mixes the News' live sound, was present during the making of **Picture This**, and the band took things they'd learned in the studio to their gigs to see how they worked live, and vice versa. "We discovered tape slap, which we use a lot live," says Lewis. "We've got the Friggenheimer 451—a very, very secret machine. Friggenheimer only made the one unit, and he said he'd give it to us only if we swore we wouldn't tell how it works.

"I'll give you one hint," says Lewis with a wink. "It gives the album

that *je ne sais quoi*." Don't look for any papers on it at the next AES meeting, folks.

MARSHALL CRENSHAW: The Grunge Factor

"There's a lot to be said for cheap gear," exclaims Marshall Crenshaw, who mapped out his songs and recorded them at home before entering the studio to co-produce his eponymous debut album with Richard Gottehrer. "I know Motown is an over-used example, but I've heard second-hand from engineers who worked there in the early '60s that the whole secret of their sound was cheap gear. That ridiculous hot snare drum sound was a result of using cheap mikes, cheap echo—cheap everything, I think."

Crenshaw's home demos were made on a TEAC 3340. He used no mixer, and only a minimal array of small-scale signal processors: an MXR Dyna-Comp, an MXR Analog Delay, and a dbx stereo compressor. His mikes were "two Shure high-impedance microphones—a Unidyne and a Unisphere, worth about \$40 apiece," he says. "For mixdown monitoring I used a JVC ghetto blaster. I mixed everything through the dbx to make it louder, fatter, bigger and noisier. I balanced with the output gain controls of the TEAC; I guess that's one way to account for the fact that there wasn't much line noise. If I'd used a mixer I might not have ended up with recordings as quiet as they were.

"One of the ways that we translated my home sound onto the album was to use some of the cheap shit that I had used at home," Crenshaw explains. "But the main thing that makes the sound interesting is the deterioration you get when you start to bounce things together. You end up with a kind of grungy sound, but instead of trying to bury that I'd get it right out there.

"When you bounce drums, they start to get really boomy and explosive-sounding. To me, that's a really desirable effect rather than a negative thing.

"On a few songs on the album we used the first-generation guitar tracks, and then we'd have a track that was all of them jammed onto one. I like to do that, just to give the record a little more grunge."

If he'd had his way, Crenshaw's album would have been done in mono. "I don't really like stereo that much," he says, "but once I accepted that that was the way it was going to be, I sorta got into it.

"The thing I discovered about making a record is that it's never go-

ing to be exactly how you imagine it. You never really know what it's going to be until it's all down on tape.

"It always changes while you're recording, and it can even change in the mastering," Crenshaw observes. "I was really surprised when we got into the cutting room [Sterling Sound, with Greg Calbi at the Lathe] and I heard how even after everything was mixed you could change the whole nature of a record there."

When Crenshaw and his band—brother Robert on drums and Chris Donato on bass—went into the Record Plant in NYC, they had planned to try for a live sound, "the sound the three of us make onstage," he says. "We created a lot of interest with our live appearances, and I wanted to try and get some of that on record. After a while that proved to be sort of difficult, so I gave up. Next time, we'll try again. If it doesn't work right away, we'll give up again.

"I've always had the same basic motive in making records," Crenshaw explains. "What I want to get down on tape is some record of the experience of making the thing, some reminder of the experience. I'm always out for having a good time when I record; I like to not get hung up on little details, and I just go for the feel. The only thing about a record that matters is that the overall sound have some quality to it that stirs your imagination. Records should be fun to listen to!"

Recording the Crenshaw way was much easier at home, he says, "but it wouldn't have been right not to have used the same approach in the studio." Gottehrer, like Crenshaw, "generally keeps things pretty loose. A couple of times I had to work on him a little bit to get him to take the sound into left field. I like to use more echo, to garbage the sound up more than Richard does."

Crenshaw points out that there is tape slap on every lead vocal on the album. "I don't think you notice that it's there, because it works," he comments. "I love the idea of atmosphere on a record, something that stirs the imagination. The important thing is really the overall sound, but not that the sound is beautiful and quiet and pretty and gorgeous. It has to be ballsy and exciting, and you should be able to hear the grit and sweat that went into it. I want it to sound like *rock and roll*."

LE ROUX: State-of-the-Art AOR

"It's hard to be a bass player and produce," says Leon Medica, who does both in Le Roux. "But it'd be harder to be a guitar player and do it. The bass is just the bass; you

(continued on page 90)

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(continued from page 88)

want to flash a bit when you've got some hot licks, but a lot of times it doesn't really fit the song. I try to find my place somewhere around the left hand of the piano and strengthen the song."

With four writers in the band (including himself), Medica says, "Picking material is hard." For the band's latest album, *Last Safe Place*, "we went through around 45 songs the writers had demo'd. It's harder to be objective about songs than about a bass part." Medica wrote or co-wrote two songs, and keyboardist Rod Roddy and guitarists Jeff Pollard and Tony Haselden contributed seven individually or in various pairs. The band tracked Buffalo Springfield's "Rock And Roll Woman" one day when there was some spare studio time, and they ended up using it on the album.

As producer, Medica gets the last word, but he doesn't have to use it very often. "When something's not working, everybody knows it," he says. "And Tony will be the first one to say, 'Jeff, why don't you play this part—it's more your thing.' Everybody contributes ideas—for example, David [Peters, the drummer] comes up with licks for the guitar players. It's real open."

Last Safe Place features state-

of-the-art production as well as pointedly AOR material. There are hints of REO, Little River Band, The Cars, Journey, Elton John and others throughout. "Each of the guys in our band listens to different things," Medica explains, "so each writer knows what he's going for. But we don't bring a record in and copy its sound."

Medica points out that recording techniques and equipment are the same in studios everywhere, which accounts for some of the surface similarities between many records. "A lot of people will be using every new gadget that comes out, and they're all going to get the same sounds out of them," he says.

Arrangements are largely a cooperative venture in Le Roux. "You play, and then everybody starts playing," says Medica. "We get to a point and then we stop and get a rhythm pattern flowing within the song. Some of the songs are so straight-ahead that there's no doubt about what you should play, like 'Addicted' [the opening cut on *Last Safe Place*].

"On 'Inspiration,' the first demo we did just didn't work. I had trouble conveying to the band what it was supposed to feel like," Medica continues. "I heard Rod playing another song on the piano and I said, 'That's what "Inspiration" should feel like.'

Once the band heard the way that part felt, the rest of the song just flowed. That's why Rod has part of the writing credit."

"Rhythm arrangements and guitar parts are entirely different matters," says Medica. "I don't know if all guitar players are like this, but the first thing our guys do with a song is just ride the whole time, kinda noodle through it a couple of times. The good thing that does is give them parts that aren't chord-based. There's a rhythm part on 'It Doesn't Matter' that they wouldn't have come up with if they hadn't messed around.

"But every song is different. Both guitarists play lead, so it's just up to whichever one feels the part. Sometimes somebody has to sort it out for them. Jeff plays what I guess you'd call the more standard-sounding rock stuff, and Tony can do things a little more outside. But that's not to say that Jeff doesn't get outside or that Tony can't play straight-ahead."

Like much of today's highly-polished AOR music, Le Roux's recordings are built around the drum sound. "We always put the bass drum and snare in the center and the high hat slightly off center," Medica notes, "and we spread the toms and the ride cymbals." On one album Medica tried alternating the toms in the mix—the first, third and fifth on the left, second and fourth on the right—"so when David went around them it was a crazy picture. But I think it works better to make the kit sound more realistic."

Medica credits the drum sound to Peters, who "knows how to tune his drums," and to engineer Warren Dewey's miking technique. "Everything is close-miked on the basics," says Medica. "Ambient sound is okay—the drum fills at the end of 'Nobody Said It Was Easy' were overdubbed and we used a lot of ambience there—but we don't use it very much in our particular band."

"You Know How Those Boys Are" features an arpeggiated pattern underscored by flourishes of guitar and keyboard. There's a sort of hyper-guitar sound, which Medica says is "one of those things Tony does real well. It's a Stratocaster, recorded direct; that's a clean sound to begin with. Then we compressed the shit out of it, ran it through a Lexicon and doubled it. And the bass is also doubling the last part of the phrase."

Medica is hoping to do some production with acts other than the one he belongs to, but it's hard to schedule projects when you're on the road playing gigs seven months a year, as Le Roux has been. "When the timing is right with Le Roux and a project comes along that looks right for me, I'll do it, says Medica. ■

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JOHN COUGAR



A Hoosier Rock Star with an Identity Problem

by David Gans

“I just re-signed with Polygram Records,” says John Cougar, “and there were certain things they said they were going to do if I stayed with them. I heard they were pissed off that I didn’t give them another ‘Ain’t Even Done with the Night’ or ‘I Need a Lover.’

“I said, ‘Hey, those songs aren’t on this record. I’ve already done those—why should I want to do them again?’”

The pugnacious Hoosier seems to be getting the last laugh, although one can’t really imagine Polygram complaining too loudly about Cougar’s failure to rephrase his earlier hits. *American Fool* and its first single, “Hurts So Good,” cracked their respective Top Fives, aided by the singer’s tireless touring and energetic performances—climaxed by forays into the adoring audiences and Cougar’s flying leaps onto the shoulders of his unflinching guitarist, who never misses a note. The second single, “Jack and Diane,” started out strong in midsummer, with airplay and more touring driving the single up the charts.

“I’m so sick of Journey and Foreigner, all those pianos and synthesizers,” Cougar snorts. “Gimme a fuckin’ break! I turn on the radio and I can’t tell one band from the next. What I tried to do on *American Fool* was not sell out to the point where you can’t tell my songs from everybody else’s. I took a little risk, because I wanted to sound like myself but have the record be a bit different

from what you normally hear. It worked, because ‘Hurts So Good’ was the most-added song on FM when it came out.”

Like the visual image his stage name suggests, Cougar’s sound is lean and sleek. “There’s no song on the record where there’s more than three or four instruments playing at once while I’m singing,” he exclaims. “There’s no piano, and just a couple of stupid guitar hook lines.” He said it, friends—I didn’t. “I tried to write songs that you can sing along with, like Creedence used to.

“Some of the songs worked, like ‘Jack and Diane,’ and some didn’t. But I’ve never bought an album in my life where *every* song worked the way I thought the artist wanted it to. I gave it my best shot.”

“Danger List” is a ballad that sounds rather like some of Springsteen’s earlier people-tales. “I tried to get a haunting thing happening with it,” says Cougar, “and I tried to get a little story going. A lot of people like that song, and a lot of people don’t.

“I think that’s the whole theme of the record: either you’re going to like it or you’re not. There ain’t going to be very much in between. I’m sorry that it isn’t what a lot of people expected.

“The next time, I want to work with a black producer and make a *Negro* record.” Cougar declares. “I’m talking serious black music, down to the lines down the side of my pants,” he says. “What I’m hearing is like the old Sly Stone stuff—black rock and roll.”

“But I don’t know,” Cougar muses. “The next record might be just

me and an acoustic guitar, you know? But right now what I’m thinking about is Sly Stone. The thing about his records was more than the sound—it was the *songs*. It might be kinda pretentious of me to think that I could write a song even remotely as good as any of his, but who knows?”

His current success and future plans aside, Cougar does have one nagging problem: his name. It’s John Mellencamp, and he’s not at all comfortable with his *nom de rock*. “It’s so pretentious!” he wails.

The name was dreamed up by Cougar’s first manager, Tony “MainMan” DeFries, who turned David Jones into David Bowie and figured he could work the same sort of magic with young Mr. Mellencamp. “I saw the cover of my first album and I went nuts, to be honest,” he recalls. “I said, ‘Wait a second—what’s this?’”

“MainMan said, ‘Look, John, it worked for Bowie,’ and then he said if the record didn’t say ‘Cougar’ then it wouldn’t come out. I’m some dumb kid from Indiana, and I said, ‘Okay, if that’s the way it’s got to be.’ I didn’t exactly have record companies knockin’ down my door! So I’ve been lumbered with it ever since.

“Most people tell me to forget about it, but if I bought a record by a guy named ‘Cougar’ I’d say, ‘John *what?*!’ I wouldn’t be able to take the guy very seriously.” Cougar hopes to work his real name onto the next album’s cover (*American Fool*’s writer credits list him as “John Cougar Mellencamp”).

“I’m more used to ‘Hey, Fuck-head,’” he laughs, “but you can’t put that on a record jacket.” ■

MUSIC NOTES

by David Gans

AMATEUR POWER

"The first time I had anything to do with music per se was doing the record," says Greg Copeland, whose debut album—

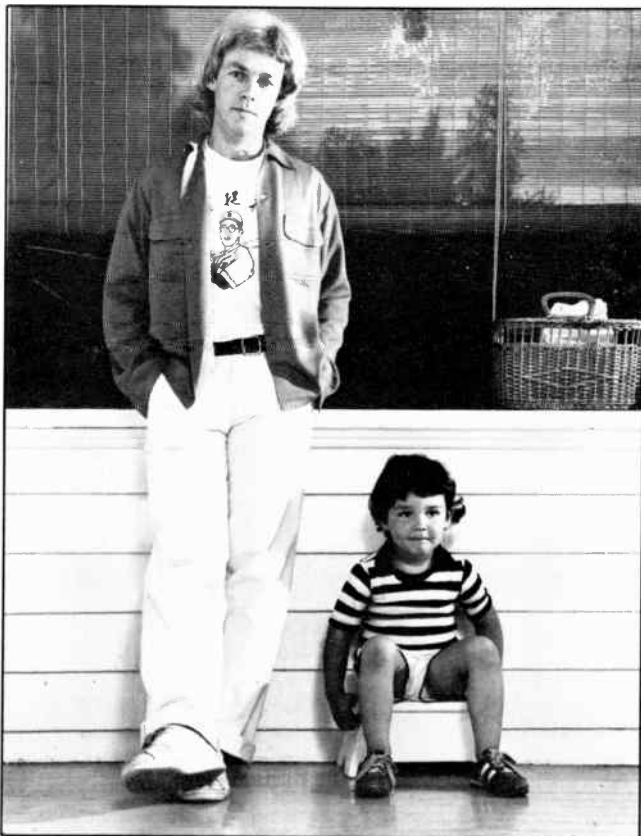
Revenge Will Come, on Geffen Records—was produced by his high school chum and longtime friend, Jackson Browne.

Copeland wrote poems "the way they did it in the beginning"—by singing them. When Browne asked what he'd been up to, Copeland made him a tape. "I couldn't play any instruments, so I just sat in my car and sang the songs out," he recalls. "Then Jackson said, 'Let's make a record.'"

Big deal—another amateur riding into Hollywood on a superstar's coattails, right? Wrong! Music may be a new vehicle, but Copeland is an accomplished and on-target writer and social critic. *Revenge Will Come's* lyrics are the most arresting to come along in quite some time. Browne has been performing the title track and "El Salvador," the two most urgently political songs on the album; other tracks tackle the bankruptcy of the American Way ("Full Cleveland," "Wrong Highway"), one man's quest for romantic redemption ("That'll Never Be the Same"), Bob Dylan ("At the Warfield"), and other timely subjects.

Imagine being a producer and starting with nothing more than words on paper and a melody in the air! It was Browne's job to decide exactly

how to present each song—tonality, rhythm, orchestration, and all. "Jackson has been wonderful," says Copeland. "It's like going hiking with a ranger: he knows where the bears are.



Greg Copeland and son Ross

"It's the most fun I've ever had," Copeland enthuses. Singing on the sessions, backed by guitarists Browne, Danny Kortchmar and Rick Vito, drummer Ian Wallace, bassist Bob Glaub, and keyboardists Jim Ehinger and Billy Payne, "was like crewing on a boat. You're working in tight quarters, and if you don't perform your function, it's so obvious to everybody," he laughs.

Rehearsals took a mere three days, the tracking only four more. "There's almost no overdubbing," Copeland notes. "Jackson's a great editor; he listens to everything and

really understands what's there, and then he makes the record." Browne spliced some takes together, Copeland says, "but there are great big chunks that are just live.

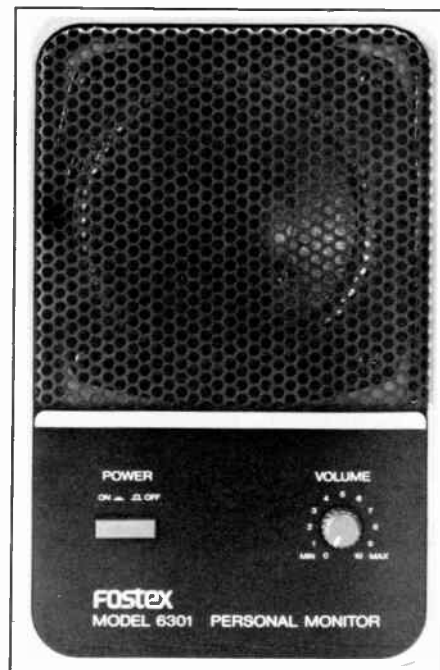
"I didn't have time to get scared and be timid," he continues. "I had to step right out there or it wasn't going to work. It was like jumping out of an airplane."

After years of studying literature, Copeland says, "I saw myself 57 years old in a high-rise in Buffalo" and decided the academic life was not for him. "Your mind has to settle on things that I just don't find as interesting as writing and singing songs and making records," he observes. "I've always had jobs, but this is my first career. It's the only time I've felt like I was doing *my* job."

Copeland is practicing the guitar, learning the songs he's already recorded and working on material for his second album. He has no definite plans to perform—"we're literally taking things a day at a time, seeing what happens," he says. But show biz is not Copeland's goal: "Jackson says that the stuff I do should have a label across it that says, 'Not in Show Business.' I like that—it frees me to do stuff that is not going to assure me of a white microphone in Las Vegas."

RANDOM AXES

The latest addition to Fostex's line of "Personal" sound equipment is the Model 6301 self-powered Personal Monitor. It's designed to accept typical line-level signals, such as those from the Multitracker cassette/mixer,



Fostex 6301 Personal Monitor

(continued on page 97)



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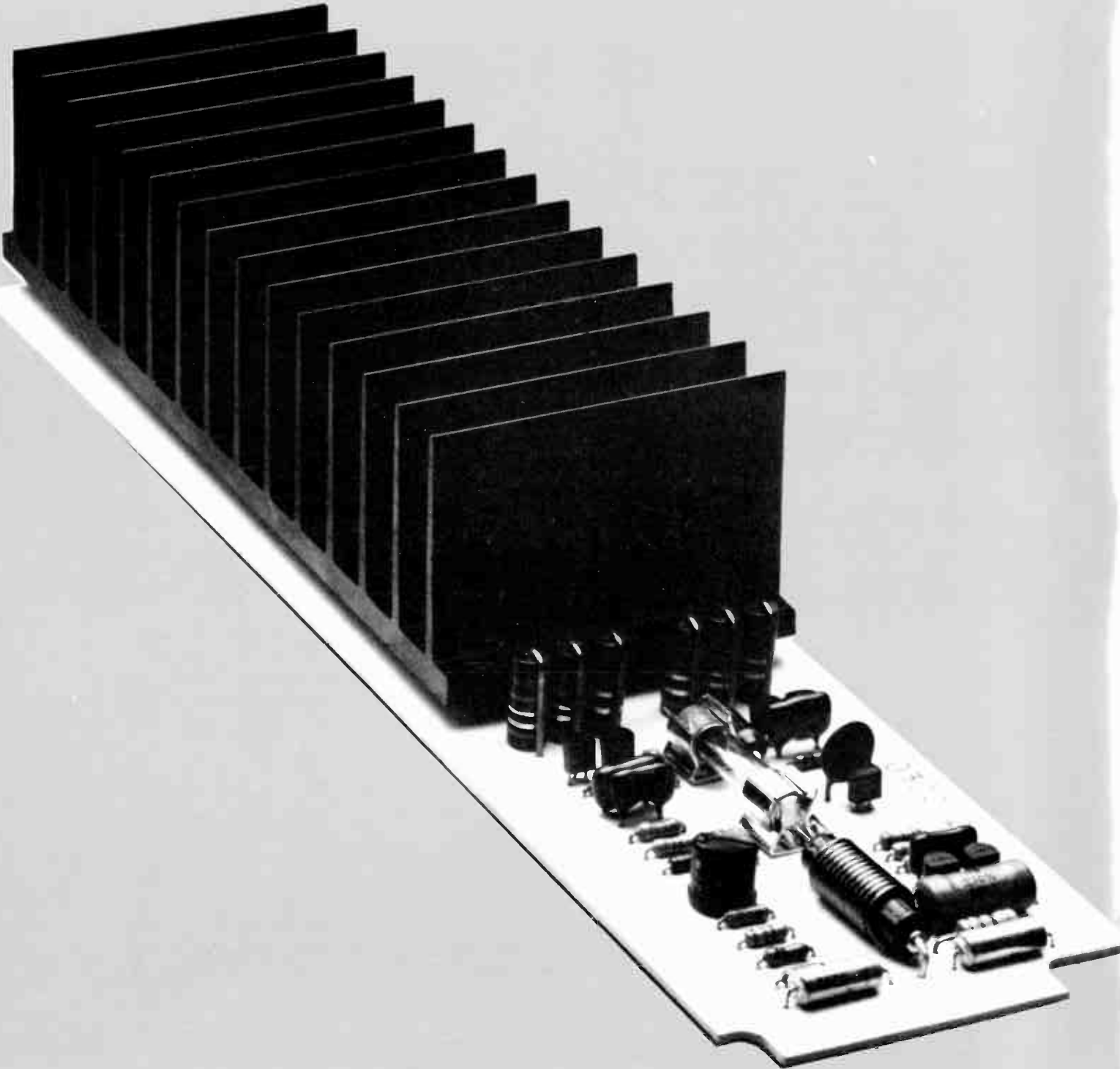
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Photography directed by Nick Clarke

MUSIC NOTES

(continued from page 92)

but Fostex says that any signal—including electric guitar or synthesizer—will drive the 6301. It's 5"x7", weighs six pounds, and lists at \$149. Frequency response is 80 Hz-13 kHz, SG-10 as either a 10-band mono or 6301 also provides for independent use of the 10-watt amplifier in situations where another power source is needed. . . . Rhythm Tech's Shaker comes in two sizes: the 9" model provides extra volume for live use, while the 5" version is designed for studio use. Both are lightweight, and both feature internal "sound control ridges" which control the feel of the instrument. . . . Mesa's "Son of Boogie" is a 60-watt combo amp with two cascaded input channels and the Black Shadow 150-watt 12" speaker. The standard Boogie three-volume-control system allows tailoring of the sound for rhythm or lead. Mesa says it's "recommended especially for Rock & Roll." The "S.O.B." lists for \$500;



Opus 3 Synthesizer

order direct from Mesa Engineering, 1317 Ross Street, Petaluma, CA 94952. . . . Moog Music's production improvements have led to cost reductions and quality improvements, according to a recent press release. The Opus-3, with strings, organ and brass in addition to a variable polyphonic synthesizer, features an "articulation mode" that allows independent attack and decay contours for strings and brass. It retails for \$995, and that includes stereo output. . . . Furman

Sound's latest product is the SG-10 Sweep Graphic Equalizer, with 10 bands of ± 15 dB EQ. Each band's center frequency is continuously variable over a 4-octave range; "stereo split" circuitry enables use of the SG-10 as either a 10-band mono or 5-band stereo equalizer. Built-in preamp interfaces with passive instruments, and low-level outputs enable the SG-10 to drive instrument amps. Balanced inputs and outputs are available as an option. List price: \$495. ■

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VIDEO NEWS

MUSIC VIDEO UPDATE An Interview with Ed Steinberg

by Mia Amato

When your local nightclub flashes on its video screens, odds are good you're about to see a "Rockamerica" tape. Rockamerica is a promotion service of Soft Focus Productions of New York, which compiles video promos from major and independent record labels for distribution each month to subscribing rock clubs.

Ed Steinberg, who runs Soft Focus, also produces video promos for bands. While the Rockamerica service shows tapes that aren't exclusively Steinberg's, the promo pool reflects his interests in "new" music and has become a useful promotional vehicle for smaller labels. (The company also supplies clubs with "Mainstream" and "Country" packages.)

In 1980 the first Rockamerica tapes were sent to nine clubs. Today the service has 140 outlets, with over 100 clubs, plus universities and record stores.

How are the clubs using the tapes? Typically, the VJ or DJ plays single cuts. There's black in between each segment so the cuts are segue-able. After the video is over, the monitor goes off and it's back to the music. Which is the way I think is most effective. It's a tease, and you don't get video'd out. Some clubs play one clip after another and after a while one video looks like the next.

Another concept is the video lounge, where video is playing constantly. Like the old Danceteria. In Boston, a club called Spit has an upstairs lounge where people sit and watch. I've shortened the length of black between cuts from five seconds to about three, because the lag time is annoying for clubs that want to play the tapes straight through. The Peppermint Lounge, for example, plays them straight through.

I don't put out a song more than once. Different songs, yes. I've had four different promos for Soft Cell, for four different songs.

Rockamerica is all new music?

Yes. And our "Mainstream" tape is always new. I have the Stones on and they're not new music by any stretch of the imagination... but they have new songs.

Does video sell records?

I know it does. Take Ballistic Kisses. I put out their tape and they went on tour and were amazed—they got better bookings, and a lot of complaints—from people who had the local record stores: 'Your video has been out for a month, and kids are asking for the records and we can't get them.' Had the record been in the stores, Ballistic Kisses might have made the lower end of the disco chart.

Another example is the song, "Telegram Sam" by Bauhaus. I was at an Atlanta record store and the managers couldn't understand why Bauhaus was selling so well in Atlanta. There was no radio play. Even the clubs didn't have the record. But they had been playing the video.

Video also creates radio play. A lot of VJs or DJs in the clubs, you must realize, work at the local radio station. And it's not like New York, where the stations are inundated with product and promotions and partying. I've seen it happen a number of times that DJs go down to watch the videos to see what's new.

You play a lot of videos from independent labels. Has Rockamerica had any effect on these bands being signed by larger labels?

Seventeen record companies subscribe to Rockamerica. I think some bands have been helped. I know the Bongos were helped a lot.

If video promos are so instrumental, why are so many record companies cutting their budgets for promo production, and are not doing as many videos as before?

That's not really true. The difference is they're not doing promos for seven cuts on an album, or even three. Three videos used to be the standard. Now they do just one video, or maybe two, per album.

And they're not going to Keefco as much, or GFF. They're going to producers like myself who do mid-range videos. I don't do videos for

\$50,000 or \$25,000. People come to me when they have maybe \$12,000 or \$18,000 to do a video. And I can give them a lot more than Keefco or some company like that, because I'm not charging a big director's fee.

Sponsorship is the latest thing that's going on. Did you see the Huey Lewis & the News' video, "Hope You Love Me"? It's shot in a studio, and all of a sudden you see this "Budweiser" neon sign flash, just for a second. I found out Chrysalis Records was given money to flash that "Budweiser."

I've always been cautious about that kind of thing, but now I'm working out a deal where a sponsor will subsidize a lot of record company promos. One sponsor has wanted to put commercials, a very expensive animated segment, on the Rockamerica tapes. I told them, 'No one will run it, they'll segue out of it. Give me so much a month to subsidize a video and I can do subtle things.'

And record companies love the idea of having their promo tapes subsidized. Give them \$5,000 and they'll have the band drinking Miller Beer or doing whatever. It disgusts me generally, but in this business you have to be a bit of a realist. Do I say, "I won't be a part of it," or do I take the opportunity and do it well and tastefully, to my advantage and to the artist's advantage?

Let's talk about your own productions. On a \$12,000 video, how do the costs break down?

Editing takes about half the budget. I normally shoot one camera, filmstyle, and do a lot of postproduction - on one-inch. So on a \$12,000 short for one song, I might spend \$5,000 on postproduction. I don't work much in studios, but a studio day might cost two or three thousand, depending on the equipment and how many people are included.

So your profits are not very high?

The profits are very little. That's why a lot of people don't want to work on \$12,000 videos.

Then, too, each tape is different. Of two promos for Tom Verlaine, one was done in eight locations around the city and had a lot of postproduction up at Utopia in Woodstock. We went

triple over budget on editing because Tom wanted to sit in, which I hadn't expected. I had budgeted eight hours to do the work and we spent 40 hours editing, with the clock running. We didn't have the money to finish up the second tape. All we could do was two or three takes in my loft here, on the insert stage. Basically I shot him full figure, then spent the night at an editing house, using hard edge graphics, geometric patterns, on a two-channel Quantel. And we came up with a good tape, an interesting tape.

Do you have much control as producer?

I'll cut soundtracks if they're too long. On Way of the West's "Drum," I cut two minutes. There was a long instrumental, which would have cost an extra two or three thousand dollars to shoot and edit. And shorter pieces work best as videos.

Is the genre locked into lip-synch?

I think so. Mick Jagger tried sound-synching with playback for "Miss You" -only the lead vocal was live-miked. It sounded terrible. Because it was recorded in a TV studio, not an audio studio.

The audio quality on the promos I get is often horrible. Some are one-track audio, or mono, and have to be remixed because Rockamerica is sent out in stereo. On my own productions, I take a 15 ips copy into the field, lay it back directly onto the one-inch.

I'm planning to do some dynamic compression. Compress the track down, so you can put a lot more signal on the tape. Then when playing back at a club, it can be expanded, and there'll be a much greater dynamic range, and less noise.

You must get a lot of unsolicited videos from unknown bands.

Some are good and I run them. Like the Brains, from Atlanta. They're popular in the South and the tape's okay. Most are horrible. They're so bad, and the performances are so bad you begin to understand why the videos are so popular out there in the midwest. Sometime I'd like to put together a compilation of all those garage bands.

Why hasn't there been a compilation tape of good promos for the home video market? Will there ever be one?

Sony has been looking to buy home video rights to rock promos. It's something EMI has tried in England, but not without great trouble. I'm working on it too, but it's very complicated, legally, with all the various rights.

Are you working on any other television projects?

I've just completed a half-hour program on dance for David Gordon's Pickup Company. Since June, I've been doing all my production on one-inch, which has increased my costs about 400 per-

cent. I used to duplicate here, on my 3/4-inch machines. Now it's all done at a one-inch facility. Next is to get a portable one-inch machine, for studio work and for duplicating.

I'm doing more studio work, set building. The dance tape helped me learn a lot more about colored lighting and different lighting effects, something you don't see much of in video. Promos, I think, will become the proving ground for new directors. There's a lot of progressive stuff out there.

STUDIO REPORT:

Editel New York has opened a new all-Studer sound mixing room for film and tape postwork in all formats. The plush suite, with its custom automated 24 track console "will match any major recording studio control room," promises designer *Vin Gizzi*, who supervised the project along with acoustical pro *Carl Yancher*.

The post room can be used to mix records, but the bulk of business is expected to be soundtracks for television programs and films. (*Editel* is a sibling of Columbia Pictures). Major innovations in console automation will allow scene-by-scene dialogue equalization, computerized sound effects cueing, and optional SMPTE time code interlock.

Also in New York — *Movielab* has upgraded its video post suites to accommodate Dolby stereo audio sweetening and audio time-compression. Down in Texas, *Third Coast Video* plied five cameras for twelve hours to cover the Jerry Jeff Walker Birthday Party Concert for *Videowise Productions*. *Reelsound* supplied mobile 24 track for the show, which featured about a dozen more Austin-based acts in addition to Walker. The project's now in post at Third Coast, being edited down to a one-hour television special.

The surrealist promo clips for *Steve Miller's* *Abracadabra* album were created by *Coco* and *Peter Conn* at *Homer & Associates*. "HOMER" is a specialized optical printer which combines the best of film, slide, and video special effects. Keep an eye on this very hot LA shop....

Sunwest is rapidly making a name for itself as a reprocessor of mono to stereo for video projects. So much so, the company recently added a third sweetening studio. Gear includes Sony 3/4-inch VCRs, Adams-Smith synchronizer, and API console for 16 or 24 tracks. The new additions at *Vidtronics* are audio post pros *Tamara Johnson* and *Tom Kafka*. The pair's TV sweetening credits range from sitcoms (*The Jeffersons*; *Diffrent Strokes*) to feature films. *Vidtronic's* facility, which features Audio Kinetic's Q-lock synchronizer and Ampex MM 2100 24 track recorder, is heavily into sitcom soundwork on six different TV series this fall. ■

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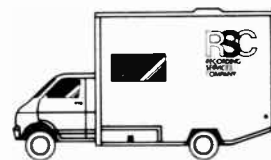
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Cable's Gold Rush

Some Advice for Prospectors

by Dean Anderson

For producers of entertainment (music and music-video) programming, the gold rush is on in the burgeoning cable industries. Those interested in prospecting this new territory have uncovered dozens of questions to be answered, given the infancy of the industry and the subsequent inaccessibility of hard facts.

A starting point for all of us who provide programming is the issue of money. Where does it come from; who is paying for what kind of material—and finally—where or how do we fit in?

I would like to pass on to you some perspectives from those who

know some of the answers to these questions. They are the producers, programmers, advertisers, and various executives who are intimately involved in this daily decision-making process. Specifically, I will discuss the progress of soliciting revenues from advertisers for programming designed for the cable marketplace.

There is a need for syntactical distinction when discussing the generic term 'cable.' The distinction is between 'pay' and 'basic' cable. If a household is wired for cable television, it automatically receives 'basic' cable programming. If a household receives 'premium' programming, that is, an HBO, Showtime, Playboy, or any other service which is added in

addition to the basic service, it is receiving 'pay' cable. The big pay cable nets do not allow advertising. So, for the sake of our discussion, we will concentrate on the 'basic' cable networks, who welcome advertiser sponsorship on their channels.

According to the latest Nielsen survey, 28 million homes (34% of all television households) are wired and subscribing to cable. The 'passby' penetration (percentage of homes situated so as to be easily wired for cable) is at 54% (approximately 46 million homes). Furthermore, cable subscriptions are increasing at the clip of about 250-300 thousand per month. Without belaboring the point, the cable industry is growing and,

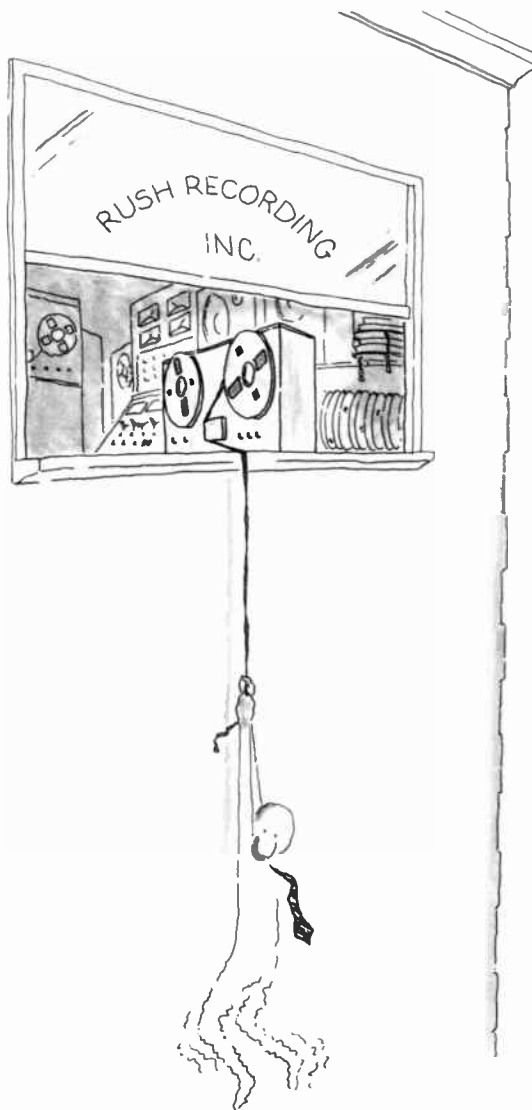
given the large number of available channels on the new systems being installed, there is a growing demand for programming.

Music programming in the cable industry is big business. Many of the 30 pay cable networks supplement feature programming with music-video pieces and nearly all of the 32 basic cable nets do the same. Five of these basic-cable services are exclusively video-music oriented (MTV: Music Television, Heartbeat Media Network, Black Music Network, Apollo Network, and Video Concert Hall). Additionally, there

Duran Duran being interviewed by MTV's, Alan Hunter



PHOTO: GARY GERSHOFF



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are a number of audio-only music services in development which will cater to cable subscribers (Home Music Store, National Jazz Net).

In the programming sequence, there are two main groups which producers must take into consideration as they plan their projects: financiers and programmers. Though there are a number of ways to finance, I'd like to focus on methods of financing your project through an advertiser sponsorship.

There are three very good reasons to seek advertiser sponsorship.

(A) Advertisers are committed to new home communications technology and programming for the long haul.

(B) Advertisers are always seeking 'new and better' ways to sell their clients' products.

(C) Advertisers have a lot of money.

New & Better Ways

A survey of the top advertisers reveals quite clearly that the ad agencies are committed to the pay and basic cable venues as vehicles for providing exposure to their clients' products. Of the various reasons advertisers maintain a keen interest in the new communications, the overriding element is simply that this medium potentially provides a 'new and/or better' way to sell product.

Cable can provide advertisers with an adjunct to the advertiser's regular network campaign; using cable buys can make up for declining network viewing share in cable and pay cable households; advertisers may gain product exclusivity and franchise sponsorships on key programs; they can match the product to program content; they may use television as a target marketing device; they may gain availabilities in sports and news programming that are sold out on conventional network TV; they may want to produce advertiser-supported and controlled programs; test-marketing of new creative campaigns and marketing strategies; they may use cable for direct marketing purposes; they may find a forum for advocacy advertisements; cable can provide attractive economies through multi-year buy-ins; advertisers can experiment with longer commercials and info-commercials; they may use cable as a way to gain experience for proprietary research; cable may expose the advertiser's client to the nuances and opportunities in cable while experimentation is affordable.

The list goes on. With the advent of 'interactive' technology (literally talking back to your television set), the ability of advertisers to gauge the dimensions of their audience

becomes startlingly accurate. The utilization of interactive cable is not just a chapter from 1984, it is reality.

J. Walter Thompson, Leo Burnett, Young & Rubicam, and Ogilvy & Mather are all engaged in the new technology and each are sponsoring experiments on various cable systems. Indeed, if there exists a 'new and better way' to advertise products, it will be exploited in the proper manner.

Money

Between 100 and 200 million dollars will be pumped into the cable industry by advertisers in 1982. Though that figure seems large, it is less than 1% of the twelve billion dollars spent on commercial radio and television airwaves last year. However, while commercial network ad revenues increased by 8% between 1980-81, cable network revenues leapt 120% in the same time period. Needless to say, a growing percentage of advertiser budgets are being rerouted to cable and it seems likely that the shift will accelerate with the growth of cable penetration. Although the positive signs of cable investment

by advertisers exist, no industry is as cost-conscious as that of advertising. J. Walter Thompson's Ron Kaatz warns that only those qualified will be included in advertisers' plans:

"If a producer has a great idea or a track record, we'll work with him. But if it's some guy who makes videos in his spare time, forget it."

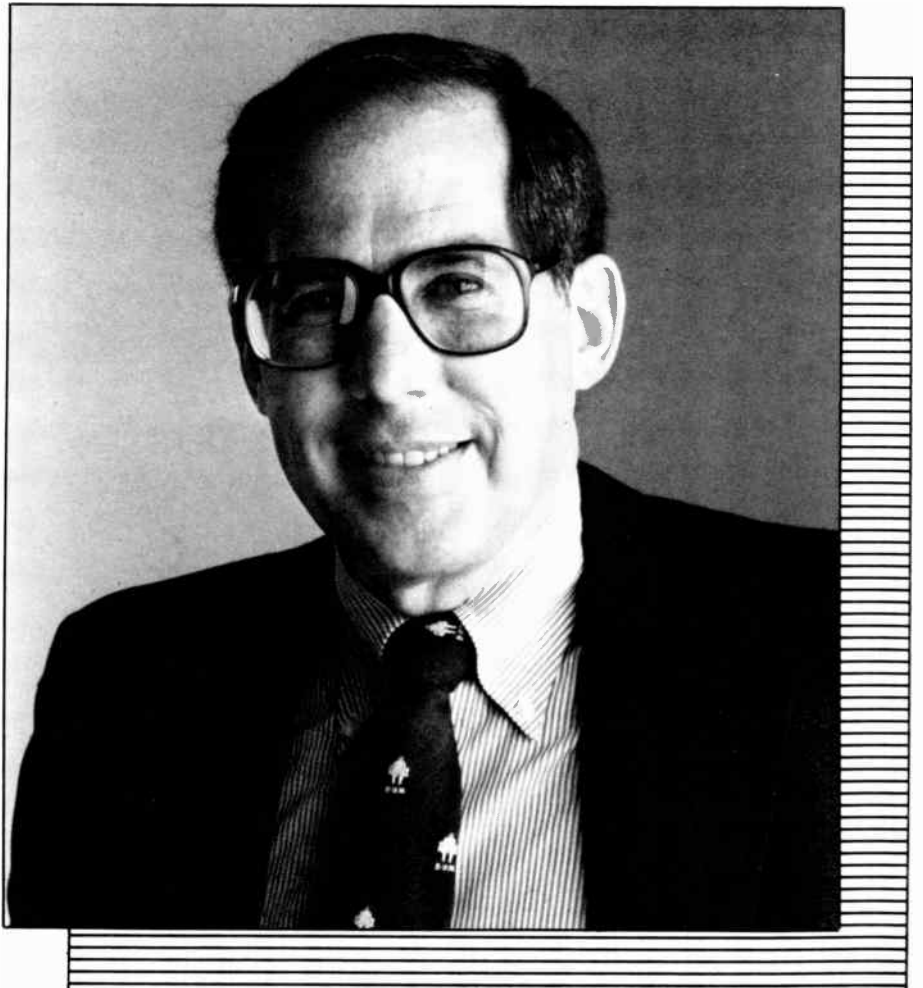
Kaatz is Senior Vice President of media resources and research at J. Walter Thompson and is both media and marketing aware of cable.

"There seems to be this notion that since cable is in need of programming, any Tom, Dick, and Harry can create a show and sell it to cable. From our point of view, if the show representing our client's product isn't up to par, then neither is our client's image."

Hence, the portrait of the cable programmer scrambling to acquire anything to fill time, or the advertiser paying to present his product on those shows, is indeed a misconception.

Cynthia Friedland, who selects the music-video pieces for USA network's "Night Flights," maintains a

Ronald B. Kaatz, Director of Media Resources and Research, J. Walter Thompson USA



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Ms. Cynthia Friedland, Vice President of ATI Video Enterprises, Inc.

three-tiered criteria for program selection:

"My biggest concern is the actual production value of the work. Is it an interesting, moving type of program? Secondly, I look at the artist. If it's a very popular artist such as REO Speedwagon or The Who, our audience can watch it for a long time. If it's a new artist, we've got to be very careful about how long we expose them to an audience who knows nothing about them."

John Sykes, director of programming for Warner-Amex' 24-hour video-music channel, MTV, places emphasis in the same place. "Good production quality is what we are looking for. MTV has a 'progressive' look—and that look sometimes includes exposing new artists—even before AOR radio. If the quality is there and it falls into the rock and roll genre, we may give it a chance." At MTV however, it is the viewer who ultimately decides what is good and what isn't. "We have a full time research staff of ten people," says Sykes, "who call MTV subscribers to gauge a response. Those folks actually

PHOTO SAM SIEGEL

Expanding horizons.



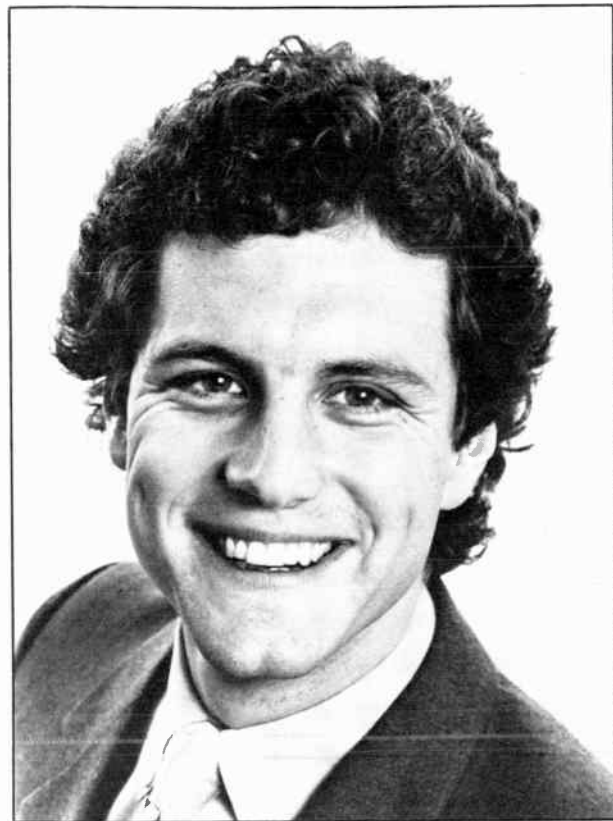
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John Sykes, Director of Programming MTV.

"MTV is terrific," says Laurel Baer of Marsteller-Chicago, an advertising and consulting agency. "What better way to attract that audience than through two of its biggest pre-occupations—music and television."

It is these types of logical relations which, given the infancy of an industry, leaves it open to the entrepreneur. It makes sense to learn about the various subjects discussed herein by *doing*. Each element of the cable/advertising structure will change with location and time, although this article does provide some standard basics.

If you are seriously considering producing music-television for pay/basic cable, it is essential to consider the sequence described here. Finance the show, do a quality production, and the buyers—given that you have a reasonably 'hot' product—should fall into place. You should keep in mind that the 12-34 year-old market has an enormous amount of disposable income and an advertiser may consider you, as a music-television producer, a vehicle for reaching that audience and its money.

Finally, evaluate your plan objectively. The cable industry is new and untested. If you are new to the production game selling in a market which has *only* newcomers, you can expect a fight, and only the producer with the best gameplan, complete with options and creative business sense, will win. ■

Dean Anderson is a graduate of the University of Wisconsin-Madison, and is currently a narrowcast consultant and music television producer for TeleFest, Inc. in Chicago.

Copyright © 1982 Dean Anderson

make some of the programming decisions at MTV."

As in other ad-sponsored media, numbers and demographics play an important part in the decision-making process. The advertiser must calculate the value of a programming schedule in relation to its desired audience. Cable, in many instances, lends itself well to such evaluation by virtue of the fact that cable systems are inherently 'limited.' Limited in the sense that each system operator knows exactly who receives cable programming. In theory, this allows an advertiser to examine the programming on a given system and determine which audience is subscribing to it. In practice, an area in need of much development is accurate cable viewing measurement. Programming on cable tends to be 'specialized' and 'narrowcast' to a demographically well-defined audience in many cases. This of course enhances the selectivity of an advertiser who wants to appeal to a certain segment of the market in a cost-effective way.

Warner Amex' Music-Television utilizes the attraction of 12-34 year-olds to music and music-culture on its 24-hour-day music video network. Comprised of primarily record-company-provided promotional video clips, the audience for the show is quite predictable.

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INTERNATIONAL RECORDING UPDATE

Eindhoven, The Netherlands Philips Builds Digital 'Listening Room'

A 'listening room' has been built at Philips' Research Laboratories Eindhoven (The Netherlands) for rapid assessment of the effects of signal-processing operations on audio signals. In the experiments, special computer programs are used that simulate changes in the design of an electronic circuit. Listening tests can then be made to find the design that gives the best results. The time spent in designing and developing new electronic circuits for signal-processing operations can then be considerably reduced, cutting costs. These simulations are now possible through the use of digitized audio signals.

Philips has developed a simple but unique method for rapidly changing the parameters of the design of a



'Listening room' for the assessment of digital audio systems. A special wall separates the listening room proper from the control room for the computer used in digital-processing simulation.

circuit so that the various options can be compared with one another. A computer is used that simulates the different effects of signal-processing and the resultant sound is then presented. The

advantage of this is that it is not necessary to construct new circuits and yet new effects can be perceived immediately. The system is an interactive one. A monitor gives a visual impression of the signal before and after processing, in both time and frequency domains. This can be useful in establishing relationships.

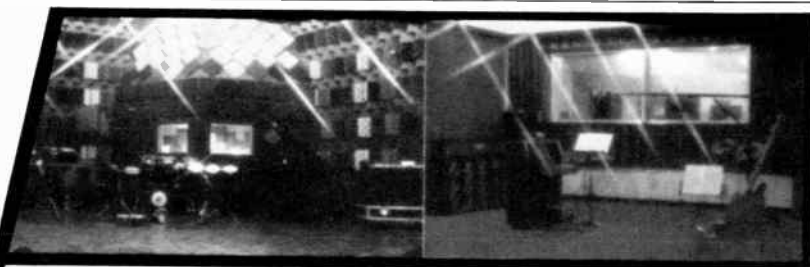
So that subjective assessments can be taken into account in designing new circuits, the 'listening room' has been built at Philips Research Laboratories. In this room the system parameters can be rapidly assessed by the use of a computer in the method described above. Some problems can now be investigated fully at the design stage. These include the minimum audibility, noise, distortion and other threshold effects of signal-processing operations. Philips' investigations to find out what is technically feasible will be greatly facilitated by the special conditions provided by the new listening room. ■

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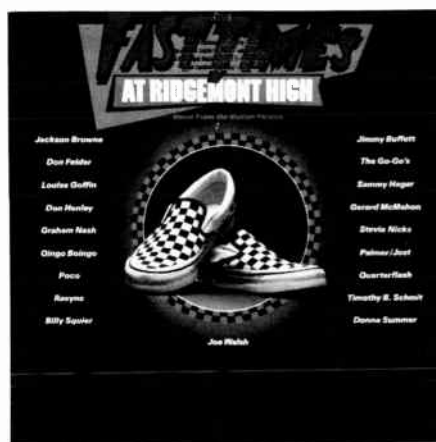
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Off the Record



FAST TIMES AT RIDGEMONT HIGH Music from the Motion Picture Full moon/Asylum 60158-1

Album Executive Producer Irving Azoff; Album compiled by Irving Azoff, Howard Kaufman and Bob Destocky; various producers.

What is wrong with this picture? No—first things first: what is wrong with this *album* is that nearly half of its nineteen selections are not heard in *Fast Times at Ridgemont High*, a film that purports to be about contemporary teenagers in the heart of America: the suburban shopping mall.

I refused to see this execrable movie again to double-check, but I compared notes with a colleague who saw it, and as we recall it, among the missing are Quarterflash ("Don't Be Lonely"), Don Felder ("Never Surrender"), Jimmy Buffett ("I Don't Know (Spicoli's Theme)"), Graham Nash ("Love Is the Reason"), Poco ("I'll Leave It Up to You"), and several others. And furthermore, at least three numbers that are in the flick—Tom Petty's "American Girl," the Go-Go's "We Got the Beat" and Led Zeppelin's "Kashmir"—aren't on the album. *Caveat Emptor!*

There are some fine moments on the *Fast Times* album, nearly all of them on the first two of four sides. The Ravyn's major-label debut, "Raised on the Radio," reminds me of the (excuse the expression) awesome power AM rock had over people just a few years ago: "Michelle/Lady Jane/Yeah, I fell in love with girls I never met. Ah, yes.

Joe Walsh contributes a piece of free-associating doggerel, "Waffle Stomp," empathetic with a modern teen world-view born of hearing namos on the evening news but not knowing for sure whether Khadafy is a bad guy from over

there somewhere or maybe the National Security Advisor.

Don Henley's entry, "Love Rules," captures all the exhilaration and bottled-up anxiety of that tongue-tied first love that we've all experienced at least once. It's the theme song for Mark Ratner, who looks and acts like the child of a marriage between Woody Allen and Bruce Springsteen. Ratner is the only character in the whole movie who doesn't need either some sense slapped into him or that smirk wiped off his face—or both. Henley sings, "When she smiles it brings you to your knees," and you *feel* that wonderful ache. So a heart beats in the chest of the King of Cool after all.

It's jarring to hear Jackson Browne and Danny Kortchmar's sweet, sensitive "Somebody's Baby" used as a background music for a 15-year-old's hasty (and voluntary, I must add) status-seeking delirium at the, er, hands of a total stranger. But Stacy's pursuit of sex is as close to a central theme as *Fast Times* can muster. Despite several funny moments and a couple of dead-on characterizations, it's a smarmy and opportunistic movie that plays up the actions of teenaged sociopaths and (obviously) brings out the bible-belter in me—and I've never even been to Arkansas. (Actually, I hope that *Fast Times* is bullshit, because if it's an accurate reflection of what most real kids are like these days, America is in deep trouble.)

We all know that the record industry is in deep trouble, and most of the music on *Fast Times*—which totally avoids a mainstay of *real* teen tastes, heavy metal *a la* AC/DC and Ozzy Osbourne—stands for the industry itself: old men trying to dope out teenagers and making a transparent and ludicrously inept effort at talking to them in their own language.

—David Gans

THE CRUSADERS with B.B. KING and the ROYAL PHILHARMONIC ORCHESTRA: ROYAL JAM MCA 2-8017

Executive producers: Joe Sample, Wilton Felder and Stix Hooper for Crusaders Productions, Inc.

Recorded live at Royal Festival Hall, London, September, 1981 by Galen Senogles. Mixed by Galen Senogles. Technical facilities: Basing Street Studios, London. Mastering: MCA-Whitney, Los Angeles.

We definitely have a contender here for what may be *the* class-act LP of 1982: the Crusaders, surely the most acclaimed R&B/fusion in-

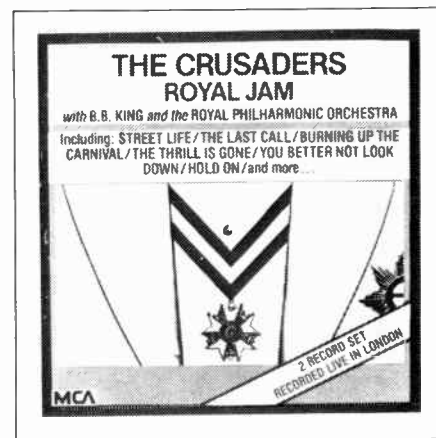
strumentalists on the scene, and the First Gentleman of the Blues, B.B. King, married together in an elegantly funky wedding party with the Royal Philharmonic of London, which has already made its own name on the pop scene via the massive success of its "Hooked on Classics" effort.

The program features arrangements and orchestrations by Crusaders pianist Joe Sample, who does a fine job of stacking together the rich, full-bodied sound of his group with the wonderfully fat blues guitar of B.B. King and the zesty back-drop of the orchestra, all the while wisely keeping the lushness to a well-measured minimum. The end result is that, instead of being lost in a potential tropical rain forest, we are treated to a healthy, well-landscaped garden. In *Royal Jam* we have an LP that can be played on almost any occasion: for a dance party, at an informal dinner, or just when pals drop by.

Still, some may argue that funk has no business consorting with such an icon of classicism; but I subscribe to the argument recently advanced by Richie Cole (who himself hopes to team up with Aaron Copeland) that if fusion is going to mean anything at all, we need more of this sort of thing. "Everybody," says Richie, "ought to be playing with everybody else."

The balance in orchestration is carried through in the pacing of the album, which blends flowing instrumentals with powerful vocals and which allows everyone involved the chance to stretch out without letting any one person hog the proceedings.

The program opens with a grand orchestral overture of the appropriate "I'm So Glad I'm Standing Here Today." On the original recording (the recent Crusaders LP *Standing Tall*) this was sung by the gravelly-voiced Joe Cocker; the



melody is sweet enough to make its transition to an orchestral reading with no problem. The overture is only the first of the seven Joe Sample/Wilton Jennings compositions which dominate the set, including the fabulous "Street Life," which was a hit for Randy Crawford and which is delivered here in gutsy style by Josie James, who shares vocal lead on the tune with B.B. Two other tunes are by Sample himself; one is a teamup of Hooper and Jennings; and the only truly outside tune is B.B.'s famous "The Thrill Is Gone," credited to R. Hawkins and R. Darnell.

Following the overture is "One Day I'll Fly Away," with Felder's sax predominating, and then Sample takes to the grand piano for the lead on his own "Fly with Wings of Love."

Side two leads off with Josie James's

Off the Record

vocal on "Burnin' Up the Carnival," with guest guitarists Barry Finnerty and David T. Walker (James Jamerson guests on bass throughout) laying down a sprightly George Benson groove; and then Sample leads again (and again on his own tune) on "Last Call."

Side three sees B.B. working out on "Thrill," followed up with the snappy "Better Not Look Down" and the romantic "Hold On." "Street Life," probably the hottest tune in the collection, ignites side four, which then closes out with two encore numbers, "I Just Can't Leave Your Love Alone," and "Never Make A Move Too Soon."

Christmas is still a few months away, but if you want to lay aside a few gifts early, and if you're the sort who might give a bottle of Chivas but are looking for something different this year, try "Royal Jam." Your friends will thank you; they could drink in all of this and still drive home safely.

—Jack McDonough



RICKY SKAGGS Highways and Heartaches Epic FE 37996

Produced by Ricky Skaggs; recorded at Audio Media Recorders, Nashville; engineered by Marshall Morgan with Pat McMakin and Hollis Halford; mastered by Glenn Meadows at Masterfonics, Nashville.

Ricky Skaggs has all the bases covered. A former mainstay of the bluegrass circuit and cum laude graduate of Emmylou Harris' Hot Band, Skaggs still enjoys the praise of "hip" critics and traditional music purists. But the days of small label obscurity have been left behind as Skaggs' first Epic LP camps at the top of the mainstream country charts while spinning off no fewer than four hit singles. A few months back Skaggs realized a lifelong dream when he was inducted into the ranks of Grand Ole Opry regulars. Ricky Skaggs, as they say, is on a roll.

His new LP, *Highways and Heartaches*, is not likely to break the momentum. By following the same basic recipe as the last time out—same studio, same engineer, many of the same pickers—Skaggs comes up with a sound

and a mixture of tunes virtually interchangeable with those on his last album. If you liked *Waiting for the Sun to Shine*—and how could you not like it?—you'll feel right at home with *H&H*.

First, a round of applause for the studio, engineer Morgan, and Skaggs' impeccable production style. Skaggs is a purist when it comes to the sound of his beloved acoustic instruments, yet he uses close miking with touches of reverb to maximum advantage: everything sounds better than you'll ever hear it live in concert. Have you ever heard a hot bluegrass band in a small kitchen? That's the sound Skaggs & company achieve here, only with some amplification and drums added for extra punch.

Next, another round of back slaps and "mighty fines" to all the musicians involved. With "Picky Ricky" in command of Nashville's elite, you can be sure that not one sloppy lick will be found half-buried in the mix. London transplant Ray Flacke can take a bow for some greased lightning chicken-pickin' guitar, and Joe Osborne's imaginative loping on bass underscores his mastery of that axe. With Buck White on piano, Jerry Douglas on dobro, Bruce Bouton and Lloyd Green on pedal steel, Bobby Hicks on fiddle, and Ricky himself filling loose spots with guitar and mandolin—well, there's no shortage of raw talent on this disk.

Add to that Skaggs' full-bodied tenor voice. When Skaggs sings like he means it—as he does, for example, on Bill Monroe's classic "Can't You Hear Me Calling"—there's no better vehicle in the business for purity, emotion, and exquisitely controlled lungpower.

Alas, on all but one of the heartbreak ballads, it seems like Skaggs just doesn't feel it. Maybe it's his happy marriage, maybe it's one too many takes on the overdub, maybe—in some cases undoubtedly—it's uninspiring material. The depth, texture and intensity that sustained all the slow tunes on the previous LP are too often absent here.

Does that mean Skaggs won't get four hit singles off this album? Not necessarily. When Ricky and friends hit their stride on the five (at least) to seven (more generous) winners, there's no better pickin' to be found for those times when you feel like rompin' and stompin' and feelin' good about your feelings. Even at full list price, *Highways and Heartaches* is cheaper than an hour with your shrink. Do ya better, too.

—Sam Borgerson

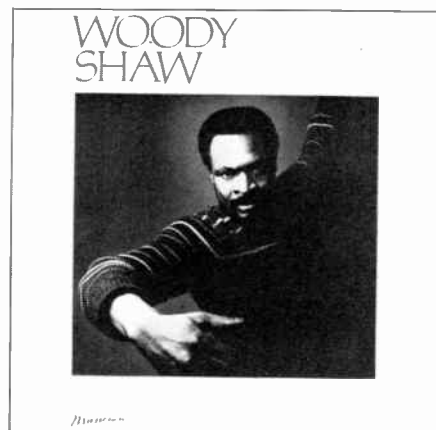
MASTER OF THE ART Woody Shaw Musician E1-60131

Produced by Michael Cuscuna; engineered by Malcolm Addey, with Rob Berman; remote recording and mixing facilities by Malcolm Addey Records.

As the new Elektra/Musician catalogue hit my doorstep, I spotted an instantly appealing matchup—Bobby Hutcherson featured on Woody Shaw's *Master of the Art*. My expectations were rewarded with an album alternately hot and cool, and always accessible.

Hutcherson and Shaw were contemporaries in Eric Dolphy's quintet in 1963, and played together quite a bit in the early Seventies. Hutcherson's vibes round out the already-warm sound of Shaw's band, a unit that showcases some

bright young jazz faces. Trombonist Steve Turre threatens to steal this show several times. His solos are remarkably in tune and time—his rhythmic phrasing is impeccable as he pushes tunes along with percussive and melodic bursts. The trombone and trumpet blend into one rich voice on the melody to "400 Years Ago 'I'morrow," yet when playing separately they plunge into altogether different tonal areas. The Walter Davis



composition switches back and forth between a Blakey-ish latin feel and up-tempo swing. Shaw's trumpet comes growling out of the chute fluttering fascinating phrases with apparent ease, as the rhythm section heats up. Hutcherson's radar-guided hands start flying, and look out! the joint is jumping. Oh yes, young pianist Mulgrew Miller takes good care of the considerable space he's offered. Perhaps Shaw hears a little of two of his preferred players, Bud Powell and McCoy Tyner, in Miller.

"Diane," and (Monk's) "Mysterioso," are lyrical and simplistic pieces that take on magical ways when played by this sure-minded band. Both tunes get deep into the blues. Turre's solo on "Mysterioso" is a striking bit of communication, though it may not be fair to single out any one of the solos on the song. Shaw's composition, "Sweet Love of Mine," closes out the music on a high note, with the trumpeter blowing a clear ringing shower of notes over drummer Tony Reedus' most bombastic playing of the date. Reedus, at 22, shows talent and sensitivity, and he has to be getting better just from playing with a group of this calibre.

Excerpts from an interview with Shaw close the record. The talk never gets too deep, but shows Shaw as caring about his music and musicians. This set was recorded before an audience at The Jazz Forum in New York. Nothing is missing on the clean recording—there is crispness and excellent dynamic range from Reedus' cymbal work to the lowermost contrabass pinings of Stafford James.

—Robin Tolleson

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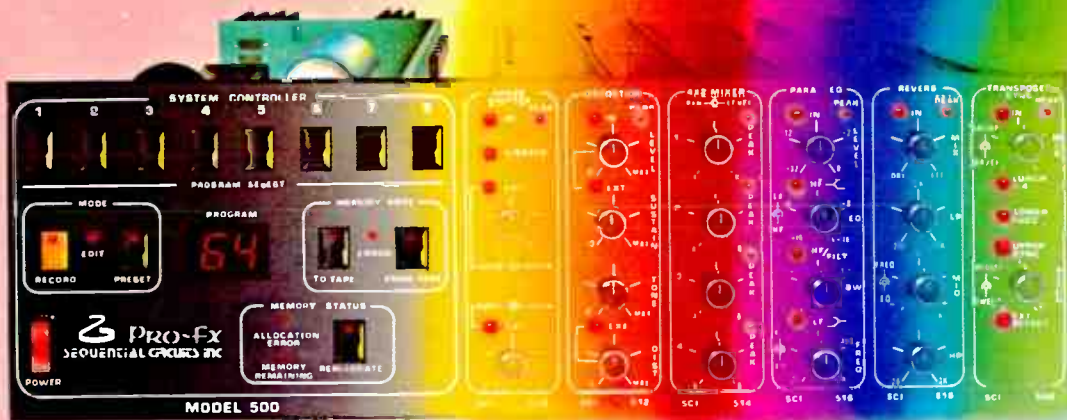
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