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THE RECORDING INDUSTRY MAGAZINE

Mix

Fantasia's New Digital Soundtrack



Listings:
Southwest Studios
Special Report:
Digital Recording

REPORT
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RECORDING...
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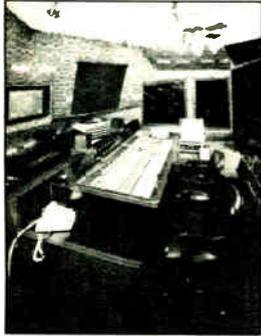
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Photo by:
Skip Nall.

VOLUME SIX, NUMBER FIVE

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INSIDE

Some people swear by digital recording. Others swear at it. In truth, it is still a very young technique with a lot of growing to do. Many demonstrations have shown various levels of superiority to analog recording, however analog techniques have also improved since digital came on line.

We have devoted a good chunk of this issue to the idea of digital recording. We don't mean to imply that digital is the answer to the industry's problems or that it is the only way to go technologically. What we mean is that it deserves your attention if you are serious about recording. The more experience you have with digital, the better your understanding will be, and you will be able to give the manufacturers informed feedback so that they can produce better products.

Sure digital is expensive now—but the price will come down as the usage goes up. Those who can afford to experiment with digital now will be the first to learn, and will be able to contribute valuably to its improvements.

Also in this issue we take a look at the refreshingly healthy recording scene in the Southwest, its studios and a few of its key personalities. ■

TRACKS

Coming next month:

- Concert Sound & Remote Recording
plus
- Bones Howe Interview
- Kenny Rogers' Studio
- Keyboard Player Profiles
- Drum Synthesizers

Dear Mix,

I am forced to take exception to your article *Diversification Alternatives for the Small Studio* on pages 14 and 15 of the February, 1982 *Mix*. Some of the items covered, especially the latter part covering retailing, are a good part of the reason a number of studios in this country are in the problem they are in.

It is very difficult for a studio to offer equipment for sale with the level of service or the variety of selection that is standard practice for the specializing retailer. I know of a case where a studio owner agreed to supply all of the necessary equipment for two potential studio owners. When I showed up on the scene I found many tragic mistakes that very likely would have been avoided had they gone to a professional audio dealer in the first place.

These "mistakes" cost my clients at least \$200,000 in false equipment purchases and lost revenues. This is, basically, the fault of a studio owner—who shall go unnamed—and several manufacturers. Sure, he moved product for them, but he also won them and himself a bad name in doing so.

No major manufacturer should sell their wares through a studio. Their reputation is too hard won. If this is the road that *Mix* is going to travel, Hy James will not be supporting it with advertising revenues. Sorry, but I have a few principles I must live up to.

Sincerely,
Henry J. Root
Hy James
Ann Arbor, MI

Dear Mix,

Just a short note to thank you for the continuing usefulness of your magazine. Please have the appropriate department note our new change of address.

In addition, I personally wanted to thank Mr. Bonzai for his contribution. He consistently sneaks in some important concepts in so non-threatening ways, and in so doing, gets across some information that would be lost in a straight article. I consider him the Doonesbury of this field!

Yours for sound health,
Steven Halpern
Halpern Sounds, Records & Tapes
Belmont, CA



Dear Mix,

We were burglarized on March 3 and lost a lot of equipment including a Walker A/V Engineering mixer in a black road case, Yamaha PM-1000 mixer, TEAC A 3340 S and various other pieces. We are not necessarily interested in prosecution, we just want to get our equipment back. We are offering a five thousand dollar reward for information leading to the return of this equipment. Anyone interested can call (714) 592-2848 anytime.

Filament Pro Audio
San Dimas, CA

Dear Mix,

Please keep your magazine coming, non-stop. I keep my back issues with other comparable papers: the deed to the house, car title, furnace warranty. An exception is the copy under the bed (on my side) that serves as a bridge from daydreams to state of the art night fantasies. Thanks for your hard work in putting out such an important trade magazine.

Ben Pietsch
Manager/Cheryl Peach
Crownsville, MD

Dear Mix,

I very much enjoyed your feature on Les Paul. However, I felt that several of the statements regarding his guitar designs were misleading. Gibson's Les Paul guitars were not patterned after "the Log." As the photo in your story illustrates, the body of the Log consisted of a solid core, along with pieces from a standard hollow arch-top guitar stuck on the sides for cosmetic purposes. The bodies of the Gibson Les Paul models, however, were completely solid and thus differed in fundamental respects from the Log. The somewhat obscure Les Paul Signature model of 1973 was constructed using a highly modified ES-335 body; since it did have a solid core and hollow sides, I suppose one could argue that it resembled the Log. Today, "Les Paul Guitar" suggests the compact, all-solid type of construction.

Sincerely,
Tom Wheeler
Editor
Guitar Player

THANKS!

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for using our digital recording systems in the
production of their commercials.

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CURRENT

SPARS/Manufacturers L.A. Digital Push

The most cohesive project to date in promoting digital recording was presented by the Society of Professional Audio Recording Studios (SPARS) and major manufacturers of digital equipment. Representatives from IVC, Mitsubishi, Sony, Soundstream and 3M displayed, discussed and debated their roles in the ongoing digital revolution, at the March 27 session held in Hollywood's United Western Recording Studios. Also featured and demonstrated were the soon to be released Compact Disc playback unit and software, as well as Polygram's new proposed packaging design for mass merchandising worldwide. An audience of nearly 200 studio owners and guests from around the country participated in the digital pep session.

The following day, a condensed version of the program was incorporated into the National Association of Record Merchandisers (NARM) Convention, across town at the Century Plaza Plitt Theatre. The somewhat larger audience of record merchandisers were shown how the new technology would soon enter their business

worlds and were advised how to make the most of the new opportunities.

Both events were reinforced with the manufacturers' and users' desires not to pursue a standards stalemate, but rather to promote careful and steady progress toward the most efficient and logical formats.

Other specific presentations at the United Western conference included "International Distribution of Tapes and Archival Storage and Improvement" by Larry Boden, IVC Cutting Center; "DAD Improvements in Defense Against Piracy/Consumer Taping" by Lou Dollenger, Mitsubishi; "Digital Broadcast Requirements and How This Relates to Signal Processing" by Tore Nordahl, Rupert Neve, "Revitalization of Old Catalogue Releases in a Digital Format and Sales of Old Catalogue" by Rick Plushner, Sony; "Digital Editing of Music and its Advantages over Analog" by Dr. Tom Stockham, Soundstream; and "Film and Music Soundtracks, TV/Radio Commercials, Audio Visual and Video Applications" by Clark Duffay, 3M.

CBS To Close Nashville Studios

Studio Manager, Norm Anderson, has confirmed reports that CBS is going to close its Nashville Studios. A closing date of June 30 has been set. The decision to shut down the facilities was made in New York. "CBS has just decided to get out of the studio business," said Anderson.

Included in the shut down, along with the 3 studios in the complex are the disk mastering rooms. Studio A is very modern in its design and equipment, while Studio B was built in the 50's by Owen Bradley. The Quonset Hut, as it is called, was the sight of the beginning of the "Nashville Sound." Its ambience and the sound of its totally custom board are still used by those seeking to capture the quintessence of early Country and Western music.

The shut down will mean the end of union staff studios in Nashville. CBS is helping to locate other positions for the 10 I.B.E.W. members losing their employment in Nashville. The equipment from the complex will be absorbed by CBS's last remaining American studio in New York and by its international operations. The studio space will be converted to offices.

—Chris Haseleu

CEO Update

As reported in the April *Current*, the California State Board of Equalization has begun auditing independent producers, engineers, production companies and recording studios in pursuit of retroactive sales tax on their services. The State's actions are based on new interpretations of existing regulations, and in some cases assessments reach back to 1974 — tax plus penalties plus interest.

The California Entertainment Organization was formed to share information and seek some form of legislative or administrative relief from what is seen as a threat to the future of the record business, and possibly other creative industries, in California.

"Things are moving quickly," said Jerry Jacob, a CEO Board member and VP. "Over 300 people have signed up, pledging financial support and/or paid dues so far. Meetings have been well-attended, especially in Southern California (where the bulk of the audits so far have been taking place). The record companies are beginning to show active interest, and several business managers and artists have joined up—and other creative businesses in the State are getting involved, too."

A "very strong" lobbying organization has been retained, says Jacob. "Legislation is being drafted

notes...

After months of negotiations, **Bill Allen**, **David Rettig** and **Bob Rodgers**, three long-time employees of **MICMIX Audio Products** have purchased the corporation from the widow of former owner **John R. Saul**, who died last year... **Drew Serb**, President of **Pro Media** of San Francisco, has appointed **Bob Huseman**, formerly of **Ampex**, as the director of Sales and Engineering for their Turn-key Contracting Division... **Terry Woodford**, chairman of the **Alabama Music Hall of Fame**, has received a \$25,000 donation towards building a permanent facility to honor recording artists from the state... **M. Travis Ludwig**, formerly of **Electro-Voice**, has joined **Shure Brothers Inc.**, as their new Technical Coordinator, distributor microphone products... A three-day symposium on the music and recording industry in the midwest has been slated for July 25-27 in Chicago. Contact the **Midwest Music Exchange**, 704 North Wells St., Chicago, IL 60610, for information... **Dr. Ray Williams**, Director of Marketing for **Coast Wholesale Music**, has been named Director of Education and Marketing Services for **NAMM**, (National Association of Music Merchants)... **Chris Ware** has been appointed Sales Engineer to head the new Dallas office of **Studer Revox America**... **Dynasty Records and Video Tapes** has expanded and relocated to a new facility at 8625 Santa Monica Blvd., Los Angeles, CA 90048. Their phone numbers remain the same... **Bill Gavin**, publisher of **The Gavin Report**, gave a recent lecture on the radio and record industries to a packed audience at the **College for Recording Arts** in San Francisco.

Correction: In our April Video Focus issue, we inadvertently left a studio out of the listings: Under the category Recording Studio Specializing in Video Sync:

VIDEO TRACKS

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(212) 944-7920,

Contact: Craig Pitcairn.

that will eliminate the sales tax on personal services in California." This principle is seen as the crux of the matter where independent engineers and producers are concerned—that recording engineers are providing services, not participating in the fabrication of tangible property, as the State claims.

An informational booklet explaining what to do "When The State Board of EQ Contacts You" has been prepared and is being distributed to paid members of the CEO. For more information, contact Jane Wolf Eldridge, Executive Director, California Entertainment Organization, P.O. Box 512, Van Nuys, CA 91408, (213) 906-2080.

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NORTHEAST

At **Trod Nossel** in Wallingford, CT, *Overture* did a booking demo of cover tunes and also cut two originals. **Rachel Rashba** recorded several operatic songs for her personal demo tape. **Stan Janiak** continues to work on his two-song project.

Having recently completed the just released **Simon & Garfunkel** "Concert In The Park" album and HBO Special, **Soundmixers Studios** of New York reports heavy Jazz activity: Studio A and engineer **Ed Trabanco** hosted a new series of Concord Jazz albums, featuring artists **Stan Getz**, **Scott Hamilton**, **James Williams** and **Warren Vache**. Sidemen included **Billy Higgins**, **Mark Johnson** and **Buster Williams**. **Carl Jefferson** was producer.

Le Studio, Morin Heights, Quebec, doing well with the top charted **Police** and **Rush** albums recorded there in 1981, **Richie Blackmore's** Rainbow sessions during November, December 1981 and January 1982, **April Wine** and **Rush** again booked in for recordings February through June 1982.

NORTH CENTRAL

In the studio at **Sound Room East**, in East Detroit, MI, is **Roger Troutman** completing overdubs and mixing his new album and producing **ZAPP's** new album. Engineering by **Greg Reilly** and **John Jaszcz**. Also in the studio is **Nikki Corvette** working on her latest. **Beau Williams** and **John Jaszcz** co-producing with **Nikki** and **Peter James**, guitarist and leader of the **Corvettes**.

Recording activity at **Atom Smashers Unlimited Studio** in Ferndale, MI includes the following independently produced projects with **John Annesser** at the board. **The Anderson Family** with **Kim Anderson** of Ferndale, MI and **Brian Anderson** out of Tennessee. **Bill Standley** of Birmingham, MI doing a self produced project. **Tim Quinn** for the Michigan Solar Energy Coalition with **John Annesser** co-producing.

Pinebrook Recording Studios in Alexandria, IN, was involved in seven projects recently nominated for the Gospel Music Association's 1982 Dove Awards. Winners included: "Kids Under Construction," Paragon Records—**Bob McKenzie/Ron Huff**, producers; "The Love Story," New Dawn Records—**Phil Brower/Don Wyrzten**, producers.

At **Jeu-Bohn Productions** in Grosse Point, MI, Pittsburg artist **Turk** is in working on an upcoming album. **Ken Scribner** former guitarist for the Rock Bottom Band and the Detroit Kids is working on a single to be released. Engineering and production by **John Jaszcz** and **Beau Williams** with assistance from **Taras Fedak**.

At **Counterpart Studios** in Cincinnati, OH, a new Dayton project for EMI Liberty Records, **Rahni Harris**, **Shawn Sandrige**, producing with executive producer **Ted Courrier**.

SOUTHEAST

Current studio activity at **Music City Music Hall** in Nashville, TN includes, honky tonkers **Gary Stewart** and **Dean Dillon** finishing up a duet album for RCA with **Eddie Kilroy** producing and **Bill Harris** engineering.

At **Bullet Recording** in Nashville, TN, producer/engineer **Kurt Kinzel** mixing album project for A&M Record's group **Trace**. Producer **Mike Hollandsworth** producing demos for **Dick James Music**.

Concluding over-dubs and a master track check at **Telstar Recording Studios** in Sarasota, FL, producer **Rocky Rothwell** is gearing up for the mixes of the **Michael Dickson** EP, "Get Away." Engineering credit goes to **Bud Snyder** and **Rothwell**.

Royal Shield's River City Recorders in Baton Rouge, LA, just completed projects for noted jazz artist **Alvin Batiste**. His original material was engineered by **Bob Cole**.

Woodland Sound Studios in Nashville, TN, has been the scene of the pre-recording for the television show "Makin' It, With Cheryl & Friends." **Cheryl Prewitt**, Miss America of 1980 is starring in the production along with her friends who include **David Soul**, **Ben Vereen** and the **Andrus Blackwood Gospel Singers**. **Cheryl**, **Ben Vereen** and **David Soul** were all in the studio tracking their parts.

NORTHWEST

At **Russian Hill Recording** in San Francisco, CA, **Lou Rawls** was in working with producer **Ed Bogas** for the upcoming "Garfield the Cat" TV special and album. **Jack Leahy** engineered, with **Jeff Kliment** assisting.

At **Mountain Ears Recording** in Boulder, CO, the **JOXX** are finishing their premier LP. The album is co-produced by **John Aldridge** and the **JOXX** with post-production and mixing done by **Jim Mason**.

At **Hyde Street Studios** in San Francisco, CA, "Little Roger" **Clark** and **Dick Bright** have completed their first album for independent release with **Richard Van Dorn** and **Mark Wallner** engineering in studios A and C.

At **Madman Studios** in Berkeley, CA, **Grant Baldwin** is currently finishing tracks for his upcoming debut album. The project is being produced by **N. Jay Yound** and engineered by **Bill Thompson**.

SOUTHERN CAL.

At **Dalton Recorders**, in Santa Monica, CA, a **Lou Grant** episode, "Jazz," featuring **Robert Walden** was filmed here for MTM Productions and CBS Television. **The Lost Angels** wrapping up their single, "Steppin' Out." **Dirk Dalton** co-

producing with **Scott Ardinger**, **Dalton** at the board.

At **Larrabee Sound** in Los Angeles, CA, currently mixing their new album for CBS International Records is the act **Heatwave**. Producing is **Barry Blue**. Engineer **Pete Walsh** at the SSL along with **Judy Clapp** assisting.

At **City Recorders**, in Hollywood, CA, **Stevie Wonder** laying down harmonica solos on tracks for **Thunderflash** debut LP entitled, "Taken-em By Storm." Produced by **Thunderflash** for **Jam Power Productions**. **Lonny Kelem** engineer, **Armondo Quinones** assistant engineer.

At **Piper Recording Studio** in Carson, CA, the country-rock group **California Express** completed an album project featuring famous country-western star **Tex Williams**. Producing was **Billy Teel** for **Garu Records**. **Allen Kaufman** was the recording and mixdown engineer.

STUDIO NEWS

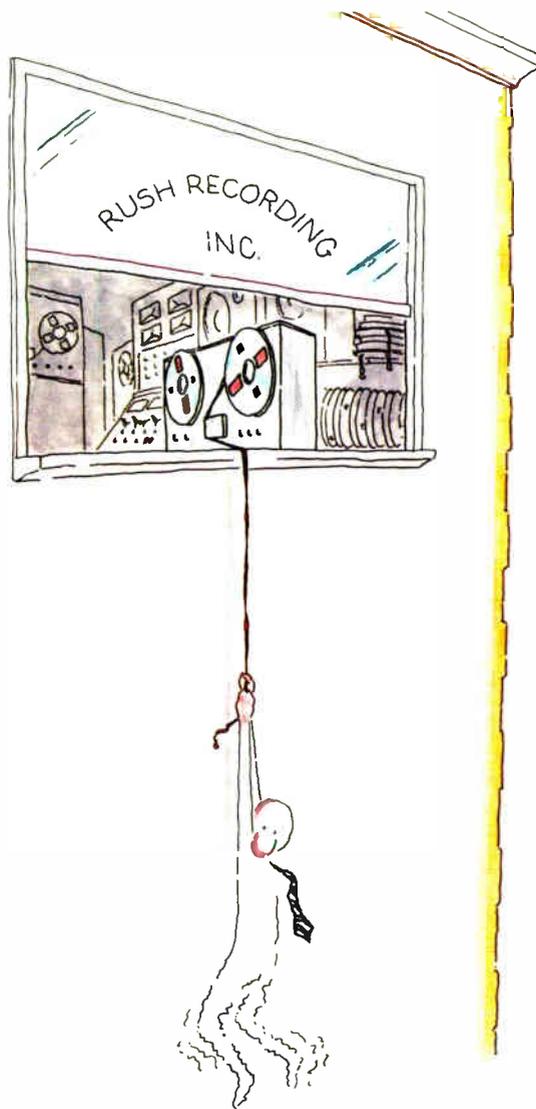
The R.I.M. Sound Studio at Middle Tennessee State University is pleased to announce a major upgrading of its facilities. To help make better music, a new **Yamaha C-5** grand piano has been purchased for the studio. To increase recording quality, a new **MCI JH 24-16** with **MCI Autolocator III** has been installed by **MCI Southeast**. To help keep it all up and running, the shop has received a test equipment package featuring the new **Tektronix 2213 Oscilloscope**, a **B&K** precision frequency counter, and a **B&K** precision signal generator.

Heavenly Recording Studios in Sacramento, CA, has moved into their new **Jack Edwards** designed facility. The control room features a **Quad-Eight Pacifica** console feeding an **MCI JH-16 24** track machine and two **MCI JH-110-B 2** track machines. The new **UREI 6500** power amp drives **UREI 813-A**, **JBL 4311**, and **Auratone** monitors.

Tom T. Hall's Toybox Studio in Brentwood, TN, has recently upgraded from 16 to 24 tracks with the purchase of a new **Studer A80VU** multi-track recorder and a **Harrison MR-3** console. Other equipment added includes a **Studer A-80 2** track, a **Revox PR99 2** track, **Lexicon 224** digital reverb, and a rack of **Rebis** signal processing devices.

Larry Emerine, studio manager for **Studio 55** is pleased to announce the addition of **Roman Olearczuk** to the technical staff. Previously, for the past 4 years, **Roman** served as technical director at **Rusk Sound Studios** in Hollywood.

Mobius Music Recording in San Francisco, CA, has recently upgraded their facilities with the installation of an **MCI 24/16** track with **Autolocator III**. In addition the studio features an **Auditronics** console, **MCI** two track, **Lexicon** reverb, various outboard equipment and an extensive microphone selection including **Neumann** tube.



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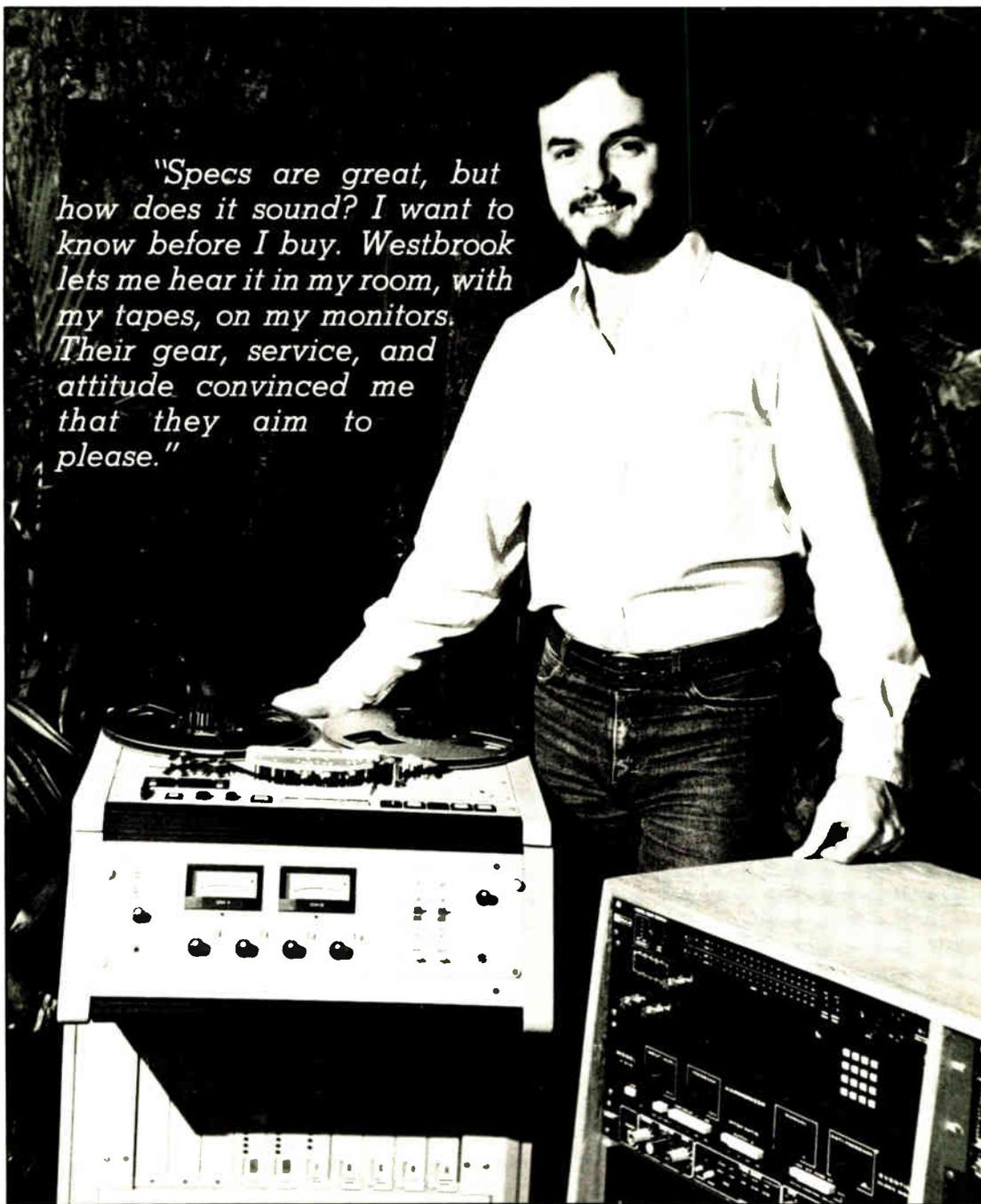
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Brian Tankersley, Chief Engineer of Rivendell Recorders and staff Producer for StarSong Records, Houston, Texas.

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by Dennis Buss
and Chris Haseleu

1982 is definitely going to be Quarterflash's year. Considering their accomplishments so far, the group's success appears to be inevitable. Not only were they able to land a recording contract with one of the country's most successful new labels, Geffen Records (John Lennon, Donna Summer, Sammy Hagar), they were also able to acquire the services of industry veteran John Boylan to produce their first album. The group's first single release, "Harden My Heart," went top 10 and has remained on the charts for over twenty-five weeks. Their latest single, "Find Another Fool," went top 40 in just five weeks. Add to these achievements Quarterflash's recent successful television and concert tours and it's easy to see they have already come a long way for a relatively new recording act.

However, possibly one of the group's greatest accomplishments is not so obvious. Quarterflash has been able to achieve their current level of success from a very contrasting background. Just two years ago, the group was performing primarily in clubs around Portland, Oregon under the name of "Seafood Mama." So how does a club act from a non-music industry city accomplish what Quarterflash has done in just two years?

"Having a good organizational structure has played an extremely important part of the history of Quarterflash," says Marv Ross—the group's leader, primary songwriter and guitar player. "If we had a certain goal in mind, we could usually accomplish it—with a little work." Ross also attributes the early success of the group, when it was known as Seafood Mama, to a good organization: "Our initial goal was to make a comfortable living playing clubs." This goal was achieved within two years of the formation of the band.

Initially, Marv and the group's singer/saxophonist, Rindy Ross (Marv's wife), managed the act. In early 1979, they were ready for the next level—to try to make it as a recording entity. At this point, Rindy realized they needed help in managing the group's organizational structure. In October of 1979, a personal management contract was signed with J. Isaac, a local attorney and manager of other Northwest acts. When asked what his role as manager consists of, Isaac comments, "The basic functions of a personal manager in rock



Brian David Willis, Marv Ross, Rindy Ross, Jack Charles, Rick DiGiallonardo, Rich Gooch.

QUARTERFLASH

and roll is to see that the artist doesn't have to worry about day-to-day business, and to be an objective viewer of the overall band."

Isaac's objectivity is an integral part of Quarterflash's organization in that it allows for the development and achievement of the group's goals. Once the objective of landing a recording contract was established, changes in the act were needed; a greater emphasis on original music with a rock style (they were performing a variety of styles in the various clubs), featuring Rindy's vocals more, and showcasing Rindy's saxophone more often. Isaac helped accomplish these by being able to view the group "from the outside" and make the needed suggestions, which helped develop a single direction for Quarterflash.

Once the sound and identity of the band were established, three additional goals were identified: 1). Make the group a regional success—not just a Portland, Oregon act, 2). Establish the

group as a serious entity by having it featured on a television show, and, 3). Release a self-produced 45 RPM record to begin establishing the act as a recording group. The band's organization accomplished all three—which ultimately created the momentum that lead into the Geffen Records contract.

Another aspect of a good, well run organization is its ability to understand the marketplace. In writing and developing the songs for Quarterflash, Marv tries to think of the needs of the record buying public. He also feels that any new act must understand how radio works—what it takes to get airplay and how to keep a song's momentum going.

Marv Ross says that other new acts should acknowledge that, "A lot of times when a record label is considering signing an artist they look at the act to see if they are organized, and if there's solidarity within the organization."

Judging by Quarterflash's track record, this is good advice. ■

Fantasia



New Digital Soundtrack for an Old Favorite

by Patrick Maloney

In late 1981 Walt Disney Production executives decided to re-record the "Fantasia" soundtrack using the latest state-of-the-art digital sound technology. The original 1938 soundtrack, which was recorded on nitrate stock, was showing signs of deterioration. Furthermore, they felt that the original "Fantasound" stereo effect was not up to today's standards of sound reproduction. After all, "Fantasia" had always been billed as the 'Ultimate in Sight and Sound' and the sound quality suffered in comparison with what they considered to be the still-revolutionary quality of the animation.

So a crack team of engineers from Disney and CBS were assembled to put together the first digitally recorded film score in the history of motion pictures. Two-time Academy Award winner Irwin Kostel (The Sound of Music, West Side Story) was called in to conduct the original music using an orchestra composed of 125 hand-picked studio musicians.

Not only was Stokowski's original music track replaced, but there were other changes as well: for instance, the voice of onscreen narrator Deams Taylor was removed

and replaced with new narration, as was the voice of Mickey Mouse. You won't hear Stokowski speak either, although you will still see him on screen. In fact all the visuals will be left alone, as it was felt that no improvements were warranted in the film's interpretations of the music of Bach, Beethoven and Tchaikovsky. In fact, the original three strip Technicolor negatives have been preserved in perfect condition and will once again be used to print the new release.

The film score was recorded at the giant soundstage on the CBS lot in Los Angeles instead of at the well-equipped Disney complex since the CBS facility could more easily accommodate the many musicians that were needed for the recording.

Parked next to the soundstage was a well-equipped remote recording truck supplied by Best Audio. Housed inside the truck were two Ampex MM-1200 24 track recorders, an Ampex ATR-104 four track recorder, an ATR-102 two track, racks of processing gear, and a large Sphere recording console operated by veteran CBS audio engineer Sean Murphy. There was no room left in the truck for the two 3M 32 track digital recorders so they were set up

Left: At the conclusion of "The Sorcerer's Apprentice" in Walt Disney's "Fantasia," conductor Leopold Stokowski congratulates Mickey Mouse on his performance in the title role. PHOTO © MCMXL Walt Disney Productions

in a soundproof control room located at the rear of the soundstage. This room also contained CBS's in-house magnetic film recorders.

HEADPHONE CUE SYSTEM & STUDIO MONITORING

The decision to use studio musicians instead of an established orchestra was made for the simple reason that you won't find many symphony musicians who are comfortable performing while wearing headphones and listening to click tracks. The extensive cueing system was also provided by Best Audio and was operated by CBS audio engineer Andy Bass from a position behind the conductor in the soundstage itself.

Seven submaster mixes from the remote truck were routed back through Andy's Yamaha M-1516 monitor console along with the conductor-to-musician talkback mike and various other signals. Bass then sent individually balanced mixes of these input signals to four output channels feeding the string, brass, woodwind, and percussion players. The feed to the string section was further broken down so that each internal group (violins, violas, cello, etc.) had their own amps and volume controls. An additional utility output channel was used wherever it was needed. The day I visited the recording for instance, the utility output was assigned to Lincoln Mayorga who was playing harpsichord on the session and just wanted to hear the strings.

In addition to the wired headphones, one of the percussionists brought in his own *wireless* cueing system. A wireless mic transmitting on the FM band picked up the music cues and click-track and broadcast these signals to the rest of the percussionists who were all wearing Walkman-type FM radios and headphones. They could then race around from instrument to instrument without having to worry about tripping over dangling headphone cords. Clever!

Additionally, the contractor for the musicians had a mike routed through the monitor board so he could inform them of breaks and recording calls. Two more inputs were taken up by the click track and the guide track, i.e. the original Stokowski orchestra recording. Conductor Kostel

had his own stereo headphone mixer which gave him independent control of these click and guide tracks. Any orchestra mix from the monitor board was also available to him at his mixer should he choose to listen to it instead. His normal monitoring mode however, was to listen to the clicks in one ear, the original score in the other and the sound of the live orchestra through leakage around the headphone cushions. Kostel also had an IFB (Interrupt Foldback) in his phones connected to Sean out in the truck so they could communicate privately whenever the need arose.

Another function of the monitor/cueing console was to route the tape playback signal from the truck to speakers in the studio so the conductor and orchestra could listen to the playback of a take. Although virtually any combination of recorded signals were available, a simple stereo recording from two overhead mikes was usually preferred.

For studio playback speakers, Best Audio supplied six of John Meyer's "Ultra-PA" loudspeakers which were divided into two groups of three, coupled to two dual 15" subwoofers, and set up at one end of the soundstage. The conductor, musicians, and engineering staff all seemed quite pleased with the quality and level of the playback sound from these speakers.

RECORD INTERLOCK SYSTEM

One of the most difficult aspects of this recording—an elaborate machine interlock system—was ironically enough, one of the main reasons why the project was possible in the first place. It was realized early on a new system had to be developed which would not only synchronize the new digital soundtrack with the original picture but would also allow the transfer of the new digital information to industry standard analog magnetic reels for editing in the conventional manner. As it turned out, the word 'conventional' was not one that was heard very often once the recording got under way! But the words "SMPTE time-code" were.

Acting as the necessary link between the various recording systems, the broadcast standard SMPTE time-code was first recorded onto a reel of sprocketed magnetic tape and loaded onto a playback machine called a "dummy." Eleven identical rolls were made and set up so that their start marks all coincided with the picture starts on eleven separate film reels. Whenever a reel of film was projected onto the screen in the soundstage, it's companion

SMPTE code roll was played as well. This code was then recorded on a separate track of the same machines that were recording the orchestra playing in sync with the film. So the code acted as a master that synchronized all the record machines for playing back to the picture later on. The machines which received code were the two 3M 32 track digital machines, the 24 track Ampex MM-1200's and the Ampex ATR-104. The synchronizer for the digital machines was a BTX Shadow, while an Ampex EECO-MQS was used to sync up the analog machines. There was also a 3 channel magnetic film recorder which was automatically synchronized since it was run off the same distributor or drive shaft as the SMPTE playback dummy. Also running in sync with the code roll were the click track reels, hand-made to conform with each particular piece of music, and the old music guide tracks that let the conductor listen to the original performances for reference purposes.

In addition to his duties as chief mixing engineer, Sean Murphy was instrumental in developing the sync system from the beginning.

Although many months were spent in the planning stages, Sean admitted that many techniques were made up on the spot. "This type of film score recording had never been done before," he emphasized, "and even though we had a good idea of what needed to be done, we had to constantly adjust as we went along. For instance, one little complication we got into with the digital machines was caused by the fact that they have a speed slewing rate or variation of only plus or minus 10 percent. If they have to go any faster or slower than that to catch up to sync they will not reproduce any sound at all. And if you don't get any output you don't know what the time code is and the whole 'sheebang' stops right there! Therefore you have to park the digital machine very close to the start of the code reel so it only has a second to make up because it can do that in about ten seconds. Film starts are normally twelve feet but the synchronizer needs more time than that. So we backed up all of our starts to 24 feet to compensate for the long

interval it took for the digital machine to lock in sync." All the analog machines got up to sync in 4 or 5 seconds so they were not a problem.

The picture that was shown in sync with all these sound rolls during recording was a black and white work print, or copy of the original, which had punches and streamers on it. "Punches" are holes that are physically hand punched in the work print to indicate a downbeat, a measure, a sound effect, or whatever the editor wants to show. "Streamers" are three foot long lines leading up to a punch that are drawn directly on the film with a grease pencil in a diagonal manner so that a moving vertical line is projected on the screen. When this line reaches the



PHOTO © MCM.LXXXII Walt Disney Productions World Rights Reserved.

Kostel conducts the 125-piece orchestra for the rerecording of the "Fantasia" soundtrack.

extreme right side of the picture, the conductor knows to expect a punch at that point. As a further aid—and one needs all the help one can get on a project like this!—click track numbers were written directly on the work print and flashed on the screen with every beat. How anyone can be expected to create a work of art by listening to click tracks of varying tempos in one ear (Stokowski was known to take considerable liberty with the composers' tempo indications!), monitoring a completely different orchestra being led by another conductor in the other ear, hearing the live sound of 125 musicians through headphone leakage into both, and all the time trying to conduct while watching a black and white picture that has holes punched in it, lines traveling across it, and numbers written all over it is beyond

me! It is to conductor Irwin Kostel's credit that he pulled it all off with such consummate skill and artistry.

Also on hand at the sessions was Keith Johnson and his custom-built three channel FM analog recorder. At the suggestion of Lincoln Mayorga, Keith was making a separate recording for the Disney archives utilizing three omnidirectional microphones. As if there weren't enough recorders already, a Soundstream four track digital machine was used to record three tracks of audio and one code track for later record release. According to Sean, "Soundstream got their feeds from three separate mikes that we set up with the intention of later replacing these tracks with the final film mix."

New dialogue was also recorded digitally using Sony equipment and it was later duped to the 3M system. So all in all, three different digital recording systems were utilized. At least they can't be accused of playing favorites.

FINAL MIXDOWN

The digital mixdown sessions at Evergreen Studios in Burbank, CA were just as complex, if not more so, than the initial recording. As Sean explained it: "First we made transfers of all the good takes from digital onto magnetic film and the mag was then edited to conform to the picture. Since the mag reels also had the code on them you then used the coded edit points to re-assemble the digital master to the picture. The nuts and bolts of how you do it is this: first, transfer the edited mag master back to digital while laying down new time code on the reel starting at your 24' start mark. Then go through and identify every edit on that reel by means of its time code position using a time code reader. You then transfer digital to digital and build up a new roll that conforms exactly to the magnetic film edit. So you've never gone out of your digital format. The transfer to the mag was, of course, analog for editing purposes but the time code was also transferred and that's what puts the digital tracks back in sync. It's sort of like negative cutting using the edge numbers in film: when you finally cut the real negatives you are just matching all the other cuts that you made earlier on work prints of those negatives. So the SMPTE time code is like an electronic edge number that enables you to identify the exact point to conform the digital edits in order to make them match the finished analog mag track."

All in all, eighteen tracks of various audio components were assembled in this fashion onto one of

the 32 track digital machines. This "dubbing" roll was then used to mix the final product in the dubbing theater. Since Sean only used 18 tracks for his source material and about 5 others for housekeeping functions such as tape lock, time code, etc., he had another 8 or 10 tracks available on which to record new material. What he recorded on those empty tracks was the actual master mix that will be played in the theatres. Herein lies one of the nicer aspects of using digital machines—there is no frequency loss when playing back in the sync mode. You can bounce back and forth in real time to your heart's content without having to worry about increasing noise, leakage, crosstalk, etc. You just print new material on the available tracks in the sync mode. So what you've got is a one machine dub! "For safety sake we are recording it on four tracks of Dolbyized magnetic film as well," Sean added, ever mindful of the dangers involved in forging new frontiers through high technology territory!

"We learned something new everyday on this project," Sean told me. "It took quite a while just to become familiar enough with the setup to where we could synchronize everything properly so we could record and playback to the picture. I started working on the movie last summer and the first few sessions forced me to learn a whole new vocabulary. They've tried to make the digital machines operate just like normal analog machines—but they don't! For instance, your headroom situation is entirely different. You don't actually have gradual tape saturation as such—you've either got a usable signal or you don't. You learn to record all your levels much hotter than you normally would on non-transient information and, conversely, you have to be very careful of information with a lot of high frequencies or transients like pianos, percussion, that sort of thing. You can record quite a bit of level with strings, most reeds, and even french horns. But you've got to be very careful with a piano or a xylophone. These instruments run out of space on the digital recorders. Even though you can monitor off the machine you usually won't hear any saturation until it's too late. It's not a gradual build up at all.

"I believe this is the first time any of this has ever been done," Sean said, "so we didn't really know what we were doing in a lot of cases. We tried something one way and if that didn't work we tried something else until it did! All of us working on this project know as much about the

process as anybody right now, but I'm certain that a lot of other people are going to start doing the same thing pretty soon."

When and if they do, they will notice that the trail has already been blazed by the pioneering work of Sean Murphy and the rest of the engineering staff at CBS and Walt Disney Productions. The road may be easier for those who follow but the singular thrill of discovery belongs to those who got there first.

THEATER PLAYBACK SYSTEM

Well, there's good news and there's bad news. First the good: the soundtrack will remain digital all the way through playback in the theatre, thus becoming the first film to be recorded and released in an all-digital format. Now the bad news: according to "Fantasia" publicity director Howard Green, the movie will only be shown in its all-digital glory in selected theaters in New York and Los Angeles. The rest of us will have to be content with a Dolby stereo analog dub of the digital on magnetic film or optical soundtrack.

Since digital playback equipment is not something that's found in even the best equipped theaters these days, Sean described the special playback equipment that will be used in the two all-digital theaters: "A mag tape containing the SMPTE time code will be put up on a dummy machine which is run by the same distributor that controls the speed of the projectors. A time code reader will then read the code off the playback dummy and route it to a synchronizer where it will be locked up to the code already recorded on one track of a four track digital playback machine."

The fact that special equipment will be needed to properly playback the soundtrack in all its high tech glory is nothing new in the continuing saga of this historic film. When it was first released in 1940 with its primitive stereo "Fantasound" soundtrack, it required the installation of \$85,000 worth of projectors and 90 specially designed loudspeakers. Few theaters were willing to make that kind of commitment to audio excellence at the time and today's theater owners aren't all that different. A lot of them feel that sound technology is changing so fast these days that they'll be stuck with an expensive system that's outdated a few months after they get it. No doubt they are more concerned with where to store their 'Sensurround' sub-woofers than they are with installing digital playback equipment.

Still, it would be nice... ■

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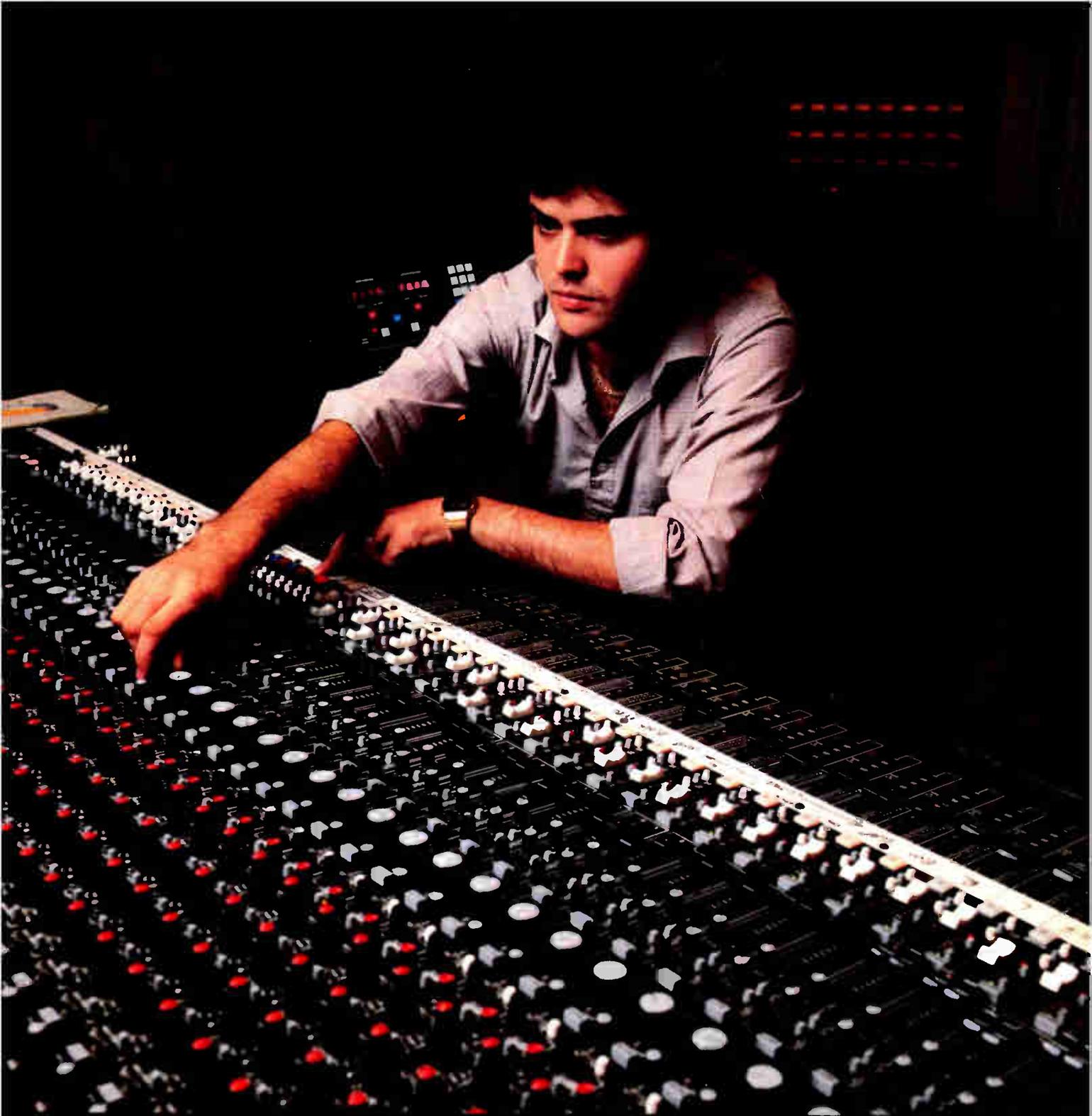
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SPECIAL REPORT:

Digital Recording Update

The 1980's seem destined to be the decade of digital audio. Although digital technology and recording hardware systems have been available for some time now, this coming year promises to be better than ever, for several reasons: First, and most important, is the industry-wide acceptance of the proposed 48 kHz sampling rate standard for PCM recording. Secondly, there are growing numbers of rental companies which make digital equipment available at reasonable rates to producers and studios without a major capital investment. Finally, the long-awaited arrival of home digital playback systems slated for this fall in

Europe and Japan has generated much interest from both consumers and industry professionals alike. (Release of the compact digital disk to the U.S. market is due spring 1983). These digital breakthroughs are welcome news to the music business, which looks forward to cleaner sound, creative flexibility, and cost-efficient production.

We surveyed a number of major digital recording equipment manufacturers to provide you with an update on their current product developments and activities. It is important to note that other companies are also working on digital projects, but have chosen not to release any specific information at this time.

JVC

by **Larry Boden,**
Chief Engineer

A number of significant developments have taken place recently within the JVC digital program. Price reductions on our digital line have averaged over ten percent. We introduced the DS-90, a unit that joins two recording systems in sync for four-channel recording. We have now made our PS-90 unit available, which permits digital to digital transfer of Sony format

tapes to the JVC format. The JVC Cutting Center in Hollywood has installed the CA/CH-90 disk cutting system, the first analog disk mastering system designed for cutting from digital source tapes. The benefits of digital recording such as wider channel separation, lower distortion, and wide dynamic range, tax even the best available disk systems. Our CA/CH-90 system was designed with these criteria in mind.

Our overall digital philosophy remains unchanged: To offer reliable, dropout-free, professional digital equip-

Glenn Meadows
Master Technologies
Nashville, TN

"We now find more demand for our digital mastering... we've got eight or nine charting albums on the JVC digital system. And maintenance problems have been virtually nil."



PHOTO: NIAALE HELLE



*The JVC DHS Series
90 Digital Audio Recording System.*

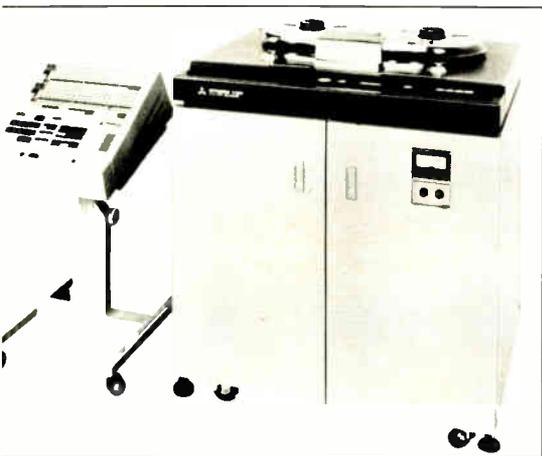
ment that features ease of operation with the highest dependability possible. Our continuing research and product development will stress these points.

Mitsubishi

by **Lou Dollenger,**
National Sales Manager

The most recent developments in professional digital recording at Mitsubishi revolve around three main areas; the formulation of a proposed standard for Professional Digital Audio Recorders sampling rates, the recent addition to our product line of the

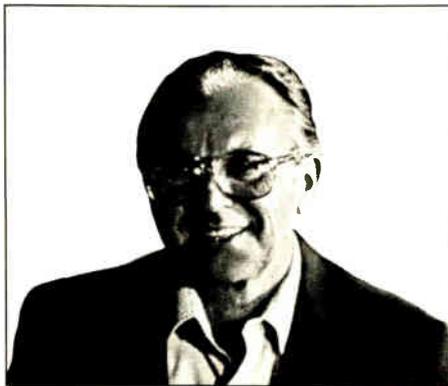
SPECIAL REPORT: Digital Recording Update



Mitsubishi X-800.

X-800 multi-channel recorder and XE-1 Electronic Editing system, and the increased popularity of digital recording on the X-80 recorder by other media.

The Mitsubishi Electric digital audio line consists of the X-80 Portable and X-80A console model two-channel recorders, the DDL-1 Digital Delay



Roy Segal
Fantasy Studios
Berkeley, CA

"The Mitsubishi digital recorders capture the subtle nuances of the artists... an ideal vehicle to showcase our studio and emphasize our engineering talents."

Unit, the XE-1 Electronic Editor, and the X-800 32 channel digital recorder. All of the recorders utilize a fixed-head, open-reel transport system that allows improved tape economy, real-time signal monitoring, highly effective error-correction, SMPTE capability, and in the case of X-80 and X-80A, razor-blade affected electronic editing internally. Along similar lines, all of the equipment now conforms to the proposed standard of 48.00 kHz sampling frequency and offers full 16 bit linear quantization to achieve a signal to noise

ratio and dynamic range characteristics exceeding 90 dB, and a full range of professional digital specifications and features.

With the addition of the XE-1 Editor to our system, we can now offer the option of two editing methods; the razor-blade method and edits performed with the XE-1. In the two channel mode, up to four X-80 Series recorders can be controlled (by their SMPTE code tracks) to provide digital level resetting, the selection of 20 different edit/crossfade durations, auto-

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SPECIAL REPORT: Digital Recording Update



Sony PCM-3324 Digital Audio Multi-channel Recorder.

location and remote control, SMPTE generation, the memorization of a number of take times, and the monitoring of data on a CRT display, or of the edit point waveform on an external oscilloscope. Housed in a desk, the unit includes a keypad, processor, and the television monitor, all of which may be rack-mounted for better convenience. A NiCad battery is provided to allow the storage of data over a period of time or during power failures.

Along the same lines, the X-800 32 channel PCM recorder will also make quite an impact on our digital line. Using one inch tape at a speed of 30 ips, 32 channels of active audio are available at all times—even when weak tape conditions exist. Separate tracks are used for the storage of SMPTE and EBU code data, analog CUE monitoring, and computer-generated mixing or timing data. The precision transport is pinch-rollerless and offers a 1 hour record time on the high-density tape. A remote autolocator is microprocessor-based and allows a variable-speed operation, the use of internal/external SMPTE or other codes, a number of automatic and manual search and punch-in/out functions, and the memorization of up to 100 take-time locations and four complete channel set-ups.

Along with the sampling frequency alterations, we have provided a modification to improve the editing capabilities of the X-80 Series recorders. Here we record an analog track adjacent to the digital data to allow the simple location of sound at other than playback speed. Due to the small gap we use on the ten-track heads on the recorder, the performance of this track was somewhat limited. To improve this

condition we have made available a compander circuit that has made the physical editing chore all the more simple and effective.

The ongoing success of our direct rental program has been evidenced by our involvement in a number of recordings of the pop/jazz variety this past year. As most classical recordings are made digitally today, our efforts have made great penetration into other areas. This movement has served to popularize digital recording methods to a much greater degree than before, and can only serve to support the success of the CompactDisc consumer PCM playback system here next fall.

Sony
by Rick Plushner,
National Sales Manager

We at Sony are convinced that digital audio will have a major impact on the recording industry. At this time, most recording engineers and studio owners have examined Sony's digital recording equipment as well as the equipment offered by other manufac-



John Moran
Digital Services Recording
Houston, TX

"Standardized multitracks will break the digital market wide open. Our Sony multitrack will razor edit and the ability to ping pong tracks ad infinitum with no generation loss will reduce the need for dual machines in many cases."

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Digital Recording Update

turers. Our 2-track mastering system has been in use for three years and we are currently introducing our PCM-3324 digital multi-track. In addition to the showcases at trade shows such as AES, we have conducted our own digital roadshows in Los Angeles, New York and Nashville, where we have taken the equipment into studios for in-depth evaluations of sound quality and reliability. The recording community is now very aware of what digital audio has to offer, and from this position we are expanding that awareness to reach all areas of the recording industry.

The response to Sony's PCM system has been very positive and I have found that a majority of studios would like to purchase digital recording equipment. Unfortunately, because of a poor economy and a general slump in the recording industry, the cost of digital equipment is beyond the means of most studios. In response to this condition, rental companies have sprung up which can offer digital recording to a greater number of artists, producers and studios. This not only increases the amount of digital production, but also provides an excellent way for studios to investigate and take a step in the digital direction. Sony does not rent equipment directly, but we give the same technical support to rental companies

that we give to studios, and in this way we support the client and the digital record projects. A large percentage of



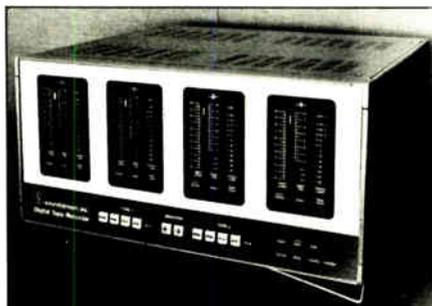
Allen Sides
Ocean Way Recorders
Hollywood, CA

"Of all the machines that I've used, the one that seems to retain the extreme high frequencies the most naturally and the most detailed is the Soundstream. It really seems to come back much closer to what went in."

sales will be to rental companies and to studios which have rental in mind.

In addition to educating the recording community, we are addressing the record companies and producers with the critical advantages of allocating budgets for digital recording. With

(Left) The Soundstream Digital Tape Recorder. (Below) The Soundstream "Instant Access" Digital Editing System.



SPECIAL REPORT: Digital Recording Update

the introduction of digital consumer hardware and software in the next year, the importance of a digital catalogue will be essential. Since the public will have true digital audio in the home, the professional will have to adjust to these new sonic specifications to create a product in the format which the consumer will receive.

The current lineup of Sony digital equipment includes the PCM-1610 2-track processor, the DAE-110 digital audio editor and the BVU-200B videotape recorders for a complete mastering and editing system. Our DRE-2000 digital reverberator has been well received in studios for the past year, and we have also introduced the DDU-1500 series of digital delay/preview units for disc mastering.

Sony's new PCM-3324 24-channel digital audio multi-track offers 24 discreet digital audio channels, two analog tracks, a SMPTE time code track and an internal control track, all on half-inch videotape. The machine has razor blade editing capability, as well as provisions for electronic editing from multi-track to multi-track with an editor which

will be introduced shortly.

We at Sony are attempting to educate artists and producers about digital equipment in general and we want to demonstrate what it can do for them so they can make intelligent decisions for the future. We believe they will purchase Sony digital equipment because they appreciate the quality and features we offer, and are aware of the long-term importance of digital recording.

Soundstream by Roger D. Russell, Director of Operations

Soundstream, in its continuing research and development of digital technology, takes a slightly different perspective of product development. As improvements in performance and reliability are made, much of the engineering effort is focused on the upgrading and overall conformity of all Soundstream's recording and editing systems. This ensures that the users and/or owners of Soundstream's oldest equipment have essentially the same format and specifications as its newest systems.

Soundstream has recently introduced new programming for its Instant Access™ Editing system making it even faster than before. The editor allows unlimited crossfade length and splice points, and these splices can be played in any order, any number of times and incorporated or deleted with a few simple keystrokes. One new feature of the Soundstream editor is its ability to accept direct digital transfers from both 3M and Sony PCM-1610 digital tapes. The clients who have edited their non-Soundstream tapes on the Instant Access™ system have been very pleased with the exceptional speed and ease at which the system works.

The philosophy behind Soundstream has always been to provide the best equipment and engineers available as a "package." Anyone can rent equipment, but the people behind the product—the engineers and editors—are what Soundstream is really about. Every editor is a trained musician, every operator is an engineer. Several Soundstream editors and engineers were up for Grammy's this year.

Soundstream currently has over a dozen digital tape recorders available for rental and others may be ordered for sale or long term lease. Soundstream keeps several systems in both New York/Boston and the Los Angeles areas as well as having machines available in Europe.

Since much of Soundstream's



Studer Prototype 8-channel 1/4" Digital Recorder.

work is in the classical field (which does not lend itself well to in-house, studio recordings) the digital recording systems have been designed with portability in mind.

Soundstream's Instant Access™ editing systems are, unfortunately, not portable, but editing is available in Los Angeles, Salt Lake City and West Germany. If producers are unable to travel to one of these centers, they can send marked scores and the source material to Soundstream for editing. The company calls this "producerless" editing and has done many albums this way.

Studer by B.J. (Sam) Borgerson, Public Relations Department

In the past year, Studer introduced prototype units of two significant new digital audio products.

First, at the 70th AES in New York, Studer demonstrated the SFC-16 Sampling Frequency Converter. This device interchanges digital audio signals of any two systems with sampling rates anywhere in the 30 to 56 kHz range. It operates on the basis of the clock signals received from the systems and therefore requires no programming. The SFC-16 is purely digital, has perfect linear phase, and has ripple of less than 0.15 dB over the audio band. Uses include program transfer between digital recorders, mastering for Compact Disc, digital broadcast distribution, pitch control on digital recorders, and high quality error concealment.

At the 71st AES in Montreux, Studer unveiled a prototype 8-track digital audio recorder using a 16 bit code and 48 kHz sampling frequency on 1/4" tape. The first Studer digital units will undergo extensive field testing be-

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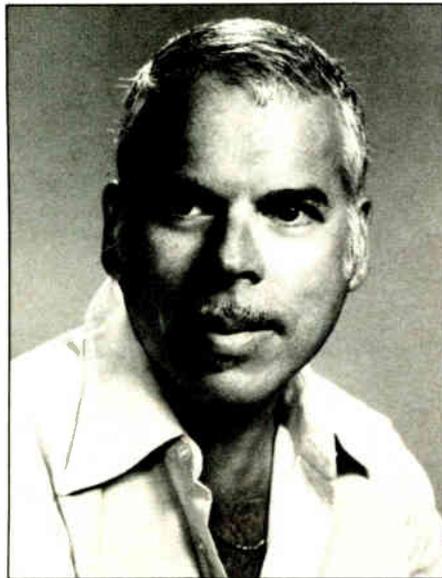
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fore serial production begins.

For several years, Studer has been involved in an extensive program of research and development covering all phases of digital audio. However, the company believes that widespread conversion to the digital audio medium will take place only when it is both technologically and economically practical. Dr. Roger Lagadec, Studer Product Manager for Audio PCM, has stated: "There is no doubt that, when mass produced, even the high technology components (for digital audio) will decrease their costs drastically. Thus, digital audio converters will one day become almost as cheap as the analog circuitry they have to interface with. But there is still a long way to go."

Studer also believes that recent



Murray Allen
Universal Recording
Chicago, IL

"The musicians feel that they're being recorded more accurately... what they do in the studio is what they hear in the control room. In fifteen months we've only had one day that the 3M digital machine was not functioning."

developments in professional analog recording, half-inch two-track mastering in particular, have reduced the incentive necessary to invest in the much costlier digital mastering units.

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SPECIAL REPORT: Digital Recording Update

3M
by **Susan E. Blakely,**
Public Relations
Department

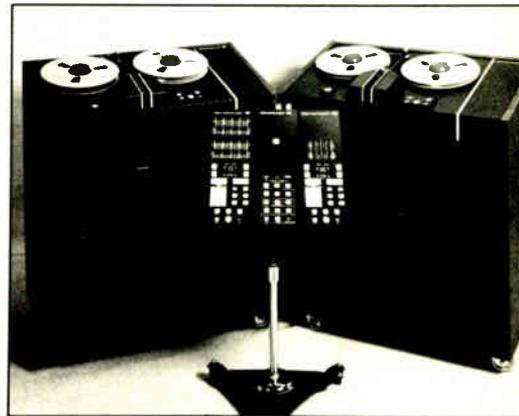
3M is observing a heightened awareness of digital benefits throughout the industry and, therefore, a greater acceptance and demand for digital equipment, particularly over the past six months. Digital is currently enjoying an increased usage in all music formats, spreading applications, more established standards, increasing competition and fewer criticisms. These are all elements of the digital mix that 3M sees as creating a considerable momentum—after a relatively slow beginning—in today's recording market.

Momentum within the industry should pick up as a result of the establishment and general acceptance of a standard for sampling rates. And as 3M has developed the electronics for a switch-selectable sampling frequency—between 50, 48 and 44.1 kHz—all digital masters recorded in the past are allowed playback at the desired rate. Lack of universal sampling rate has not been a major problem in the past for artists as 3M equipment was usually

available worldwide, but with increased demand and the advent of digital consoles, disks and competitive units, this standardization will be advantageous.

Awareness of the benefits and trend toward digital will be increased as more manufacturers support the technology with digital equipment. The ultimate boost is likely to come from the advent of digital home playback equipment—scheduled to begin reaching the consumer yet this year. Labels, producers, artists and studios are becoming anxious to supply the software for tomorrow's home hardware. In fact, they are already being approached on their re-issuance rights for the digital audio disk.

Much of the criticism once attributed to digital technology is now no longer valid. The occasional comment that digital sounds harsher than analog is often recognized as a result of extensive over EQ'ing which is not necessary with the new technology. And there were questions from the start about the practicality of electronic editing, whereas now the benefits of greater precision and creativity are realized. With electronic editing, for example, a recent 28-minute soundtrack received



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N by Ben Hunter Boyett

Norman Petty was much more than the doctor who delivered a baby named Peggy Sue. He was one of her fathers as well. It was his pioneering genius as a musician, engineer and producer for Buddy Holly that developed the sound that is still seen as a benchmark of professional quality. Norman Petty scored hits before and after his all-too-brief period of collaboration with Buddy Holly, but those years will forever be remembered as milestones in the history of rock & roll. Today, at age 54, Petty is quite happy to have life virtually figured out in an electronic and acoustical heaven he has created amid the mooring cattle, throbbing railroads and thundering fighter jets of Clovis, New Mexico.

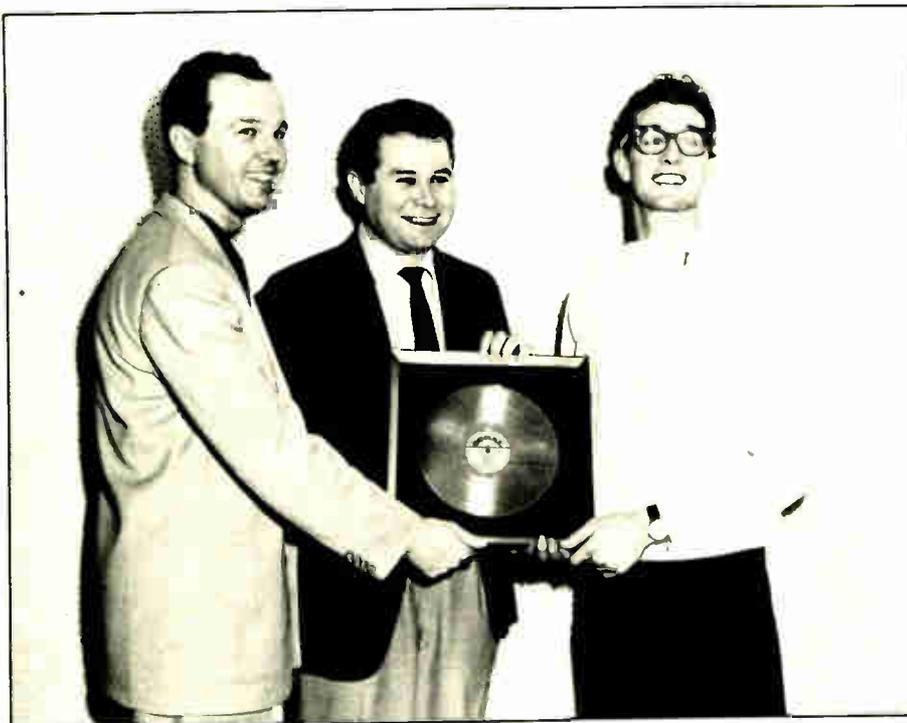
Petty's career in music began early, when he started playing his neighbor's piano in Clovis. "We didn't have a piano of our own," he recalls, "and I think I drove the neighbors crazy." His interest in making records manifested itself early as well. In 1940, at the age of 13, Petty saved up the sum of 89 dollars to make a down payment on a Wilcox-Gay disk cutter. Young Norman turned the Petty's front room into his studio, in which he first recorded campaign pitches for New Mexico politicians.

It was also at about age 13 that Norman began playing piano with adult dance bands. His twin obsessions fed one another: money earned from dance gigs were plowed back into his budding recording business, while the recording business

N O R M A N P E T T Y



(Above) Norman Petty in a recent pose at the controls of his Mesa Theatre Studio and (below at left) with Bob Thiele of Coral Records, presenting a gold record to Buddy Holly for his (78 rpm) record "Peggy Sue" in 1958.



taught him more and more about sound.

After marrying a classically-trained pianist, high school sweetheart Violet Brady, and learning to play the organ during a tour with the Air Force, Petty formed the Norman Petty Trio. Featuring Norman on Hammond, Vi on piano, and, at different times, a guitarist and a drummer, the Trio played the nation's finest ballrooms in the late Forties and early Fifties. For nine years on the road, their trademark was an amplified, crystal clear, lushly balanced sound. In fact, Petty was so fascinated by the electronics and acoustics that he often received return engagements for his trio with the stipulation that he work on the house public address system.

The Trio scored a hit record in 1954 with a version of Duke Ellington's "Mood Indigo," released first on their own Nor-Va-Jak label in Clovis, then later by RCA. They also (continued on page 28)

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(continued from page 26)

had a moderate success in 1956 with a Petty composition, "Almost Paradise," a song that was an even bigger hit when covered by Roger Williams.

The royalties from "Almost Paradise" gave Norman and Vi enough wealth to quit the grinding routine of one-nighters. Norman converted the old family garage and service station into his recording studio and began attracting West Texas musicians. (Clovis is only eight miles from the Texas/New Mexico border.) A kid from Canyon, Texas named Buddy Knox recorded a song in the Nor-Va-Jak studio entitled "Party Doll," and it rose to Number Two in the United States. The success of "Party Doll" caused another young man named Buddy to seek out the producer with the prophetic pleading that "If you can get Buddy Knox a hit, you can get me one."

Petty had previously recorded some demos for Buddy Holly in Clovis, but it wasn't until Holly returned from a failed attempt at stardom in Nashville with Decca Records that the collaboration began in earnest. During their less than two year association, Holly and Petty co-authored almost 20 songs, including such classics as "That'll Be The Day,"

"Maybe Baby," "Peggy Sue," "Everyday," "It's So Easy," and "True Love Ways." In addition, Petty either wrote or co-wrote such Holly landmarks as "I'm Gonna Love You Too," "Not Fade Away," "Oh Boy," "Heartbeat," and "Rave On."

Petty's knack for using sounds that no one else would have conceived can be seen from a marathon recording session he, Holly and the Crickets undertook in July, 1958. They were working on "I'm Gonna Love You Too" when a stray sound kept interfering. Petty discovered a cricket hiding in the ceramic-tiled echo chamber (a chamber built to Petty's specifications by Buddy Holly and his father, actually) and he adjusted the tempo of the song and recorded the unhired musician's efforts as part of the production.

But Petty also learned from others. He credits the experiments of Les Paul with interesting him in the possibilities of multiple overdubs. Petty devised, by trial and error, his own methods of keeping the monaural signals clean enough for doubling Holly's voice in harmony. Later, when the first 4-track machines became available, he was an early experimenter in combining two tracks onto a third in order to free up tracks for more doublings.

Alas, the Holly-Petty partnership did not last forever. In 1958, Holly wanted to move to New York to be in the center of the music world. At first, Petty, who also served as Holly's manager, went with him, supervising a memorable recording session in the Pythian Temple that resulted in some of the first rock & roll with strings added. But shortly thereafter, Holly and his new bride, Maria Elena, came to Clovis to announce that Holly would not be renewing his management contract with Petty. Buddy added, "But I'd like you to still record me." Petty was surprised, but answered "No management, no recording." When Norman asked Holly why he was being dropped, according to Petty, "Buddy didn't say anything, and in a little bit Maria finally said, 'We don't think you've done enough for Buddy.'" The bitterness between Petty and Holly's wife continues to the present, as evidenced by Petty's role in Holly's career being omitted in the recent film *The Buddy Holly Story*.

The death of Holly in a plane crash in February, 1959, led other aspiring rock stars to flock to Clovis to work with Petty. And for a while Petty did try to re-create a new Buddy Holly. (Bobby Vee was one such

protegee.) But Petty was soon able to discover other pace-setting talents. One of his groups, the Fireballs, scored several instrumental hits in the early Sixties, including "Quite a Party." Another band, the Springalongs, rose to Number 3 on the charts with a Petty composition, "Wheels." (Ironically, the song that became famous as "Wheels" was actually entitled "Tell The World;" the real "Wheels" was supposed to be the B side of the 45. But Warick Records reversed the labels on the pressing.) To date, there have been more than 200 versions of "Wheels" recorded throughout the world. Petty's last two hits were Jimmy Gimer and the Fireballs' "Sugar Shack," which hit the top of the charts in 1963, and the Fireballs' swan song of 1968, "Bottle Of Wine."

During his more than 40 years as a professional recording engineer, Petty has owned a wide range of equipment. Beginning with the Wilcox-Gay disk cutter in 1940, he moved through a succession of better disk cutters, then wire recorders, then tape recorders. In about 1950, Petty bought his first Ampex 400 mono tape machine, a classic piece of equipment which he believes for its time was the best he ever owned.

In about 1955, Petty bought an Ampex 350 recorder, the addition of which would later make possible Holly's historic over-dubs. Purchasing his first four-track machine, an Ampex 300, in 1960, Petty was able to make his first true multi-track mixes. With the four tracker, he quickly learned to multiply the tracks three or four times. A Scully eight-track was purchased in 1965 for installation in his new studio. Petty's current MCI 24-track board and recorder were installed in 1978. He plans to add 24 more tracks in the near future in order to be able to record choirs. As he puts it, "I could record big choirs and not have to mike just every two or three singers."

The Nor-Va-Jak studio (the one-time gas station and garage) was placed into semi-retirement in 1965 when Petty realized his long-standing dream of buying and converting a movie theater into a studio. This dream developed during the years of touring with his trio. In those days, he would systematically walk around a room's interior, clapping his hands sharply in order to make mental notes on the decay period, live or dead spots, natural reverberance characteristics, and particular frequencies which seemed to reflect or absorb off the walls, ceilings, and floors. In doing so, he developed a

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love for solidly-built big rooms, rooms which had very high ceilings that allowed huge volumes of air to be compressed by the sounds' vibrations.

After buying Clovis' old Mesa Theatre, the naturally superb acoustics were improved with the addition of an angular-serpentine folded treatment on the interior walls, new seating upholstery (chosen for its absorptive quality), and a huge eyeball-shaped acoustical lens on stage. About twenty



The Norman Petty Trio, (left to right): Norman, his wife Vi, and original trio guitarist Jack Vaughn.

feet higher than the stage, in what used to be the balcony projection level, Petty sits at the massive MCI control board, able to view the musicians below through a glass wall.

Petty delights in demonstrating his room's acoustics. Asking the visitor to sit about three quarters of the way toward the back of the theater, he walks to the arched proscenium stage and begins to slowly spill small change from one hand to the other. He smiles broadly when he hears the inevitable "I don't believe it!" Even from the back of the room, the coins' light tinkling sound has a presence as though it were amplified and equalized.

Petty believes it is no real trick to be able to record sounds naturally if they can be produced naturally in the first place. For this reason he stays as far away as possible from the artificiality of over-equalization, compression, digital effects, and frequency filtrations. When those devices are needed, he would rather use them only during mixing.

With the exception of "Bottle

Of Wine," Petty has produced no hits from his present premises. But this was due in large part to his devoting most of his energy and a great deal of his money to building, then operating, an AM and FM radio station. Now that these financially unsuccessful (though acoustically acclaimed) ventures are behind him, Petty has returned to active producing.

Petty mildly resents being remembered only for his work with Buddy Holly. With the resurgence of Holly's popularity in America—he was never out of favor in Europe—Petty is continually besieged by fans requesting autographs, anecdotes and other remembrances. "I want to tell them," he says, "that I'm proud of them for preserving that music. It's

music that I love, too, and after all, a lot of those songs are my songs too. But that's a part of my life that is in the past. I can't live in the past."

For now, Petty is content to methodically produce and record promising new talent in the hope that he will find another gem in need of his patented polishing. Besides that he plans to add an additional 24 tracks of recording capability, and has come up with what is surely the ultimate case of living in the future. "I want to produce my own pre-recorded funeral service," he confides. As one who is often called upon to play the organ at such services, Petty has seen many which were badly done. "I think that's one time when the sound ought to be just right." ■

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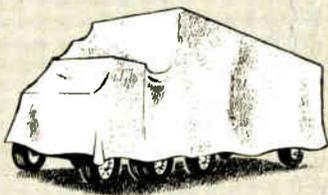
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The so-called "slump" in the recording industry doesn't seem to have put a dent in the southwest studios. Many are busier than ever and have been upgrading, remodeling, and building new facilities to catch up with the demand. We checked in with some of our friends in the area and found a hotbed of activity.

Del Sol Recording Studio, of Alice, Texas, has recently opened its doors for business. The studio is equipped with the new Tascam 85-16 sixteen channel recorder and Tascam Model 15 16x8 console. JBL studio monitors, Crown power amplifiers, and signal processors by UREI, DeltaLab, and Orban complete the facility.

A burgeoning business increase in projects at Reelsound Recording Company, in Manchaca, Texas (near Austin) has necessitated the construction of a second mobile unit. The new 42 foot trailer-van should be ready this summer and is designed for concert, TV, film, and long-term album mixing work. The current Reelsound mobile unit is contained in a 1948 Flexible road bus and has recorded a number of gold albums, including Ted Nugent's "Double Live Gonzo," and Frankie Beverly and Maze' "Live in New Orleans."

Lone Star Sound, in Austin, Texas, has upgraded their studio by installing a new MCI 600 series console, MCI 16 and 2 track recorders, and additional outboard gear, purchased from Southwest Pro

Audio.

The Dallas Communications Complex—The Studios: Las Colinas, in Las Colinas, Texas, synchronized their grand opening and open house with last month's NAB convention in Dallas. This complete audio/video recording complex is the largest facility of its kind outside of New York or California. The many firms housed at the complex provide total state-of-the-art multitrack sound recording with or without broadcast quality video production, post-production, and audio sweetening. Catering services and office space are also available at the complex.

Omega Audio and Productions have just completed their new facility in Dallas. Located in the Southwest Airlines terminal at Love Field, studio designer Paul Westbrook faced a real challenge in designing a recording studio in an area where jet aircraft take off and land every five minutes. The equipment package includes an Amek Series 2500 recording desk, Otari 24 track and master recorders, and a wide range of the latest outboard equipment. Omega Audio also has a 24 track remote truck available.

Bill Young Productions of Houston, have finished construction of their new studio for recording promos for Pace Concerts, Willie Nelson, Barbara Mandrell, ZZ Top, and many other successful artists. They are now equipped with a Total Audio Concepts (TAC) console, Otari MTR-10 series recorders, ADR Scamp, Crown, JBL, etc. The equipment package, design, and construction of the facility was by Westbrook Audio, Inc., of Dallas, Texas.

Digital Services of Houston, has opened a new studio in Nashville, TN, to keep up with the increasing digital demands of Nashville producers. The facility will offer the Sony digital mastering and editing system as well as the second 24 track digital Sony recorder in the United States. Recent bookings have been for Gary Dunham on Newpax Records, as well as a digital mix of Kenny Rogers' "Somewhere Between Lover and Friend," produced by Randy Goodrum for Rogers' new album. The Houston-based group Dr. Rockit and the Sisters of Mercy new album *Great Big Fun*, recorded live to digital at Rockefeller's Club in Houston, is currently being mastered at CBS studios in New York City.

Larry Strom, Vice President of operations at Premier Audio in Dallas says that one would be hard pressed to find the recession based on his *(continued on page 34)*



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Take a look below at the features of our Series Three amplifiers. High-efficiency circuitry, soaring dynamic headroom, true dual-mono configuration, front-removable modular design. And we've packaged it all in a low-profile chassis. More power, less rack space.

We were so impressed with our prototype Series Three amps that we decided to take them into the field

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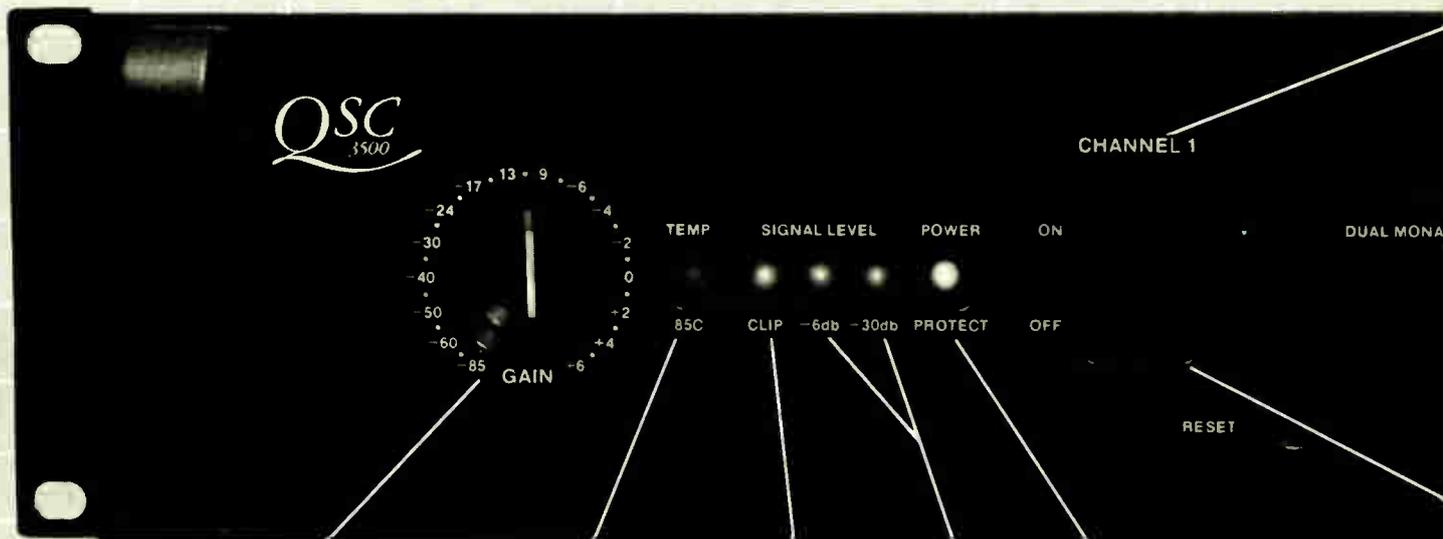
For maximum strength and shielding.

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All electronics for each channel can be exchanged while amp is in rack.

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everyone start over.

for strict "A/B" performance comparisons. We committed them to actual working environments. They were compared in critical listening tests for audio quality and performance during peak power conditions. As we had expected, the response was overwhelmingly positive. The Series Three amplifiers outperformed the nearest competitor many times over.

The moral of the story: Why settle for a product that's only outstanding in a few areas? QSC Series Three is the culmination of a comprehensive design

approach. So we urge you to look into our Series Three amplifiers. Because while everybody else is looking where they've been, QSC is stepping into the future.

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Costa Mesa, CA 92627
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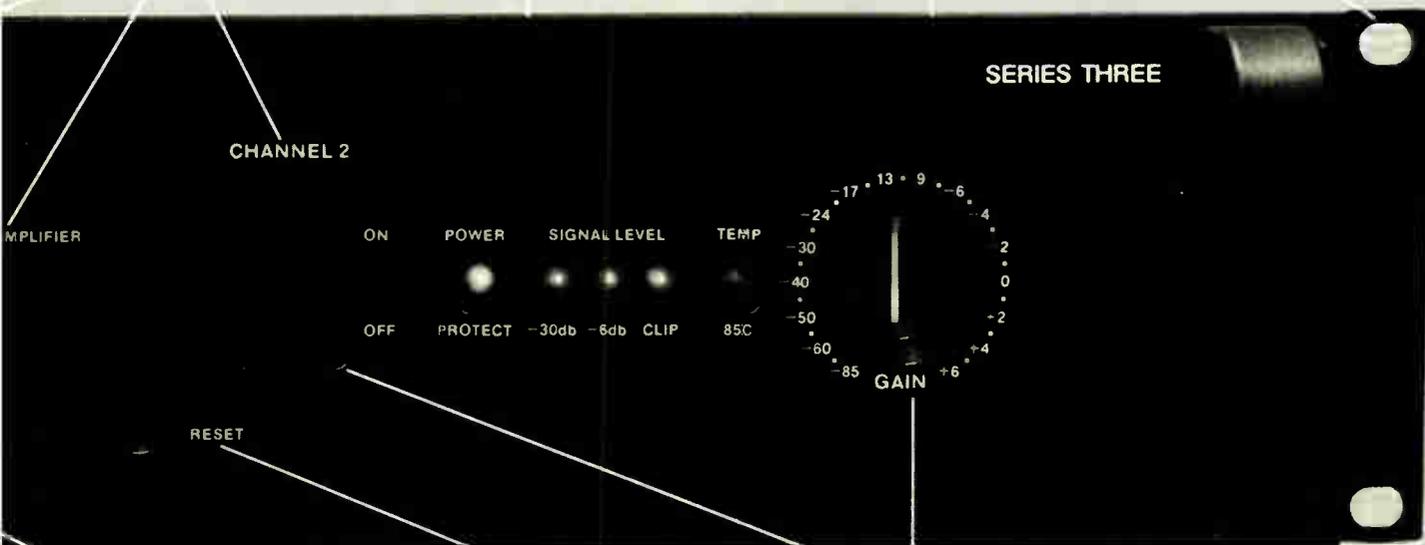
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Provides exceptionally tight, high-impact bass performance.

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Includes 1/4" RTS, XLR, and barrier inputs. Provision for active or passive accessory input modules such as crossovers, filters, limiters, and transformers. Binding and barrier outputs provided.

REINFORCED FRONT AND REAR RACK MOUNTS.



SEPARATE AC SWITCHES

Enable single channel to be powered up or down. Useful for emergency speaker changes during performance.

FRONT MOUNTED CIRCUIT BREAKERS

No fumbling around in the back of the rack.

RECESSED CONTROLS

Prevent damage and accidental movement.

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Assures long-term reliability under abusive conditions.



Sales & Service

**1500 Summit St.
Austin, Texas 78741
(512) 443-4567**

**Branch Office
Garland, Texas
(214) 271-2300**

(continued from page 31)

equipment sales. He finds continual upgrading in the studio realm, many churches adding four track recording capabilities and a quickly growing demand for video interfacing—especially BTX Systems. Some of their recent projects include Brian Sound Production in Waco, Texas upgrading from 8 to 16 track with the addition of a Neotek Series II console and Tascam 85-16; Video Post and Transfer in Dallas adding a video editing suite with plans for a second audio/video editing suite; and Sierra Studios in Fort Worth building a 24 track live end-dead end concept control room with a Neotek console and a Stephens 24 track console.

Kludgit Sound, Inc., of Santa Fe, New Mexico, has upgraded its 16 track facility to 24 tracks with the installation of an MCI JH-24 24 track transformerless tape machine, a Sound Workshop Series 40, 30 in x 20 out mixing console with 32 channel ARMS automation, a Lexicon 224 version 4.4 digital reverb unit, a UREI 6500 listening amp, and JBL Bi-Radial and UREI 539 Time Aligned studio monitors.

Rampart Sound Studios in Houston have now completed a major renovation project. The studio design is by Woody Smith of ASi Pro Audio in San Antonio. The project included a major equipment update and the addition of a new Soundcraft 1624, 16x16x24 console purchased from ASi.

Another Houston area studio involved in equipment upgrading is Rivendell Recorders, of Pasadena, TX, who have purchased a Trident Series 80 console, Studer A-80 recorder, Otari MTR-10-2 master recorder, and AMS digital reverb.

Sundance Recording, of Houston, recently went from 16 to 24 track with the addition of a Tangent 3216/36 console, Otari MTR-90 recorder, Otari MTR-10-2 master recorder, full dbx noise reduction, and a host of outboard gear and new microphones. Westbrook Audio, of Dallas, supplied all equipment and completed the installation.

The Bob O'Neill Sound Studio in San Antonio, Texas plans to celebrate its grand opening soon. Studio owner Bob O'Neill chose a unique location by purchasing an old antique store for the project. The outcome of the Woody Smith studio design is cosmetically appealing and provides a very functional environment. The control room features the Tascam 85-16 sixteen channel recorder, a Soundcraft console, JBL monitors, Crown amplifiers, and an Ampex mixdown deck, all supplied by ASi Pro Audio. ■

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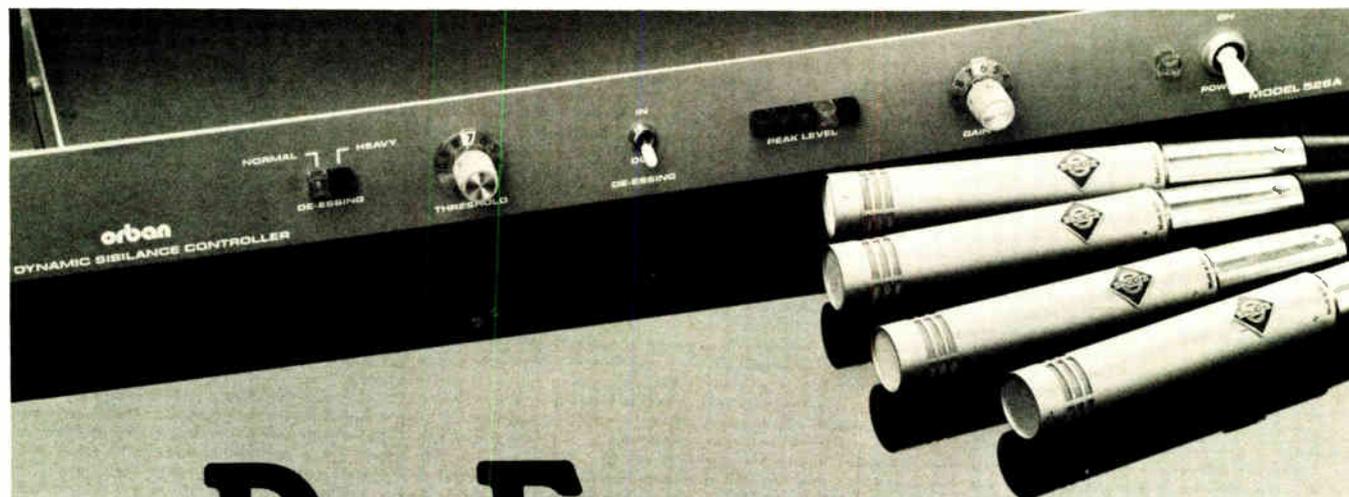
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De-Esssss

The Orban 526A single-channel Dynamic Sibilance Controller is a *simple*, economical dedicated de-esser—without the complexity and compromises of multi-function processors. It sets up *fast* to produce sibilance levels that sound natural and right. Features include mic/line input, fully balanced input and output, LED level meter, GAIN control, compact size and more. Special level-tracking circuitry assures consistent results with varying input levels. And our control technique doesn't emphasize residual IM when de-essing occurs.

De-essing doesn't have to be complex, expensive, and time consuming. The 526A does it fast and *right* in recording studios, cinema, broadcast and cassette duplication.

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San Francisco, CA 94107
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4 & 8 TRACK

The Southwest

•• ACCESS SOUND STUDIOS
also REMOTE RECORDING
4922 Burnet Road, Austin, TX 78756
(512) 452-6050
Owner: Roy T. Poole
Studio Manager: David Risig

•• AUDIO AMERICA, INC.
also REMOTE RECORDING
Suite 2-B, 6347 Ashcroft, Houston, TX 77081
(713) 981-9190, 337-3395
Owner: John B. Hill
Studio Manager: John B. Hill

•• AUTOGRAPH RECORDING STUDIOS
601 E. Blacklidge Dr., Tucson, AZ 85705
(602) 882-9016
Owner: Autograph Incorporated
Studio Manager: Joe Bidwell

•• B.A.S. RECORDING STUDIO
5925 Kirby Dr., Suite 226, Houston, TX 77005
(713) 522-2713
Owner: Shelton Bissell
Studio Manager: Shelton Bissell

•• CHARITY RECORDING CO.
22 S. 177th E. Ave., Tulsa, OK 74108
(918) 234-3145
Owner: David Smallwood
Studio Manager: David Smallwood

•• FIREHOUSE RECORDING
2242 Butler St., Dallas, TX 75235
(214) 634-0415
Owner: Ron Mason
Studio Manager: Ron Mason

•• GOLDBAND RECORDING STUDIO
313 Church St., Lake Charles, LA 70601
(318) 439-8839
Owner: Eddie Shuler
Studio Manager: Jeff Le Jeune

•• LA LOUISIANNE
also REMOTE RECORDING
711 Stevenson St., Lafayette, LA 70501
(318) 234-5577, 234-3361, 234-4363
Owner: Carol J. Rachou, Jr.
Studio Manager: Carol J. Rachou, Jr.

•• LOST MOUNTAIN RECORDERS
also REMOTE RECORDING
7308 S. Congress Ave., Austin, TX 78745
(512) 444-5762
Owner: Navarro Productions
Studio Manager: Michael Weibold

•• OAKRIDGE MUSIC RECORDING STUDIO
2001 Elton Road, Haltom City, Ft. Worth, TX 76117
(817) 838-8001
Owner: Homer Lee Sewell
Studio Manager: Homer Lee Sewell

• SELLERS COMPANY
2102 Jackson, Dallas, TX 75201
(214) 741-5836
Owner: Jack Sellers
Studio Manager: Jack Sellers

• SNOWBIRD JUNCTION
also REMOTE RECORDING
1508 N. Central Ave., Phoenix, AZ 85004
(602) 256-9121
Owner: Mike Craig & Tina Craig
Studio Manager: Mike Craig

• SOUND RECORDERS
4031 Guadalupe, Austin, TX 78704
(512) 454-8324
Owner: Miles Muller
Studio Manager: Ted Candler

•• SOUTHERN RECORDS
also REMOTE RECORDING
56 E. 53rd Pl., Tulsa, OK 74105
(918) 747-3701
Owner: John Southern
Studio Manager: John Southern

•• TSB RECORDING, INC.
3013 Fountain View, Suite 210, Houston, TX 77057
(713) 974-7481
Owner: Tom Wollenberger
Studio Manager: Tom Wollenberger

•• TOBY'S CUSTOM RECORDING STUDIO
also REMOTE RECORDING
1024 South Presa St., San Antonio, TX
(512) 533-3030
Owner: Toby Torres
Studio Manager: Toby Torres

•• TOMLYN RECORDING STUDIO
Rt. 1, Box 696, Flint, TX 75762
(214) 894-7713
Owner: Tom Russell
Studio Manager: Jim Phillips

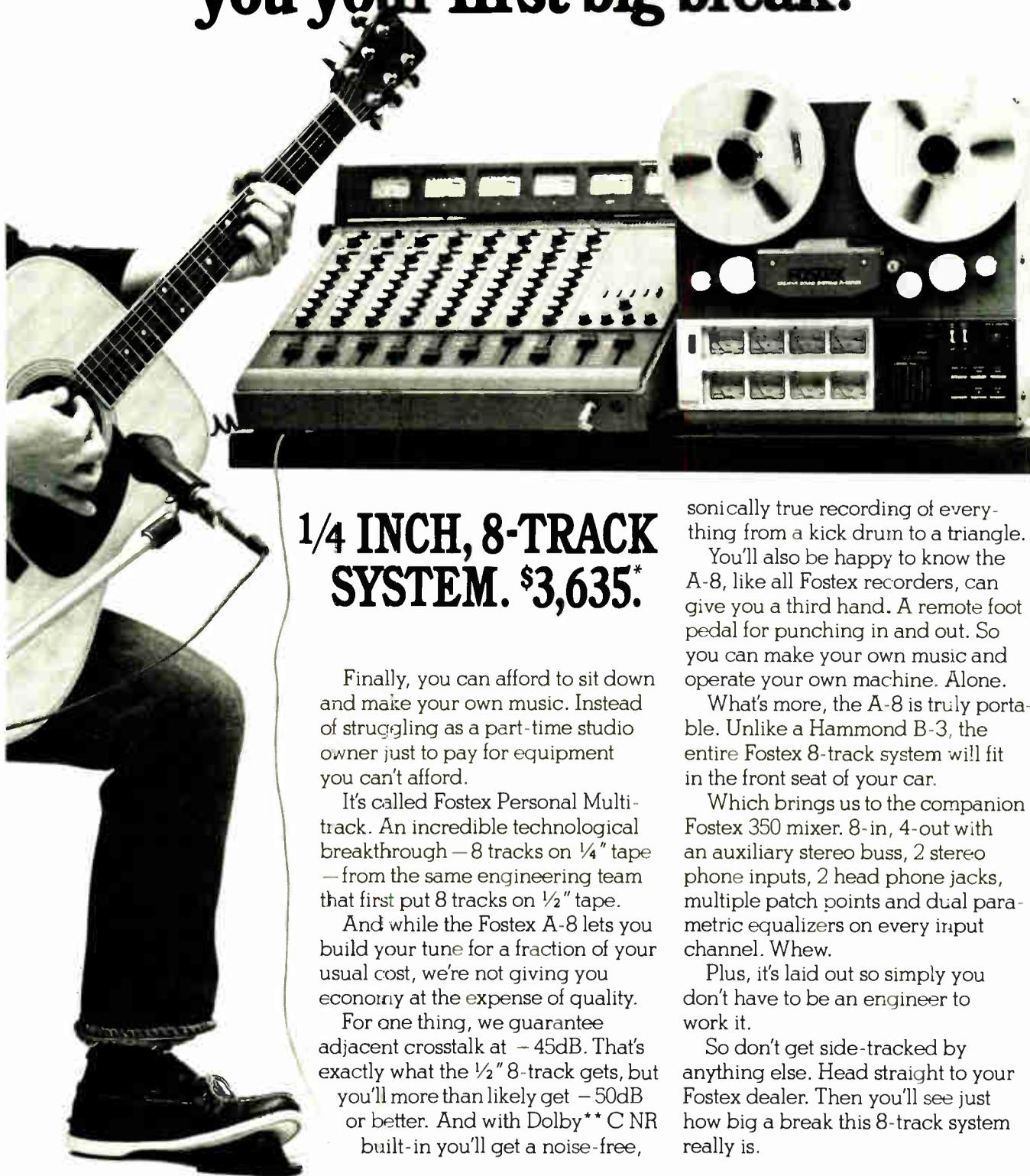
•• VOICE OVER STUDIOS
8625 King George Dr., Suite 335-C, Dallas, TX 75235
(214) 688-0600
Owner: Chuck Webster
Studio Manager: Larry Stevens

•• THE WINDMILL
also REMOTE RECORDING
3442 Nies, Fort Worth, TX 76111
(817) 834-3879
Owner: James Michael Taylor
Studio Manager: Charles P. Bowles

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1. Be a commercially available 4, 8, 16, or 24 + track recording studio.
2. Get in touch. You can call us at 415/843-7901 or write us at P.O. Box 6395, Albany Branch, Berkeley, CA 94706.
3. If you have not yet heard from us twelve weeks prior to the issue date, please get back in touch so we don't miss you.

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1/4 INCH, 8-TRACK SYSTEM. \$3,635.*

Finally, you can afford to sit down and make your own music. Instead of struggling as a part-time studio owner just to pay for equipment you can't afford.

It's called Fostex Personal Multitrack. An incredible technological breakthrough — 8 tracks on 1/4" tape — from the same engineering team that first put 8 tracks on 1/2" tape.

And while the Fostex A-8 lets you build your tune for a fraction of your usual cost, we're not giving you economy at the expense of quality.

For one thing, we guarantee adjacent crosstalk at -45dB. That's exactly what the 1/2" 8-track gets, but you'll more than likely get -50dB or better. And with Dolby** C NR built-in you'll get a noise-free,

sonically true recording of everything from a kick drum to a triangle.

You'll also be happy to know the A-8, like all Fostex recorders, can give you a third hand. A remote foot pedal for punching in and out. So you can make your own music and operate your own machine. Alone.

What's more, the A-8 is truly portable. Unlike a Hammond B-3, the entire Fostex 8-track system will fit in the front seat of your car.

Which brings us to the companion Fostex 350 mixer. 8-in, 4-out with an auxiliary stereo buss, 2 stereo phone inputs, 2 head phone jacks, multiple patch points and dual parametric equalizers on every input channel. Whew.

Plus, it's laid out so simply you don't have to be an engineer to work it.

So don't get side-tracked by anything else. Head straight to your Fostex dealer. Then you'll see just how big a break this 8-track system really is.

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Personal Multitrack

*Suggested list prices: A-8, \$2500. 350 Mixer and Meter Bridge, \$1125. Foot pedal, \$15. **Dolby is a registered trademark of Dolby Laboratories, Inc.

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16 TRACK

The Southwest



ACA Recording Studios, Inc.
Houston, Texas

••• **ACA RECORDING STUDIOS, INC.**
also **REMOTE RECORDING**
8208 Westpark Dr., Houston, TX 77063
(713) 783-1771

Owner: William D. Hollford
Studio Manager: William D. Hollford
Engineers: William D. Hollford, Dwight Hollford & Andy Bradley & D.W. (Bill) Hungerford
Dimensions of Studios: Studio A: 33' x 55' x 22'; Studio B: 21' x 35' x 22'
Dimensions of Control Rooms: Studio A: 20' x 21' x 10', Studio B: 12' x 16' x 10', Studio C: 19' x 21' x 10'
Tape Recorders: 3M 500-16 16 track, 3M 500-8 8 track, (3) Ampex 300 4, 2, & mono; Ampex 440 2 track; (3) Ampex 351 2 track; Scully 280 mono; Scully 280B-2 2 track
Mixing Consoles: Audiotronics Model 501, 24 in x 24 out Auditricks Model 110A, 16 in x 4 out, Stephenson/Interface Model 114, 16 in x 4 out
Monitor Amplifiers: McIntosh Mc2200, McIntosh Mc2100, (8) McIntosh Mc40
Monitor Speakers: Studio A: Studio Altec A7, Control Room: JBL 4333A, Auratone 5C & Auratone 5S, Studio B: Studio-Altec A7, Control Room: JBL L36, Auratone 5C, Control Room C: RET Delta monitors, Auxiliary monitors: moveable-Altec A7s, RET Delta monitors
Echo, Reverb, and Delay Systems: (2) EMT 140 Plates, Lexicon Delta T Stereo
Other Outboard Equipment: Full dbx noise reduction on all channels in all control rooms, Lexicon Delta T with flanger and doubling, Orban/Parasound De-Esser, dbx compressors, UREI, LA-3A limiters, Allison Gain Brains & Kepex, UREI graphic equalizers, UREI Digital Metronome, Countryman 968 phase shifter PAIA Flanger/Chorus, Varispeed
Microphones: (4) Neuman U-47, (3) U-67s, KM-84, (2) AKG C-61s, C-451E, (2) Sennheiser 441s, Electro-Voice RE-20, 655E,

648, PL-6; Sennheiser MKH 105; Shure SM-81, SM-53, 545, (3) Altec 639s

Instruments Available: Baldwin 9' concert grand piano, 2 Hammond organs (B3 & RT3) with Leslie, Pearl Drum Kit, Fender Rhodes piano, Mellotron

Rates: Studio A: 16 track \$96/hr recording, \$80/hr mixing, 8 track \$72/hr recording; \$62/hr mixing, 2 track \$54/hr; Studio B: 4, 2, 1, track \$40/hr

Extras: Arranger/Producer: Dr. Art Gottschalk, Songwriter/Arranger/Producer: Shelton Berg, Producer John Owens Highly experienced studio musicians available for virtually any musical production. Affiliated with ACA: is the Jingle Production Company, Media Music Group

Direction: ACA has been in continuous operation in Houston since Feb. 1948 and has cut many country, R&B, rock, Top 40, and Spiritual national hits. We are experienced with Symphonic, choral, jazz, big band, marching band and music of many ethnic settings. Such as music of India, Turkey, Kenya, Rhodesia, So Africa, Australia, Burma, China, Japan and many others

••• **STEPHEN ARNOLD RECORDING & PRODUCTION**
1404 Forest Lane, Garland, TX
(214) 494-6882

Owner: Stephen Arnold
Studio Manager: Bill Knobbe

••• **AUDIO RECORDING CORPORATION OF ARKANSAS**
also **REMOTE RECORDING**
100 N. Rodney Parham, Little Rock, ARK 72205
(501) 224-1111

Owner: A R C A
Studio Manager: Clyde Snider, Dick Marent.

••• **BLEU RECORDING PRODUCTIONS**
1006 A Vista Del Cerro, Tempe, AZ 85281
(602) 968-1999

Owner: Tom Mortensen
Studio Manager: Tom Mortensen.

••• **BOYD SOUND STUDIO**
P.O. Box 682, 103 N. Ballard St., Wylie, TX 75098
(214) 442-1620

Owner: Anthony D. Boyd
Studio Manager: Anthony D. Boyd

••• **EMMIT BROOKS RECORDING STUDIO**
115 East Idaho Avenue, Las Cruces, N.M. 88001
(505) 524-1889

Owner: Emmit H. Brooks
Studio Manager: Emmit H. Brooks

••• **AL CLAUSER (ALVERA)**
also **REMOTE RECORDING**
Box 129, Prue, OK
(918) 242-3303

Owner: Al and Vera Clauser
Studio Manager: Al Clauser

••• **COOKSOUND PRODUCTIONS, INC.**

(formerly Shotgun Cook Productions)
also **REMOTE RECORDING**
6626 Hornwood, Houston, TX 77074
(713) 772-1006

Owner: Dwight "Shotgun" Cook
Engineers: Chris Jensen, Dwight "Shotgun" Cook, David Edney, Tina Neikin, Karen Cook
Dimensions of Studios: Studio I 10' x 10', Studio II 30' x 30'
Dimensions of Control Rooms: Control Rm I: 25' x 25'; Control Rm II: 30' x 20'
Tape Recorders: MCI JH-16 w/Autolocator, Otari MX 5050 2 & 8 track, Tascam 25-2 2 track, Tascam 40-4 4 track, Technics RS 1500 2 track; 4 cassette machines
Mixing Consoles: Spectronics 8/16 custom, 20 in x 8/16 out, Tascam 3/2A, 15 in x 4 out
Monitor Amplifiers: AU 217, AU-717, Technics (phones)
Monitor Speakers: Modified L A studio monitors, JBL 4311, (4) Auratones

Echo, Reverb, and Delay Systems: Master-Room chamber, Sound Workshop stereo reverb, Tapco stereo reverb, Eventide Delay Lines

Other Outboard Equipment: Eventide H949 Harmonizer, dbx 3bx expander, dbx 165 compressor/limiter, dbx 150, Eventide Harmonizer w/2nd output, dbx 158 2 channels of dbx for mix-down

Microphones: AKG 414, Crown PZM's; Shure SM-5's, SM-81's, SM-53's

Instruments Available: Horugel studio piano, Ludwig drums
Rates: \$50/hr Studio I, \$70/hr Studio II. Add 10% for evenings and weekends

Extras: High-speed duplication and computer labeling, free snack area. Relaxed, creative atmosphere with rough cedar, stained glass, and low-level track lighting. Major credit cards accepted. Convenient accommodations nearby

Direction: Combine over 40 years of expertise in music and recording with an abundance of resources, like the finest equipment, creative producers, and a highly motivated and talented staff who have helped CookSound earn awards and acclaim in the advertising and music industries, and you will find the reason for our success. We produce national radio campaigns, jingles, and original music for film, records, and demos. Please write for our free demo

••• **DESERT SOUND RECORDING INC.**
3026 W. Clarendon, Phoenix, AZ 85017
(602) 264-1280

Owner: Desert Sound Recording Inc
Studio Manager: Sandy Lamont
Engineers: Sandy Lamont
Dimensions of Studios: Main Studio: 30' x 30', Drum Booth: 8' x 8', Vocal Booth: 6' x 6'

Dimensions of Control Rooms: 12' x 15'
Tape Recorders: Scully 288B 16 track; Tascam 80-8 8 track w/dbx; Otari 5050B 2 track, TEAC 3300 2 track, TEAC 3300 1/4 track; (6) Sharp cassette decks

Mixing Consoles: Custom, 24 in x 24 out, 4 buss, 8 sends, 24 channel cue mix

Monitor Amplifiers: McIntosh MC 1200, Hatler DH200; (2) custom tube amps

Monitor Speakers: (4) JBL 4311; Auratones
Echo, Reverb, and Delay Systems: (2) Custom built phase systems, (2) custom spring systems; custom electronic reverb, DeltaLab DL-2; MXR Flanger/Doubler; MXR Digital (full memory)

Other Outboard Equipment: EXR Exciter, (2) UREI 1176 limiters, (2) dbx 160 limiters; Orban De-Esser; (6) Sweep EQ's; (16) custom noise gates, custom comp/limiter

Microphones: AKG-451's, 414's, Sennheiser 421's, 441; Countryman EM-101; AKG D-12; Neumann U-47; Crown PZM 30 GPB's, Shure SM-57's, SM-53; Electro-Voice RE-20's, 661's; Beyer M-500N

Instruments Available: Yamaha grand piano, ARP 2600; ARP String Ensemble; Rhodes piano, guitars; bass; drums

Rates: \$35/hr 16 track (10 hrs \$300); \$25/hr 8 & 2 track, (\$45/hr 24 track Late "82")

••• **DUSTY DICKERSON'S RECORDING STUDIO**
1514 Mercury Dr., Houston, TX 77029
(713) 673-6385

Owner: Dusty Dickerson
Studio Manager: Ronn Russ
Engineers: Dusty Dickerson, Ronn Russ, Dennis Robertson
Dimensions of Studios: 20' x 40'
Dimensions of Control Rooms: 15' x 10'
Tape Recorders: Ampex MM-1000 16 track; Scully 280-B 2 track

Mixing Consoles: Soundcraft II, 16 in x 16 out
Monitor Amplifiers: McIntosh

Monitor Speakers: CTC Drivers custom built
Echo, Reverb, and Delay Systems: AKG BX-10E; Eventide H-910 Harmonizer/Digital delay

Other Outboard Equipment: UREI 1176LN compressor/limiter, dbx 161 compressor/limiter, dbx 163 compressor/limiters, Orban De Esser Model 516 EC; Eventide FL-201 Instant Flanger; Eventide Instant Phaser; Countryman Assoc's direct boxes
Microphones: Sony; Electro-Voice; Shure; AKG

Instruments Available: Kawai studio piano, Hammond B-3 organ; Ludwig drums; Ovation acoustic guitar; Yamaha acoustic guitar; Wurliizer electric piano; ARP string ensemble; ARP Pro soloist; MiniMoog synthesizer

Rates: \$65/hr

••• EDENWOOD RECORDING STUDIOS
7319-C Hines Place, Suite 201, Dallas, TX 75235
(214) 630-6196
Owner: Jerry Swafford
Studio Manager: Dave Scott

••• HUDDLESTON'S RECORDING STUDIO
11819 Lippett Ave., Dallas, TX 75218
(214) 321-2049
Owner: HRS
Studio Manager: Gene Huddleston
Engineers: Paul Hill, Jimmy Billingsley, Gene Huddleston
Dimensions of Studio: 30' x 30'
Dimensions of Control Rooms: 16' x 22'
Tape Recorders: MCI JH 24-16 w/Autolocate III 16 track, Ampex 440-B 2 track, Pioneer RT701 ¼ track, Ampex AG500 mono
Mixing Consoles: Tangent 3216, 18 in x 16 out
Monitor Amplifiers: Crown D150A, Yamaha P2100
Monitor Speakers: JBL 4311's, 4313's
Echo, Reverb, and Delay Systems: Digital delay, spring reverb, tape echo
Other Outboard Equipment: Limiters, noise gates, graphic EQs, etc
Microphones: Neumann U-87, E.V. RE-20, RE 15, PL-9, PL-76, Sennheiser 421, AKG D12E & 1000, Superscope EC-9P, Sony ECM 270, Shure SM-57
Instruments Available: 7' Grand, Rhodes, ARP Strings, Fender Jazz bass, Epiphone acoustic guitar, Harmony acoustic (High Tune), Fender Vibrolux w/JBL's, Fender Princeton Reverb w/JBL Premier drums, Fender Bassman 50, Roland electric piano
Rates: \$40/hr
Extras: Kitchen, large lounge area, easy access located on a main thoroughfare in Dallas; good food restaurants directly across the street, fine accommodations located nearby, music library and jungle production as well as a relaxed professional atmosphere for record production
Direction: HRS was established in 1970. All three engineers have many years experience, besides their musical background in performance and studio production. Studio designed and built by JDB. Sound for relaxed but professional environment

••• LONE STAR RECORDING
1204 North Lamar, Austin, TX 78703
(512) 478-2224
Owner: Ed Guinn, Stan Coppinger
Studio Manager: Ed Guinn, Stan Coppinger

••• LUDWIG SOUND STUDIO
also REMOTE RECORDING
1022 Hodgkins, Houston TX 77032
(713) 449-8388
Owner: Charles T Ludwig
Studio Manager: Charles T Ludwig

••• PRODUCTION BLOCK STUDIOS
also REMOTE RECORDING
2222 Rio Grande, #D-108, Austin, TX 78705
(512) 472-8975
Owner: Joel Block
Studio Manager: Joel Block

••• RAMPART STUDIOS
also REMOTE RECORDING
6105 Jessamine, Houston, TX 77081
(713) 772-6939
Owner: Steve Ames
Engineers: Steve Ames, Dan Yeane, Linden Hudson
Dimensions of Studios: 24' x 40' (Drum room, vocal booth, iso room)
Dimensions of Control Rooms: 12' x 18'
Tape Recorders: 3M 16 track, 3M 2 track, Ampex 2 track, Sony ¼ track, Technics cassette deck
Mixing Consoles: Soundcraft #1624, 48 channels
Monitor Amplifiers: Crown DC-300A, Crown D-150, Crown D-60
Monitor Speakers: JBL 4333's, Auratones
Echo, Reverb, and Delay Systems: EMT 140-Stereo Plate, Lexicon Digital Delay Line, Eventide Digital, VSO Tape Delay
Other Outboard Equipment: UREI 1176 limiters/compressors, UREI 1178 limiter/compressors, Orban Parametric EQ, Eventide Harmonizer, dbx & Quad/Eight noise gates, MXR Auto-Flanger, Aphex, Bi Amp EQ, Lang EQ
Microphones: Neumann, Sennheiser, Beyer, Sony, AKG, RCA, Electro-Voice, etc
Instruments Available: (No Additional Charge) Kawai grand piano, Fender Rhodes piano, MiniMoog, Hohner clavinet, Gibson acoustic guitar, LP congas, Rogers drum set, complete percussion gear
Rates: Available upon request
Extras: Coffee bar, lounge area, etc
Direction: Rampart is a creative environment for both artists and producers, with an experienced professional staff. Specialists in rock, country, and new wave recording projects. Clients include ZZ Top, the Judy's, the Noise, Hershel Wiggins, Helpinstill Blues Band, Columbia Records, Atlantic Records, and many more

••• ROSEWOOD SOUND
4307 Merrel Rd., Dallas, TX 75229
(214) 350-0905
Owner: Sam Davenport & Jimmy Kelley
Studio Manager: Larry "Bull" Dozier & J.R. McMath III

••• SOUNDTRACK RECORDING STUDIO
2011 North Alamo St., San Antonio, TX 78215
(512) 224-4107
Owner: Mike Hettler, Jr.
Studio Manager: Mel Moran

••• SOUTHWEST RECORDINGS
2031 Libbey, Houston, TX 77018
(713) 681-7565
Owner: Jeff Smith
Studio Manager: Jeff Smith

••• TRAX RECORDING STUDIO
8539 Ferguson Rd., Dallas, TX 75228
(214) 321-1837
Owner: Buford Jones, John Storey
Studio Manager: Buford Jones
Engineers: Buford Jones, John Storey
Dimensions of Studio: 17' x 30'
Dimensions of Control Rooms: 12' x 12'
Tape Recorders: Tascam 85-16 16 track, Sony 850 2 track, Pioneer 701 4 track, AIWA cassette.
Mixing Consoles: Tascam 15, 24 in x 8 out
Monitor Amplifiers: Phase Linear 700, Crown D-75, Crown D-60 headphone amps
Monitor Speakers: UREI 813's, Yamaha NS-10's, Beta 0-75
Echo, Reverb, and Delay Systems: Lexicon 224 reverb, Lexicon Prime Time delay, Eventide Harmonizer
Other Outboard Equipment: UREI limiters, dbx limiters, Bi-Amp graphics
Microphones: PML DC-63, misc Shure's, Sennheiser's, Sony's
Instruments Available: Yamaha 53" grand, Ludwig drums, Fender Rhodes, Casio 202, Sunn and Music Man guitar amps
Rates: \$50/hr

••• WALK ON WATER STUDIOS, INC.
also REMOTE RECORDING
Rt. 2, Box 566-H, New Braunfels, TX 78130
(512) 629-4396
Owner: Ken Brazle, Ron Stirn, Bruce Weldy
Studio Manager: Ken Brazle
Engineers: Chief: Bruce Weldy; Ken Brazle, Ron Stirn
Dimensions of Studio: 22' x 20'
Dimensions of Control Rooms: 20' x 13'
Tape Recorders: Tascam 8516 16 track; Tascam 80-8 8 track; Tascam 25-2 ½ track; Tascam 3340S 4 track; Tascam 122 cassette
Mixing Consoles: Tangent 3216, 16 in x 16 out
Monitor Amplifiers: Crown D150A
Monitor Speakers: Electro-Voice Interface Model 3's
Echo, Reverb, and Delay Systems: DeltaLab DL-4 digital delay, Bi-Amp reverb, Tapco Innersound reverb
Other Outboard Equipment: Dietz parametric EQ's, Bi-Amp 210 and 270 EQ's; dbx 160, 161 compressor/limiter; dbx noise reduction; DeltaLab DL-4 flanging & doubling
Microphones: AKG 414; Sennheiser 421, Beyer M500; Shure SM-57, 56; E-V RE-20, Primo condenser mikes and misc E-V mikes
Instruments Available: At no extra charge: Kawai 6' concert grand piano, Hammond C-3 w/Leslie, Ludwig 9 piece drum kit, Rogers 7 piece drum kit. Available for rental: Moog Taurus bass pedals, ARP String Ensemble, ARP Odyssey synthesizer, Oberheim OBX2 synthesizer, G&L electric bass, Fender Precision bass Amps by Fender, Music Man, Peavey and Legend Guitars by Ovation, Fender, Gibson and Rickenbacker.
Rates: \$45/hr for 16 track; \$35/hr for 8 track, live recording on per job basis.

••• WOODEN STUDIOS
also REMOTE RECORDING
7334 Rampart, Suite 102, Houston, TX 77081
(713) 988-9872
Owner: Gus Buzbee
Studio Manager: Gus Buzbee
Direction: We are a fully equipped 16 track studio. Some of our equipment is as follows: Tascam 85-16; Otari 5050B; JBL 4311's & Auratones, Crown amps; Speck B00D console; Lexicon Prime Time, Kepex & Gain Brains; Plate reverb; Harmonizer; AKG, Sennheiser, E-V, and Crown PZM mikes, grand piano; drums; Marshall 51 amp. We specialize in original music and offer a European placement for demos. Call us for more info



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The Southwest

•••• ASSOCIATED PRODUCTIONS OF TEXAS also REMOTE RECORDING

222 College at Presa, San Antonio, TX 78205
(512) 227-3400
P.O. Box 22801, Houston, TX 77027
(713) 780-7227
Owner: Henry W. Lam, Jr.
Studio Manager: Don Roberson

•••• AUDIO VIDEO RECORDERS OF ARIZONA

3830 N. 7th St., Phoenix, AZ 85014
(602) 277-4723
Owner: Floyd Ramsey
Studio Manager: Tim Ramsey

•••• BENSON SOUND, INC.

3707 S. Blackwelder, Oklahoma City, OK 73119
(405) 634-4461
Owner: Larry R. Benson
Studio Manager: Linda Groves
Engineers: Gary Duggan, Larry Benson
Dimensions of Studios: 35' x 45' x 17'
Dimensions of Control Rooms: 20' x 17' x 12'
Tape Recorders: MCI 24 track, (2) MCI 2 tracks
Mixing Consoles: Harnson 40/32, 32 in x 32 out
Monitor Amplifiers: Crown DC-300 (C R); Crown D 150 (cue)
Monitor Speakers: UREI, Altec 9844, Auratones
Echo, Reverb, and Delay Systems: EMT Plate, AKG BX-10
Other Outboard Equipment: Marshall Time Modulator, (2) Eumig cassette decks, Eventide Harmonizer, Orban De-Esser, (8) Kepex's, (8) Neve limiters.
Microphones: Sony, Electro-Voice, Shure, Neumann, Sennheisers, too many to detail.
Instruments Available: 9' Yamaha concert grand piano, Prophet 5, Fender Rhodes, Hammond B-3, Chamberlin 2 manual, unbe lievable drum and percussion booths, guitar amps
Rates: 24 track master \$85/hr, stand-by \$70/hr, 16 track master \$80/hr, stand-by \$65/hr, 8 track master \$70/hr, stand-by \$55/hr, 2 track master \$50/hr (Dolby A N/C), dbx \$10/hr, automated mix \$10/hr applies to 8, 16 or 24 track

•••• BUFFALO SOUND STUDIOS

910 Currie St., Fort Worth, TX 76107
(817) 335-7733
Owner: Jim Hodges
Studio Manager: Buff Haskin

•••• CECCA SOUND

also REMOTE RECORDING
3198 Royal Lane, Dallas, TX
(214) 350-6945

Owner: Charley Pride
Studio Manager: Kraig Pride, Bob Pickering
Engineers: Bob Pickering, Kraig Pride, Chns Green
Dimensions of Studios: 58' x 26'
Dimensions of Control Rooms: 28' x 15'
Tape Recorders: MCI JH-24 24 track, MCI JH 110 4 track, MCI JH-110 2 track, MCI JH 110 mono
Mixing Consoles: MCI 538/producer's desk, 38 in
Monitor Amplifiers: UREI, Crown
Monitor Speakers: UREI 813 (4), JBL 4313's, Visikon-Little Davids

Echo, Reverb, and Delay Systems: Audience (3 plates), Lexicon 224 digital reverb

Other Outboard Equipment: Marshall Time Modulator, Vocal Stresser F769X-R, DLS DeltaLab Harmonizer/Computer, Urs Major Space Station SST, Lexicon Prime Time, digital metronome, Kepex Gain Brain, UREI LA-4 compressor/limiter (2), Valley People Dynamite (2), UREI 1176 LN (2), dbx 162, dbx 165, EXR Exciter, Dolby Model PS2, AWA1 M800 cassette, Amber 4550 audio spectrum delay
Microphones: AKG C 451E (3), C-414EB (3), Milab VM-41 (4), DC63 (4), Electro-Voice RE 20 (4), S515P (8), Countryman Associates EM-101 (5), Beyer Dynamic M 201N (5), Sennheiser 421 (4), 431 (4), Crown PZM (4), Shure SM-57 (4)
Instruments Available: Baldwin 9', Lynn drum computer, new Dolby PS2 24 channels
Rates: \$120/hr for 24 track

•••• CEDAR RIDGE STUDIOS

also REMOTE RECORDING
108 Berry Rd., Houston, TX 77022
(713) 691-4776

Owner: Bob Swannqm
Studio Manager: Bob Swannqm
Engineers: Charles Erhelberger, Eric Willson, and Sammy Taylor Jr.
Dimensions of Studios: Approx 29L x 25W—complete isolation

Dimensions of Control Rooms: 18' x 15'—symmetrical design
Tape Recorders: Otari MTR-90 w/Autolocator 24 track; Scully 284B-8 1" tape, 8 track; Studer/Revox A 77 1/2" tape, 2 track; TEAC 80-8 1/2" tape, 8 track; TEAC 35-2 1/2" tape, 2 track
Mixing Consoles: Tangent, 24 in x 24 out, Interface 300, 16 in x 8 out, Interface 104, 8 in x 8 out
Monitor Amplifiers: MAC 6100, Crown D-150, MAC 250, Crown D-300
Monitor Speakers: JBL 4311's, Klipsch Heresy's, Auratone monitors

Echo, Reverb, and Delay Systems: MXR digital delay (all four cards) Loft digital delay, AKG BX-10 reverb, Eventide Harmonizer

Other Outboard Equipment: dbx 160 compressor/limiter, DX 8 dbx noise reduction, Eventide Harmonizer
Microphones: Electro-Voice PL-76, PL-5, Shotgun, Neumann KM-84, KM-85, Beyer M 101, M-67, M-500, Sennheiser
Instruments Available: Martin D-18, Fender Strat, Ovation bass, Ovation 6 & 12 strings, full set Ludwig drums, several very fine new and older Fender tube amps; and much, much more, soon digital reverb
Rates: At 24 tracks \$85/hr, 1" 8 track \$50/hr, 1/2" 8 track \$40/hr

•••• CHATON RECORDINGS

also REMOTE RECORDING
5625 E. Nauni Valley Dr., Scottsdale, AZ 85253
(602) 991-2802

Owner: Ed & Marie Ravenscroft
Studio Manager: Steven E. Moore
Engineers: Steve Moore, Ben Taylor, John Gibson, Tim Smith, Chief Maintenance: Alan Dahl
Dimensions of Studios: 14' x 20'; Drum Booth 6' x 8'
Dimensions of Control Rooms: 14' x 16'
Tape Recorders: Otari MTR-90, 24/16 track 2", Otari MTR-104, 2/4 track 1/4"/1/2" format, Otari 5050-8, 8 track 1/2" format, Otari 5050B, 2 track 1/4" format, (2) Nakamichi 680 cassette decks

Mixing Consoles: Tangent 3216 w/simultaneous PPM/VU Bar Graph Display by Orbichronics, 24 in x 16 out

Monitor Amplifiers: BGW 750B AB Systems 105, Cue Amplifier BGW 100B

Monitor Speakers: UREI 811 Time Alians, Auratone 5C's, JBL 4311's w/UREI 539 room filters

Echo, Reverb, and Delay Systems: Echoplate 1 stereo reverb chamber, DeltaLab DL-4, DeltaLab DL-2 Acousticcomputer, Master-Room XL 305 stereo reverb unit

Other Outboard Equipment: dbx 900 Modular Rack with (5) 901 noise gates, 902 silbance controller, (2) 903 compressor limiters, Eventide H949 Harmonizer w/keyboard, EXR Exciter, UREI 1178 stereo compressor/limiter, Thorens TD 105 turntable, BTX Shadow Synchronizer, BTX 5400 SMPTE reader/writer

Microphones: Neumann U-87's, U47, KM-84, PML, AKG's, Crown PZM's, Sennheiser's, Sony's, Shure's, Electro-Voice's, Countryman Type 85 direct boxes

Instruments Available: Steinway 1891 grand piano, Prophet-5, ARP Strng Ensemble, Roland Voroder, Roland TR-808 drum synthesizer, ARP Pro Solist Complete set of Gretsch drums and Holo-Toms, set of conga drums, timbales, assorted percussion instruments, Precision bass, Fender Rhodes Mark II, Polytone Mini Brute IV bass amp, Fender Deluxe, Fender Super-Reverb amp
Rates: 24 track \$80/hr, 16 track \$65/hr, 8 track \$50/hr Block rates available—call for information Rate includes staff engineer

Extras: Chaton is located on 2 1/2 secluded acres, patio, poolside lunches, luxury resort nearby, quiet, no traffic. Studio is well maintained, comfortable atmosphere with many creative tools for both musician and engineering staff. Everything works!

Direction: Chaton is proud to announce that our 24 track facility is now ready to roll! Our new mobile recording truck can be used for live concert recording, film or video production and live simul-casting. Watch for ads in MIX Magazine and the future mobile recording issue for further details. Also, watch for information on a NEW 24 track facility soon to be built to replace the one we presently own. We still maintain a high degree of recording quality and excellence in our services. We provide a relaxed environment and welcome all projects. Please feel free to call as we can provide more services as time goes by.



Chaton Recordings
Scottsdale, AZ

•••• THE CORNERSTONE RECORDING COMPANY also REMOTE RECORDING

P.O. Box 18508, Oklahoma City, OK 73154
(405) 235-2848

Owner: Kenneth A. Sarkey
Studio Manager: Dana Portante
Engineers: Kenny Sarkey, Steve Merkel, independents
Dimensions of Studios: 35' x 50'
Dimensions of Control Rooms: 15' x 25'
Tape Recorders: Stephen's Electronics B21, 24/16 track w/Q II Autolocate computer, MCI JH-110B 2 track w/Autolocate; Otari 5050B, 2 track, Otari 5050A, 2 track, Sony TC-630, 1/4 track, Nakamichi, Technics cassette
Mixing Consoles: Tangent 3216, 28 in x 24 out, Tascam 10, 12 in x 8 out
Monitor Amplifiers: (2) Crown D-150, Crown D-60, Technics SU 860X

Monitor Speakers: Merkel custom monitors, Altec 604 8 G with UREI Time-Align Crossovers, Auratone 5 C, JBL 4311's, RTH's Altec Model 5's

Echo, Reverb, and Delay Systems: Lexicon 224 digital reverb, EMT 140 tube stereo reverb, AKG BX-10 reverb, MXR digital delay, Lexicon Prime Time delay

Other Outboard Equipment: UREI LA 4 compressor/limiters dbx 160 compressor/limiter, dbx 165 compressor/limiter, EXR Exciter, PAIA Dual Limiter (cue), Valley People Dynamite stereo limiter/gate/de esser, Crown EQ-2, Dynaco graphic EQ, Omni Craft noise gates, Audio Control Real-Time Analyzer & graphic EQ, dbx noise reduction, phase & flangers

Microphones: Neumann, Sennheiser, Sony, Shure, Beyer, Electro-Voice, Altec PZM, AKG, RCA

(continued on next page)

Instruments Available: Yamaha 7'5" grand piano, Rhodes stereo electric piano, Wurlitzer electric Piano, Hammond B-3 Organ w/Leslie, ARP Omni synthesizer, Mini Moog synthesizer, Rogers drum kit w/double bass, Yamaha drum set with 5 concert, 5 double headed toms, Yamaha Fender, and Pignose guitar amps, complete percussion/effects
Rates: 16 & 24 track recording and mixing: \$80/hr including engineer and all studio instruments Discount block and producer rates available

**** **CRYSTAL CLEAR SOUND**
 4902 Don Dr., Dallas, TX 75247
 (214) 630-2957
 Owner: Merle D. Baker
 Studio Manager: Merle D. Baker

**** **DIGITAL SERVICES RECORDING**
 also **REMOTE RECORDING**
 2001 Kirby, Suite 1001, Houston, TX 77019
 (713) 520-0201 (24 hours)
 Owner: John A. Moran
 Studio Manager: Houston John Moran, Nashville Tom Semmes
 Engineers: John Moran, Tom Semmes, Chuck Fitzpatrick, various independents
Dimensions of Studios: The world
Dimensions of Control Rooms: 550 square foot control and editing room
Tape Recorders: Sony PCM 3324 24 track digital, Sony PCM 1610 2 track digital, Sony DAE 1100 digital editor, Nakamichi cassette
Mixing Consoles: Neve 5442
Monitor Amplifiers: Phase Linear
Monitor Speakers: Calibration Standard inst MDM-4
Echo, Reverb, and Delay Systems: If we don't have it, we can get it
Other Outboard Equipment: If we don't have it, we can get it
Rates: Less than you would expect for this kind of equipment
Extras: We will soon open our second facility in Nashville. All our equipment is available for use anywhere at anytime at anyplace. We format any material for compact digital disk and also do sound for video, as well as produce the best sounding records imaginable
Direction: We will spare you the whole list but here are examples: Live Recording 10th Annual Sewanee Fiddler's Convention, Houston Grand Opera, Studio Recording Gary Dunham for Newpax Records, Sound for video: 5th Annual Great Plains Blues Festival

**** **GILLEY'S**
 4500 Spencer Hwy., Pasadena, TX 77504
 (713) 941-7193
 Owner: Mickey Gilley, Sherwood Cryer
 Studio Manager: Bert Fritol

**** **INERGI RECORDING STUDIO**
 15825 Memorial Dr., Houston, TX 77079
 (713) 493-1533
 Owner: Vincent Kickenlo
 Studio Manager: Danny Ward
 Engineers: David Kealey
Dimensions of Studios: 25' x 40' x 18' ceiling
Dimensions of Control Rooms: 18' x 19' x 12' ceiling
Tape Recorders: MCI JH114, 24 track, (3) MCI JH110, 2 track
Mixing Consoles: MCI JH536-C, 36 in x 32 out automated
Monitor Amplifiers: BGW
Monitor Speakers: Audicon, JBL 4313's, Auratone, UREI 813
Echo, Reverb, and Delay Systems: (2) EMT 240's, Lexicon and Eventide delay
Other Outboard Equipment: Scamp rack, Aphex model 602, Marshall Time Modulators, dbx & UREI compressor/limiter, ADR Vocal Stresser, Parametric Equalization, Dolby noise reduction on all equipment; automation
Microphones: Neumann U-47's, U-87's; KM 84's; KM86, AKG 414, 452's, Sennheiser 421 D; Beyer, Sony; PZM; Shure SM56, Electro-Voice RE-16, RE 20
Instruments Available: Yamaha grand piano, Fender Rhodes, clavinet, ARP String Ensemble, Music Man guitar amps, Pearl drums
Rates: On request

**** **JANUARY SOUND STUDIOS**
 also **REMOTE RECORDING**
 3341 Towerwood, Suite 206, Dallas, TX 75234
 (214) 243-3735
 Owner: Fairbanks Broadcasting, Inc
 Studio Manager: Les Studdard
 Engineers: Bob Pickenna, Linda Adelfoff, Tom Adler, Thom Caccetta
Dimensions of Studios: Studio A 30' x 36'; Studio B 15' x 15'
Dimensions of Control Rooms: Studio A 15' x 20'; Studio B 16' x 24'
Tape Recorders: 3M 16 & 24 track, MCI 24 & 16 track, Electro-sound mono; MCI 2 track
Mixing Consoles: MCI 536, 32 in x 24 out, Audiotronics 501, 26



in x 24 out
Monitor Amplifiers: BGW, McIntosh, Crown, Phase Linear
Monitor Speakers: UREI Time Aligns, JBL, Altec (with Mastering Lab crossovers), Visonik
Echo, Reverb, and Delay Systems: EMT, MICMIX, Lexicon, Harmonizer
Other Outboard Equipment: Dolby and dbx noise reduction, UREI, compressor/limiters; dbx limiters; Gain Brains; Kepex's, Orban De-Esser, Orban parametrics, MCI Videosync
Microphones: Neumann, AKG, Sennheiser, Sony, Shure, Electro-Voice, RCA
Instruments Available: Steinway 9' grand piano, Fender Rhodes, clavinet, Crummer w/Leslie, Ovation guitar
Rates: Studio A \$120 (including engineer); Studio B \$95 (including engineer)

**** **KLUDGIT SOUND INC.**
 Box 171, Cerrillos, N.M. 87010
 (505) 471-0051
 Owner: Baird Banner
 Studio Manager: Janet Persons
 Engineers: Chief Baird Banner, various assistant engineers
Dimensions of Studios: 30' x 22'
Dimensions of Control Rooms: 18' x 15'
Tape Recorders: MCI JH 24 24 track transformerless, MCI JH 110 2 track, Otari MX-5050 2 track, Nakamichi 670 ZX

cassette deck
Mixing Consoles: Sound Workshop 4036, 30 in x 24 out with 32 channel ARMS automation
Monitor Amplifiers: BGW 500/250; UREI 6500 listening amp
Monitor Speakers: JBL 4430 Bi-Radials; UREI Time-Aligned, SPICA Auratone, SPICA SC-50's, JBL 4311's, Tannoy
Echo, Reverb, and Delay Systems: Lexicon 224 digital harmonizer, MICMIX stereo, stereo Lexicon, Echoplex reverb
Other Outboard Equipment: UREI 527 third octave EO, Scamp rack—(3) compressor, (3) parametric, (3) noise gates, (2) UREI 1176 compressor, EXR Exciter, stereo, (3) sibilance compressors, dbx compressors, dbx & Dolby noise reduction, Mutron Bi-Phase, MXR Phase, Audacious Audio custom headphone cue system
Microphones: Neumann U-47, U-48; Crown PZM's, AKG 451; Electro-Voice RE-20; Shure 57, 58, 59's; Beyer Dynamic; Beyer Ribbon; Sennheiser 421 & 441
Instruments Available: Kawai grand, Hammond M-3, Wurlitzer electric piano, assorted drums, other instruments available by appointment
Rates: \$80/hr 24 track, \$60/hr 16 track; \$35/hr 2 track, please call for more information on block discounts and accommodations Remotes quoted

**** **LONGBRANCH STUDIOS**
 also **REMOTE RECORDING**
 6314 E. 13th, Tulsa, OK 74112
 (918) 832-7640
 Owner: Bill Belknap, Walt Banfield
 Studio Manager: Bill Belknap
 Engineers: Bill Belknap, Walt Banfield and freelancers Film sound engineer Walt Banfield
Dimensions of Studios: 80' x 50' w/40' ceiling Biggest studio in the Southwest
Dimensions of Control Rooms: 25' x 30'
Tape Recorders: Ampex MM1200 24 track, Ampex MM1200 16 track, (2) Ampex ATR102 mixdown 1/2 tracks, Ampex AG440A 2 track, Nagra 4s
Mixing Consoles: Automated Processes Inc., 24 in x 24 out with additional 8 channels for mixing, portable 8 channel w/API parts.
Monitor Amplifiers: McIntosh MC-2300, Crown D-150, Crown 300-A, BGW 100, Phase Linear 930
Monitor Speakers: Studio: Altec Super Reds; Control Room: Big Reds, Century 100-A, Auratones.
Echo, Reverb, and Delay Systems: EMT plate, AKG BX-10, MICMIX, Eventide Harmonizer, room delay, Cooper Time Cube.
Other Outboard Equipment: Graphic equalizers, sibilance con-

(continued on next page)

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1651 Gardena Avenue, Glendale, CA 91204 (213) 956-3222

trol, UREI LA-3A compressor/limiters, UREI 1176 compressors, API 525 compressor/limiters, instant flangers, notch filter, Kepex's

Microphones: Neumann, Sennheiser, Shure, Electro-Voice, Crown PZM, RCA, Beyer, AKG, Sony, large selection of each
Instruments Available: Yamaha 9' grand, Yamaha CP 30 electric piano, Jupiter 4 synthesizer, Camco studio drums, various percussion

Rates: 24 track \$90/hr. (block time \$80/hr), 16 track \$80/hr (block time \$70/hr), 8 track \$70/hr (block time \$50/hr); 2 track \$50/hr, radio production \$40/hr, freelance engineer rates on request, film sound and mixing rates upon request



Musicians Recording Studio
Houston, TX

•••• MUSICIAN'S RECORDING STUDIO
1423 Richmond Ave., Houston, TX 77006
(713) 521-9887

Owner: Music Resource Services, Inc

Studio Manager: Bill Wade

Engineers: Bill Wade, Bobby Ginsburg, Roger Tausz

Dimensions of Studios: Studio A 36' x 22', Studio B (live) 22' x 19'

Dimensions of Control Rooms: 17' x 12'

Tape Recorders: Studer A 80 24/16 track, Otari MX 5050 B track, Otari (2) MX-5050B 2 tracks, Technics M-2/B & M 14 cassette decks

Mixing Consoles: Quad/Eight Pacifica, 28 in x 24 cut

Monitor Amplifiers: SAE 2500 (2), SAE 2400, Kenwood 7400 (phones)

Monitor Speakers: UREI 813's, JBL 4313's, JBL L 100's (fold-back), Auratone

Echo, Reverb, and Delay Systems: Lexicon 224 digital reverb with all programs, DeltaLab DL-1, DL-2, MICMIX Super C Master-Room, Orban stereo reverb, live room for foldback or cutting

Other Outboard Equipment: White room EQ, limiters and noise gates by Quad Eight, UREI and dbx, Omnipressor, dbx noise reduction

Microphones: AKG 414's & 451's, Beyer M-500's, E-V RE 20's, Crown PZM's, Neumann U 87's, KM 84's, 86, 88, Sennheiser 421's, 441's, Shure SM 57's, 58's, 54's, 81's, Sony 22 F's, 50 P's, RCA 77 DX

Instruments Available: Sonor drums, Kawai grand piano, Fender Pre CBS Super Reverb, Fender 4 10" Bassman, Hammond C 2 w/Leslie, Fender Precision Bass, any percussion and synthesizers available by appointment

Rates: 24/16 track \$85/hr, 8/2 track rates upon request Available 24 hrs/day, 7 days/week

Extras: Two separate and isolated rehearsal halls for recording or stage show rehearsals. Also suitable for video and promotional shoots. Complete monitor system with four independent mixes in to four floor and two sidefill monitors, 3K watts of Crown and Crest power. Full stage lighting on 6 channel controller with three Berkey spots

Direction: Serving the Houston music scene for over five years Musician's Recording Studio has recently completed a year's worth of remodeling and improvements, reflecting its commitment to absolute quality mixed with a simple, relaxed atmosphere

•••• OMEGA AUDIO & PRODUCTIONS, INC.
REMOTE RECORDING ONLY
8036 Aviation Place, Box 71, Dallas, TX 75235
(214) 350-9066

Owner: Paul A. Christensen, Russell L. Hearn

Studio Manager: Paul A. Christensen

Engineers: Paul A. Christensen, Russell L. Hearn, David Buell

Dimensions of Studios: Studio A 35' x 40', Studio B 12' x 15', Remote Recording Truck: 8' x 15'

Dimensions of Control Rooms: 22' x 20'

Tape Recorders: Otari MTR-90 24 track, (2) Otari MTR-10 2/4 track, Otari MX5050-B 2 track, Studer/Revox A-77 2 track, Eumig cassette, Autogram stereo cart

24 TRACK

The Southwest

Mixing Consoles: Amek M2500, 36 in x 24 out, Custom, 30 in x 24 out

Monitor Amplifiers: Crown PSA 2, (4) Crown D-150A, (Crown D 40

Monitor Speakers: JBL 4435 Bi radial, JBL 4313, JBL 4311, and Auratone

Echo, Reverb, and Delay Systems: Echoplate and Master Room reverb

Other Outboard Equipment: Eventide H 949 Harmonizer with DeGlitch Card, Analog and Digital Associates stereo tapped delay, DeltaLabs DL-2 digital delay, UREI 565T "Little Dipper", HTS stereo phono preamp, Denon DP 1100 turntable, Gotham TTM NR rack with dbx K9-22 cards, Autogram stereo broadcast cart machine, UREI Digital Metronome, BTX 4600 4 machine controller w/Shadow interlock, Scamp rack w/17 modules, BTX 5100 time code generator

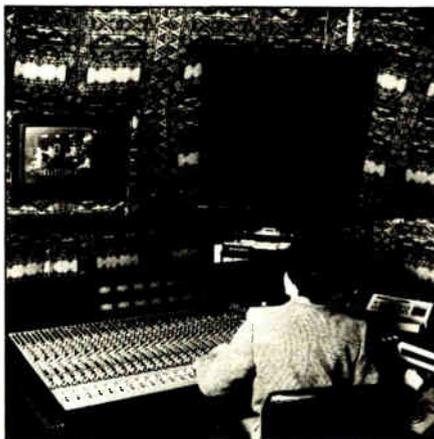
Microphones: Varied selection of over 70 available including: Neumann U 87, U 47, AKG 414, 451, CK 8, Shure SM 81, 58, 57, 53, Beyer M 201, Sennheiser 441, E-V RE 20, MR-520, Sony 22 P, ECM 50, ECM 21, AKG D 12E

Instruments Available: Baldwin 7' grand, Les Paul electric and Martin acoustic guitars

Rates: Studio, audio only 24 track \$100/hr, audio/video interlock \$125/hr Remote recording \$1,800/day, plus travel expenses

Extras: Studio facility is specially equipped for video music production. Located in same-door access with Video Post & Transfer, state-of-the-art 1" computerized video editing facility. Additional association with clearwater Teleproductions, network 4 color camera, 1" video mobile unit. Video music projects can be handled from concept to completion

Direction: Commitment to the development of video music for cable and video disk has been substantial over the past 4 years. Partial credits: Johnny Cash, Helen Reddy, Anne Murray, Eddie Rabbitt, Merle Haggard, Alabama, Ben Vereen, Donna Fargo, Al Jarreau, Blondie, Micky Gilley, Loretta Lynn, Charlie Pride, Willie Nelson, Waylon Jennings, Todd Rundgren, Spyro Gyra, The Ramones, Hall & Oates



Omega Audio & Productions, Inc.
Dallas, TX

•••• PANTHEON RECORDING STUDIOS
6325 N. Invergardon Road, Scottsdale, AZ 85253
(602) 948-5883

Owner: Dennis Alexander

Studio Manager: Beth Gunn

Engineers: Steve Escallier, Dennis Alexander, Ralph Osborn

Dimensions of Studios: Studio A 40' x 22', Studio B 3

separate rooms totaling 22' x 17'

Dimensions of Control Rooms: Studio A 18' x 18', Studio B

15' x 13'

Tape Recorders: Lyrec (Neve) 24 track, Ampex ATR 100 2

track, Technics 2 track

Mixing Consoles: Studio A: AMEK 8064 28 in x 24 out, Studio B SpectraSonics 22 in x 16 out

Monitor Amplifiers: BGW 750 C

Monitor Speakers: A: Altec 604E w/Mastering Lab Crossover, B: Altec 604E bi-amp w/new advanced technology cone #524

Echo, Reverb, and Delay Systems: Quad Eight digital reverb, AKG BX-10; Echoplate, stalls and hallways for echoes

Other Outboard Equipment: 24 track dbx and Dolby, UREI 1176 limiters, dbx 160 limiter; noise gates, 8 channel Omni Craft GT-4's, Eventide Flanger, Eventide Harmonizer; Orban De-Esser, (2) Inovonics 201 peak limiters, CPR 16 digital delay and effects micro-processor

Microphones: Neumann U 87's, AKG's E.V's, Shure's, Sony's, Sennheiser 451's

Instruments Available: Yamaha grand piano, 1936 B Steinway grand piano, Yamaha CS-80 synthesizer, new 5 piece Gretsch drum set, assorted percussion other instruments on request
Rates: Upon request

•••• PRECISION AUDIO, INC.
also REMOTE RECORDING
11171 Harry Hines, Suite 119, Dallas, TX 75229
(214) 243-2997

Owner: Mr & Mrs Charles S Sheppard, Jr

Studio Manager: Rick Sheppard

Engineers: Rick Sheppard, John Rouzer, Stacy Brownrigg

Dimensions of Studios: 25' x 25' x 11' ceiling

Dimensions of Control Rooms: 15' x 15' x 11' ceiling

Tape Recorders: MCI JH-114, 24 track, (2) Scully 280, 2 track; TEAC 3340S, 4 track, Ampex 400, full track, Crown 722, 2 track, Telex 300, 2 track

Mixing Consoles: Custom built, 28 in x 28 out, w/8 mixing busses, Tascam Model 10 modified

Monitor Amplifiers: Crown and Custom built

Monitor Speakers: UREI 811's, Speakerlab Super 7's

Echo, Reverb, and Delay Systems: EMT Plate Model 140, MICMIX Model III, Tapco 4400, tape delay echo

Other Outboard Equipment: UREI 539 equalizers, 48 channels STC noise reduction; 8 channels dbx noise reduction; UREI LA3A compressor/limiter, Eventide Phase Shifter

Microphones: (2) Neumann U-87, KM-88, (2) Sennheiser 441, (5) Sennheiser 421 U, (3) AKG C-451-E, (4) Sony ECM-22P, (2) AKG D-224E, (4) AKG D-1000-E, (3) Shure SM-53; MB 301, E-V 635-A

Instruments Available: Yamaha C-3 conservatory grand piano, 8 piece Ludwig trap set, Yamaha 115B bass amp, (2) Checkmate 25 guitar amps, VOX continental organ, ARP String Ensemble, Gibson Grabber Bass, Gibson ES 340TD electric guitar, acoustic guitars by Yamaha, Epiphone, and Dobro; large custom built two keyboard studio synthesizer

Rates: 24 track \$85/hr, 16 track \$65/hr, 8 track: \$45/hr. Special after hours demo rates available. Call for quotes on location recording

•••• RAINBOW SOUND
1320 Inwood, Dallas, TX 75247
(214) 638-7712

Owner: Bob Cline

Studio Manager: Phil M Allison

Engineers: Chief David M. Boothe, Keith Rust

Dimensions of Studios: 33' x 23' x 14'

Dimensions of Control Rooms: 18' x 14' x 8'

Tape Recorders: MCI JH 116, 24 track, MCI JH 110, 2 track, Scully B280, 2 track; Ampex A440, 2 track, Eumig FL1000 cassette

Mixing Consoles: MCI JH 428-B 28 in x 24 out

Monitor Amplifiers: Crown

Monitor Speakers: JBL Auratone

Echo, Reverb, and Delay Systems: Echoplate, AKG BX 20 BX 10, DeltaLab DL 1

Other Outboard Equipment: ADR Vocal Stresser, LA4's, 1176's, Easy Rider, Orban Parametric EQ & De-Esser, Eventide Harmonizer and Flanger, Gain Brains, Kepex, Cooper Time Cube

Microphones: Neumann 87's, 47's, KM 86, 88, 84, Sennheiser 421, 441, AKG 451, Sony C 500, ECM 22, PZM, RCA DX 77, 44-B (2), Shure SM 53, E-V RE 15, 16, 20, Beyer M-160N
Instruments Available: Kawai 7' grand Fender Rhodes, Hammond B 3 w/Leslie, misc percussion

Rates: Call for info

•••• REAL TO REEL STUDIOS INC.
2545 N Fitzhugh, Dallas, TX 75204
(214) 827-7170

Owner: Corporate

Studio Manager: Ron Moran

•••• REELSOUND RECORDING CO.
ONLY REMOTE RECORDING
P.O. Box 280, Manchaca, TX 78652
(512) 472-3325 or 282-0713

Owner: Malcolm H Harper, Jr

Studio Manager: Malcolm Harper, Jr

Engineers: Malcolm H Harper, Mason Harlow, Greg Kling-smith

Dimensions of Studios: (Sierra Audio design truck) Remote

Unit: 42' long, 13' height, 8' wide, Overdub room: 7' x 6'

Dimensions of Control Rooms: 20' x 8' x 6' 9"

Tape Recorders: MCI JH-24, 24 track, MCI JH-16, 24 track,

(continued on next page)

MCI JH 110B 2 track, MCI JH 110B 1/2 inch, 2 track, Nikko NG 790 cassette

Mixing Consoles: MCI JH 6J6LM, 36 in x 36 out, Ampex AM-10, 6 in x 2 out, Soundcraft, 16 in x 6 out

Monitor Amplifiers: Crown, Studer

Monitor Speakers: Sierra Hadley TM-7, JBL 4311, 4313, Auratones

Echo, Reverb, and Delay Systems: Ursal Major 6 x 32 reverb, DeltaLab DL-1 DL-2, MICMIX XL-405

Other Outboard Equipment: Allison Kexex, Gain Brains, Dynamics, UREI LA-4A, dbx 160, dbx rack with DS and limiters UREI Graphics, White 11/6 octave EQ units; Sony TV monitor system, Toshiba color camera, MCI JH 45 AutoLock System SMPTE Time Code editing, 48 input transformer split box

Microphones: AKG D 400, D 224, 451 E, 414 E D 12 Shure SM 57, UREI DL, Neumann KM 84, U47/FET, Countryman DI 101, Crown PZM, Sennheiser 441, 421 E V RE 20 Beyer HR 201

Rates: Based on per day, mileage per diem on crew (lodging and meals), tape cost

Direction: Ampex Golden Reel Awards Gold and Platinum Record Awards Artists Ted Nugent Journey ZZ Top, Tom Petty Todd Rundgren Al Stewart, Genesis Christopher Cross Amy Grant, De Garmo and Key Band Hee-Goos Wilhe Nelson Joe Fly Asleep at the Wheel, Frankie Beverly and Maze Taste of Honey Jerry Jeff Walker Earth Wind and Fire Dotie West Quarterflash B J Thomas Andrae Crouch Charlie Daniels Band The Gap Band Yarbrough and Peoples Jay Arron

**** RIVENDELL RECORDERS

2223 Strawberry Village, Pasadena, TX 77502
(713) 472-5082

Owner: Jubilee Communications, Inc

Studio Manager: Wayne Donowho

Engineers: Brian Tankersley, Paul Mills, Rick Thigpen, Jerry McPherson

Dimensions of Studios: 28' x 42'

Dimensions of Control Rooms: 18' x 20' x 11'

Tape Recorders: Studer A 80 Mark III, 24 track, Otari MTR 10 1/2 track, Technics RS 1520 1/2 track, Technics RS 1506, 1/4 track, JVC KDA8 cassette

Mixing Consoles: Trident Series 80 32 x 24 x 24, w/32 channels of Melquist automation

Monitor Amplifiers: H&H, Crown, Crest, Harmon Kardon

Monitor Speakers: UREI 813 JBL 4311, Auratone

Echo, Reverb, and Delay Systems: AMS RMX-16 digital reverb, EMT 140ST (tube), H910 Harmonizer, (2) DeltaLab DL-1, Loft 450

Other Outboard Equipment: UREI 1176 EXR Exciter, dbx 160, Compressor, Kexex II, various graphics and parametrics

Microphones: Telefunken U 47, Neumann U-67 U-87, KM 84, AKG 414, C-33, Sennheiser 441 421, Shure SM-81 SM 57, E V RE 20, and others

Instruments Available: Kawai grand, Yamaha CS 80, clavinet, Rhodes, B-3 full Yamaha drums

Rates: Please call

**** SOUND ARTS RECORDING STUDIO

also REMOTE RECORDING

2036 Paskett, Suite A, Houston, TX 77092
(713) 688-8067

Owner: Jeff Wells

Studio Manager: Barbara Pennington

Direction: Sound Arts offers high quality recording at reasonable rates equipped with a 48 channel console and a 24 track Ampex machine Using its state of the art 24 track studio as a vehicle for achieving national quality master tapes The studio also has a wet bar, showering facilities, and an outdoor courtyard patio for a relaxed atmosphere Sound Arts has plenty of outboard equipment including several digital delay lines, noise gates, compressors, limiters, flangers and (2) AKG reverbs using an Altec 604 system for monitoring Other services include publishing, block rates and we own our own record label, Earth Records Call us for more information

**** SOUTHERN RECORDING & VIDEO PRODUCTION, INC.

also REMOTE RECORDING

1123 Jackson St., Alexandria, LA 71301
(318) 473-0779

Owner: Bill Gabour, Dennis Murdock

Studio Manager: Bill Gabour, Dennis Murdock

**** STUDIO SOUTH

also REMOTE RECORDING

308 W. 6th St., Austin, TX 78701
(512) 472-4807

Owner: Windsong Corp

Studio Manager: James Tuttle

**** SUMET-BERNET SOUND STUDIOS INC.

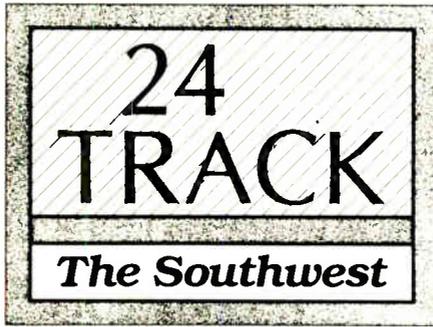
7027 Twin Hills Ave., Dallas, TX 75231
(214) 691-0001

Owner: Ed N. Bernet

Studio Manager: Tom Kenchel

Engineers: John Mayfield/Bob Sullivan/Zeke Durrell

Dimensions of Studios: Studio A 48' x 52', Studio B 28' x 20'



Dimensions of Control Rooms: Studio A 14' x 18', Studio B 12' x 14'

Tape Recorders: MCI JH 16, 24 track Ampex MM-1000 16 track, Ampex AG 440 B 8 track Ampex AG 440 B AG 440 C mono 2 track

Mixing Consoles: Studer A Harrison (2) 24 w/ Allison Automation, 26 in x 24 out Studio B Custom 24 in x 16 out

Monitor Amplifiers: A Phase Linear 400's B Phase Linear 400's

Monitor Speakers: Studio A UREI Time Aligned 813's Auratones, Studio B JBL 4331 Auratone

Echo, Reverb, and Delay Systems: AKG BX 20E EMT four natural chambers

Other Outboard Equipment: Kexex Gain Brain Stereo synthesizer compressor/limiter limiters Varispeed Harmonizer Aphex Aural Exciter, Metronome Dolby noise reduction, D'Esser

Microphones: Neumann AKG Shure Electro Voice, Sennheiser RCA PZM Beyer Sony

Instruments Available: Steinway 9' grand, Yamaha 7' grand, Hammond B 3 Fender Rhodes J3

Rates: 24 track \$105/hr, 16 track \$65/hr, 8 track \$50/hr, mono/2 track \$50/hr

**** SUNDANCE PRODUCTIONS

7141 Envoy Ct., Dallas, TX 75247
(214) 688-0081

Owner: Rush Beesley

**** SUNDANCE SOUND STUDIOS, INC.

also REMOTE RECORDING

3330 Walnut Bend Lane, Houston, TX 77042
(713) 977-9165

Owner: Chip Stanberry, Les Williams, Mark Richardson

Studio Manager: Mark Richardson

Engineers: Les Williams, Mark Richardson

Dimensions of Studios: 29' x 42' x 12'

Dimensions of Control Rooms: 17' x 22' x 10'

Tape Recorders: Otari MTR-90, 24 track, Otari MTR-10, 2 track, Studer/Revox A 700, 2 track

Mixing Consoles: Tangent 3216A, 28 in x 24 out

Monitor Amplifiers: Haller 500

Monitor Speakers: JBL 4313, Auratone, Toby, Advent

Echo, Reverb, and Delay Systems: Lexicon 224 digital reverb, Echoplex II plate reverb, DeltaLab DL-2 Acoustic/computer/digital delay, Roland 555 Chorus-Echo

Other Outboard Equipment: EXR Exciter, Aphex Aural Exciter, dbx 165 compressor/limiters, full complement of noise gates and equalizers, Roland Dimension D, Orban De Esser, cassette and 1/4 track reel copy machines

Microphones: Neumann U-87, AKG C414EB, C 451, C 452, Sennheiser 421, 441, E V PL 20, PL-77, PL-91, Crown PZM, Shure SM-57, SM-58, Neumann KM-84, U-47

Instruments Available: Yamaha C-7B, 74" grand piano, Oberheim OB-Xa B voice synthesizer, Prophet-5 synthesizer, ARP String Ensemble, Oberheim DMX drum machine, TAMA drum kit, Rhodes stereo electric piano, Roland guitar synthesizer, amplifiers by MESA/Boogie, Fender and Music Man, Hammond B 3 organ & Leslie speaker, EMU Systems Emulator

Rates: Upon request

Extras: Wet bar and lounge area, shower, video & film services available, live studio recording area for strings and brass, complete production, arranging and copyrighting services, in-house publishing company

Direction: We have extensive experience in both album productions and commercially aired jingles We also are currently involved with major Los Angeles based producers on a recording and publishing basis Our goal is to encourage and attract national caliber artists and producers to the Houston area We feel our facilities offer the opportunity to record any type of material on a caliber equal to the current major recording centers

**** THE THIRD COAST SOUND, INC.

501 NORTH IH-35, Austin, TX 78702
(512) 478-0019

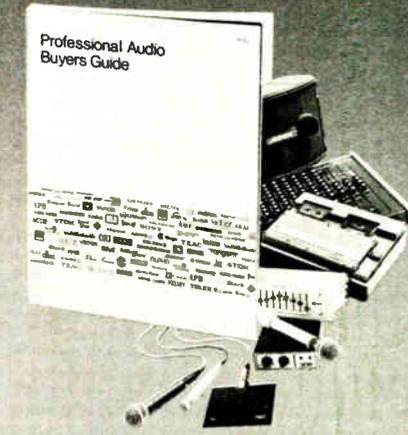
Owner: Michael Block

Studio Manager: Bruce F. Truitt

Engineers: Vince McGarry, Dennis Davis, Patterson Barrett, Larry Lawrence, Bruce F. Truitt

(continued on next page)

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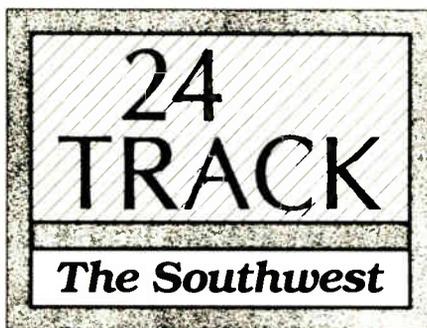
Recognize
the Problem...

★ Increase Service Life
★ Increase Cost Savings
If your tape heads are worn and ready to be replaced or just not delivering high quality performance, let **RESTORATION** evaluate them at no charge. If refurbishment is possible your tape heads will be delivered within 24 hours, ready to perform at peak efficiency, at about 1/10th the cost of a new head. For further information contact:

the Solution...



15904 Strathern St. #23 / Van Nuys, CA 91406
Phone: (213) 994-6602



Dimensions of Studios: 3 rooms from 12' x 7', 20' x 40', 150,000 cubic foot sound stage
Dimensions of Control Rooms: 22' x 18'
Tape Recorders: MCI 24 track with JH 45 loc., (2) MCI 110-B, 2 tracks, Studer A 67, 2 track, Ampex 440 C, 4 track, cassette recorders
Mixing Consoles: MCI 500 Series, 32 in x 32 out, w automation
Monitor Amplifiers: McIntosh, HGW
Monitor Speakers: UREI 813 Time Aligned Auratons
Echo, Reverb, and Delay Systems: Prime Time Acousticomputer DL 2, Eventide Harmonizer, Lexicon 224
Other Outboard Equipment: Scamp Rack UREI 1176, UREI LA 3 and LA 4, Allison rack (18 modules), UREI Graphics, Neve comp/limiters
Microphones: Neumann, AKG, Sennheiser, Shure, Capps, Crown P2M, etc.
Instruments Available: Busendorfer grand Yamaha grand, Colard & Collard 1820 grand, various guitars, amps and synthesizers. Full band gear available
Rates: Call for data
Direction: The Third Coast is a full audio video production house centered in an historic stone warehouse in Austin. We feature the finest video equipment available, a fully automated 24 track recording facility and a 120,000 cubic foot sound stage. Audio and Video are tied together with house sync and fully interfaced. The Video equipment includes 3 HCA 1" machines, Quantel Digital Video Effects, CMX 340X and a Grass Valley switcher with Fmem+. Audio features a full 24 track MCI system with a 528 automated console JH 24 recorder and Dolby A Texas' finest 25 track facility where the last overdub is video. For information Call Michael Block or Mike Moore (512) 478-0019

**** T.M. PRODUCTIONS
1349 Regal Row, Dallas, TX 75247
(214) 634-8511
Owner: Shamrock Broadcasting
Studio Manager: Dan Peterson

**** UNDERGROUND STUDIOS
4420 E. Thomas Rd., Phoenix, AZ 85018
(602) 959-2007
Owner: Charley Eyanson
Engineers: Charley Eyanson, Michael Schwartz
Dimensions of Studios: 20' x 27' Isolation booths A 10' x 16', B 10' x 14'
Dimensions of Control Rooms: 18' x 20' x 12' high
Tape Recorders: Otari MTH 90, 24 track, Otari 5050B 2 track, Pioneer HT2022, 2 track
Mixing Consoles: Tancent 4216, 24 in x 24 out
Monitor Amplifiers: Yamaha
Monitor Speakers: JBL 431's, Auratone 5C's
Echo, Reverb, and Delay Systems: DeltaLab DL 4 Master Room XL 210 reverb, EXB Exciter, dbx 161 compressor, Yamaha F1010 delay, MXR pitch transposer, Master Room Dyna flanger, Omnidrive noise gates
Microphones: AKG 451, 501, Sennheiser 441, 41, Beyer 500, 400, Electro Voice BE 16, Shure 81, 58, 57, Audio Technica 41, 41, 21
Instruments Available: Yamaha grand piano, Hammond B 3 w Leslie, ARP synthesizers, Ludwig O 1 plus 6 over-drive sets, Q1 Ovation acoustic and electric 12 string, Birkbeck 4001 bass, Gibson Les Paul, Fender Strat & others, in rental
Rates: 24 track \$100/hr, 16 track \$80/hr, Track \$60/hr. Block rates in request and studio musicians available

**** UNITED AUDIO RECORDING
8535 Fairhaven, San Antonio, TX 78229
(512) 690-8888
Owner: Robert Perron, Martin Perron
Studio Manager: Marco Greenberg
Engineers: Martin Perron (chief), HSEF, MSEE, Robert Perron, ASC/AP, Bruce Greenberg, BA John Wiggle, Asst. engineer
Dimensions of Studios: A 36' x 40', B 22' x 15'
Dimensions of Control Rooms: A 17' x 20', B 12' x 15'
Tape Recorders: 41 M/M 79 24 tracks, 41 Ampex ATH100 4 tracks, 41 Ampex ATH100 2 tracks, 41 Scully 2805 2 tracks, Scully 2805 1/2 track
Mixing Consoles: A Spectra Sonics 10, 4 24 w Valley People automation, 4 in x 4 out, B Interface, 16 in x 4 out
Monitor Amplifiers: Spectra Sonics
Monitor Speakers: UREI 813A Time Auras Auratones

Echo, Reverb, and Delay Systems: Lexicon 224 digital reverb, Prime Time, Eventide Harmonizer, Master Room MR3, AKG BX 10F
Other Outboard Equipment: Teletronics LA 2, UREI 1176, Gain Brain, Kepex, UREI Graphics, dbx 165, Orban Parametric, Orban De Esser
Microphones: AKG C 414, C 451's, Neumann KM 84, KM 86, KM 88, U 47, U 67, U 87, U 47FET, Electro Voice RE 20's, RE 55's, CS 15 Shure SM 57, SM 81, Sennheiser 421, 441, Meyer 500 Crown P2M
Instruments Available: (2) Ludwig tympani drums Baldwin grand piano Baldwin Packer piano Prophet 5 synthesizer Rhodes 88 Hammond B 3 w Leslie, orchestra bells, chimes, bell tree, wind chimes, and all other percussion instruments
Rates: \$85/hr. Special daily and weekly rates available. Materials at wholesale, accommodation rates on request

**** VINTAGE RECORDERS
4831 N. 11th St. Suite D, Phoenix, AZ 85014
(602) 241-0667
Owner: Billy Moss
Studio Manager: Gayle Cells
Engineers: David Musick, Howard Gold (assistant), freelance encouraged
Dimensions of Studios: Drum booth 12' x 8', Iso room 9' x 9', Main studio 26' x 20', Reception 16' x 11'
Dimensions of Control Rooms: 16' x 21'
Tape Recorders: Studer A 80 (w Mark II w Mark III updates and autowater), 16 24 track, 4M M 64 2 24 track, 4M M 64 2 track, TEAC 3340S, 4 track, TEAC A 6400 2 track, Nakamichi 680ZX cassette
Mixing Consoles: Trident B' range (highly modified) 46 x 16 x 24
Monitor Amplifiers: UREI 6500 Crown D 150's McIntosh 2100, McIntosh MC75
Monitor Speakers: UREI 813, Auratone 5 C, E V Sentry V with EQ, Valley People (TMI) powered headphone system (9 double stations)
Echo, Reverb, and Delay Systems: EMI 140 stereo plate (tube), Lexicon Prime Time, UREI Cooper Time Cube
Other Outboard Equipment: Teletronics LA 2A's (orig.), 4 noise gates, Aengus graphic EQ's, Gotham Klien Hammond (U E 100 EQ (tube) gates, sta level compressor cart, RCA 117 VCR Conn Strobotuner, Franz metronome, Tektronics scope signal generator, Fluke multimeter
Microphones: Neumann U 67's, U 47's (tube), M 49's, KM 64's, AKG C 12's, Sony C 37A's, C 57, Shure SM 57's, SM 58's, 664 Sennheiser 441's, Altec 633 salt shaker, RCA 44 IR's, 44 BX's, 77-IX's, 77 A's
Instruments Available: Yamaha C-7v 7 1/2" piano, Hammond B 3, Fender Rhodes, Fender Stratocaster 1955, Fender Esquire 1961, Fender Precision Bass (Tele style) 1957, Fender P Bass 1964, Fender fretless P Bass 1965, Fender P Bass 1965, Fender Telecaster Bass 1968, Gretsch Country Gentleman, Old Kay electric C&W guitar, acoustic b & 12 strings 1950's tweed Champ, Fender Vibrochamp, Gretsch drums, Rogers drums, Ludwig drums, 5 different size snares, many cymbals, LP brass timbales
Rates: Call

**** WESTWOOD RECORDING STUDIOS
also REMOTE RECORDING
964 West Grant Road, Tucson, AZ 85705
(602) 622-8012
Owner: Roger King, Fred Porter, Bill Cashman
Studio Manager: Bill Cashman
Engineers: Fred Porter, Roger King, Bill Cashman
Dimensions of Studios: Studio A 42' x 22', Studio B (vocal booth) 6' x 6', Studio A also has an adjoining 10' x 10' Drum room
Dimensions of Control Rooms: Studio A 14' x 22', Studio B 8' x 8'
Tape Recorders: MCI JH 114 16 & 24 track, MCI JH 110 2 track, Ampex 440H 2 track, Ampex 440 2 track, TEAC Tascam 40 4 4 track, TEAC cassette C 3 2 track, TEAC A 2 400SX 2 track
Mixing Consoles: MCI JH 640 w automation, 28 in x 28 out, Tancent 4216, 18 in x 16 out, Tascam Model 5A 8 in x 4 out
Monitor Amplifiers: Crown 900's, Crown 150's, Crown D 60
Monitor Speakers: JBL 4333A's, 4311, 4301's, Auratones
Echo, Reverb, and Delay Systems: AKG BX 20F, Eventide Digital Delay, Kenoplate II
Other Outboard Equipment: Eventide Harmonizer, Orban Parametric, De Esser, UREI LA 2A's, LA 2A's, Orban Parametric Series, Synthesizer, UREI Parametric, EQ, 111 stereo processor, E V Aengus Kepex, max compressor, MXR Flangers, Eventide Flanger, Plus a FX 400 SMPTE synthesizer and BTX 411 SMPTE time code generator
Microphones: Neumann 87's & 8's, Sennheiser 441's & 41's, Shure SM 11, 58, 57, Electro Voice RE 20's, RE 10's, AKG
Instruments Available: Baldwin grand piano, Hammond B 3 w Leslie, ARP 2600, ARP Chroma, MCI, M, and other synthesizers, Fender Precision Bass, Fender Telecaster, Fender Stratocaster, Shure 4001 drum set, J. J. Tablas, Gildor, and other maxamp, zoom, minis, over-ride instruments
Rates: \$100/hr 24 track, \$85/hr 16 track, \$45/hr 4 track, \$40/hr 2 track, Mobilize/lock rates: \$500/\$600 per day (1/2 mile) and per diem. We also offer our featured rate of \$1000/week. Our 24 track production rates are \$45/hr in room, 4 track production. These rates include all outboard gear, studio musicians, and engineer. No additional charges

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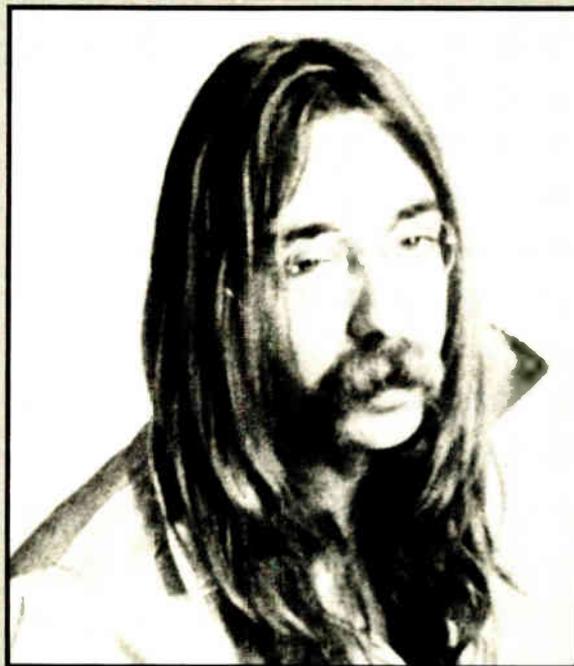
PRODUCERS - DESK

by James Riordan

Jeff Baxter is the classic example of the musician turned producer. A founding member of Steely Dan, Baxter quickly acquired a reputation as one of the best of a new breed of tasteful rock guitarists that came on the scene in the early seventies. By the time Baxter left Steely Dan in the summer of 1974, he was one of the premier L.A. session guitarists, a position which he holds to this day. By December of that same year Baxter had joined the Doobie Brothers. He enjoyed tremendous success with the group on four albums from "Stampede" to "Minute By Minute". While recording "Minute By Minute," Baxter produced the Paul Bliss Band's "Dinner With Raoul" album which displayed his amazing ability at crafting and building a highly stylized and technically skilled production. This was followed by his producing Livingston Taylor's "Man's Best Friend" and Nazareth's "Malice In Wonderland." Since then he has produced a second album for Nazareth and his most recently released project is the highly acclaimed debut album for Sneaker which has already spawned two hit singles, "More Than Just The Two Of Us" and "Don't Let Me In."

"My friend, Shelly Weiss, was working at A&M Records at the time," says Baxter, and he played a tape of Sneaker and I said, Whoop! Songs, — great songs. They're real good players as well. A band that is a product of all the styles I really like. I hear a lot of myself in the guitar player and a lot of Jay Graydon, and a lot of Elliot Randall, but at the same time it's unique. The band has synthesized various styles into something totally different. I related to them on all levels and I told Shelly I should produce their record. They were looking for a producer and I told them to take their time and decide, but I felt I was the only guy that was going to be able to produce this record, and sooner or later they would come back to me. Three years later we got together and that is exactly what happened. We started our first session on some borrowed time after midnight, but we got it rolling and a year later the record came out. It's one of my all time favorite records in terms of the crafting and the goodies. There's lots of goodies on it. I'm working with Carl Wilson right now and I'm really looking forward to making that record as well."

Baxter confirms that his criteria for producing a band is in the material.



**Jeff "Skunk"
Baxter**

"Songs. I don't give a shit if they're ugly or deformed. It's in the songs. Look at Steely Dan. We were one of the ugliest and most deformed bands in the world, but we did all right. We got panned for our first gig at the Whiskey and the guy said he wasn't real sure about the music, but he knew for sure that we were the worst dressed band he ever saw. Ugliest bunch of guys he'd ever seen on one stage."

Baxter cautions that the music business has changed since Steely Dan began. "It was a lot simpler then. It takes a lot more to survive now and the entire music business is in transition. This is my theory, for what it's worth: In the 1940's, the decade of the big band, a major artist could tour the world with a large band. After the war the inflationary period that set in made it almost impossible for a 17 or 18 piece orchestra to travel and be able to make a living. So the record business grew, because instead of having to go see the band you could listen to them on a disk. Okay, now we've had 10 or 15 years of

rock n' roll on the road. It costs over \$160,000 a week to keep a band like The Doobie Brothers on the road. That means they can only play the big places which results in the same thing happening again but instead of the record business it's the video business. Now the technology is there so you can see and hear the band. The reason there are twelve rock n' roll shows on TV every Saturday is because the kids are staying home and watching it. To go to a concert is going to be twenty bucks for you and your girlfriend and another fifteen dollars for gas and dinner. Kids can't afford that on a regular basis. But you can watch it on TV and even hook up the set to the stereo so it sounds like music."

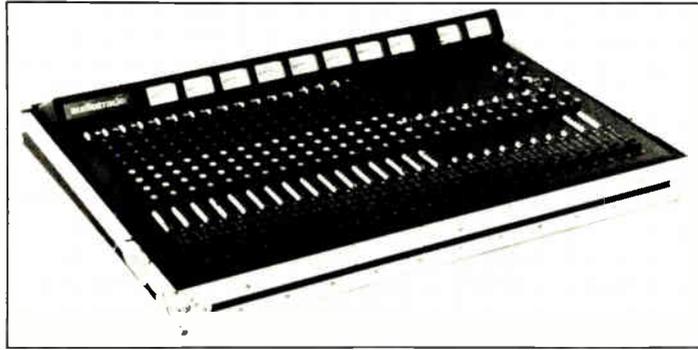
Baxter advises those seeking a career in producing to learn how to be a mediator and put combinations of people together in ways that benefit all concerned. "You need a little knowledge in a lot of areas to be a good producer. I'm a big believer in getting into the music business from the technical side. Learn your craft well and get out

and meet people. I used to always try to get a job in a music store or a guitar repair shop where every guitar player who was working was going to come in so, sooner or later, the gigs would come."

In this era of the super stage show, Baxter has somehow always managed to convey a very musical energy in his approach to playing. It's obvious he was enjoying it for what it was, not what it was made out to be. "I think for something to be truly effective there must be contrast present. If I sit there on a stool with my headphones on and concentrate on my guitar playing it makes the bombs, flashes, smoke or whatever more exciting because it was the antithesis. It created tension, which is what Shakespeare did when he interwined his comic plots with tragedy. I think that a lot of songwriting and a lot of how we hear songs comes from the Anglo-Saxon concept of writing and music. Shakespeare was written in iambic pentameter which is playable on a set of drums or programmable on a drum machine. The shuffle is probably the most widely loved groove of all, and that is iambic pentameter."

Baxter also relates the music and physical sciences of the middle ages to today's musical processes. "Classical compositions were not all accepted. When Stravinsky's Rite Of Spring was first performed, people rioted in the streets. Because when you listen to that piece of music it tears you into pieces. It's like taking acid. You can't take it all in if you're actually listening to it. Instead of putting on 8 inch platform shoes and blowing up bombs or sacrificing goats on stage, they played what was known as the devil's interval which, in the thirteen half-tone scale of western music, is the flatted 5 and the dominant. For instance, if you were in the key of G, the top of the interval would be G and the bottom of the interval would be D#. That sound was banned by the Catholic Church for 400 years.

"Alchemy also relates to our music. Before the scientific method was accepted, the alchemists performed the same operation over and over again waiting for the universe to be right to make the transformation. They were waiting for the stars and everything to line up just right. Making a record is very much like alchemy because you are going through the same process over and over waiting for the inspiration, or whatever you want to call it, to make the performance transform into something special. The bit about the alchemists trying to transform lead into gold was only a small part of what they did. They were really into transforming matter into energy and energy into matter and that's what making records is all about."



Audiotrack 16:8:2 Mixing Console

Audiotrack, a new low cost console line for road/stage use, 8-track recording, or mobile broadcast production has been introduced by European Audio Distributors. This new console features 16 input channels, 8 monitor sections which can be used for 8-track monitoring or as sub-groups, and a stereo master output. Three band EQ is standard on all input channels which have electronically balanced mic inputs. Three effects sends are included for each in-

put, two pre-fade, one post-fade. Output is typically +21 dB.

The new Audiotrack console is available built into a heavy-duty road case or with walnut side rails for fixed installations. A separate power supply is standard for either version. Suggested retail is under \$4,000, making it comparable to many boards with far fewer features and only four monitor group/sections.

For more information, contact:
European Audio Distributors
20610 Manhattan Place,
Torrance, CA 90501.

SSMT Voltage Controlled Amplifier

Solid State Micro Technology for Music, a company committed to producing state-of-the-art IC's for the audio and electronic music industry, has unveiled the SSM 2012, a new, low cost, high performance linear-analog VCA. The SSM 2012 offers class-A perfor-

mance with a 100 dB signal to noise figure at 0.01 THD. This new VCA has more than 12 dB of headroom at the rated specs, and can be configured to give up to 40 dB of gain. For information about SSMT products and their worldwide distribution network, contact: Solid State Micro Technology for Music 2076-B Walsh Avenue Santa Clara, CA 95050

New Peavey Power Amplifier

Peavey has introduced their new M-3000™, a 19" rack-mountable mono power amplifier. This unit includes a DDT compression circuit (to automatically detect the onset of power amp clipping) which can be defeated by pulling the level control knob outward. The M-3000™ features forced air fan cooling, a transformer-balanced low Z input, and a massive aluminum heat sink to insure reliability in almost any per-

forming situation. The amplifier also has LED indicators for clipping/compression and a tri-colored calibrated output display.

The M-3000™ is an especially versatile monitor system power amplifier which performs equally well in two or three-way system applications. Suggested U.S. retail list for the M-3000™ is \$299.50.

For more information, contact:
Peavey Electronics Corporation
711 "A" Street,
Meridan, MS 39301



The Soundworks

Visions Of The Future



At Soundworks digital audio/video facilities, New York City, owner Charles Benanty (center), discusses the new Donald Fagan (Steely Dan) solo digital album with its engineers Roger Nichols (left) and Jerry Garszza. The album is being recorded on the studios' newly purchased 3M 32-track digital audio recorder (far right).

by Bruce C. Pilato and George Petersen

Beneath the electric madness of New York City's Studio 54 disco is Soundworks, one of the country's most unique and most intimate audio/video facilities. Viewed as a "home away from home" by many prominent artists and producers, Soundworks has prided itself on being more than just another audio/video production center. In addition to providing those services, the studio and staff are at the complete disposal of the artist and can take care of most of their needs. "We supply food and all the general necessities," said Soundworks' founder and co-owner Charles Benanty; "whatever they need—coffee, cake, Broadway tickets, limosine service."

After ten years as a music publisher, manager, producer, and R&B recording studio owner (The Music Farm), Benanty formed a partnership with Alan Ramer, a

former ABC booking agent who handled the likes of Bob Hope and Lionel Hampton. After a careful search for a building that would be best suited for both audio and video equipment, they constructed their facility on 54th Street.

"We did a little study about five years ago in order to see what was going on over the period of the 80's. We felt the big lack of entertainment products... musical software," said Benanty. "By building a recording and video facility, we could utilize our own production capabilities and be producing shows for the upcoming market, as well as being a facility in which long-term clients can come in and rent a recording studio and the place becomes theirs, whether it's audio or video."

Although comparably equipped to most major recording studios in the country, Benanty admits he never sought to make Soundworks into some
(continued on page 52)

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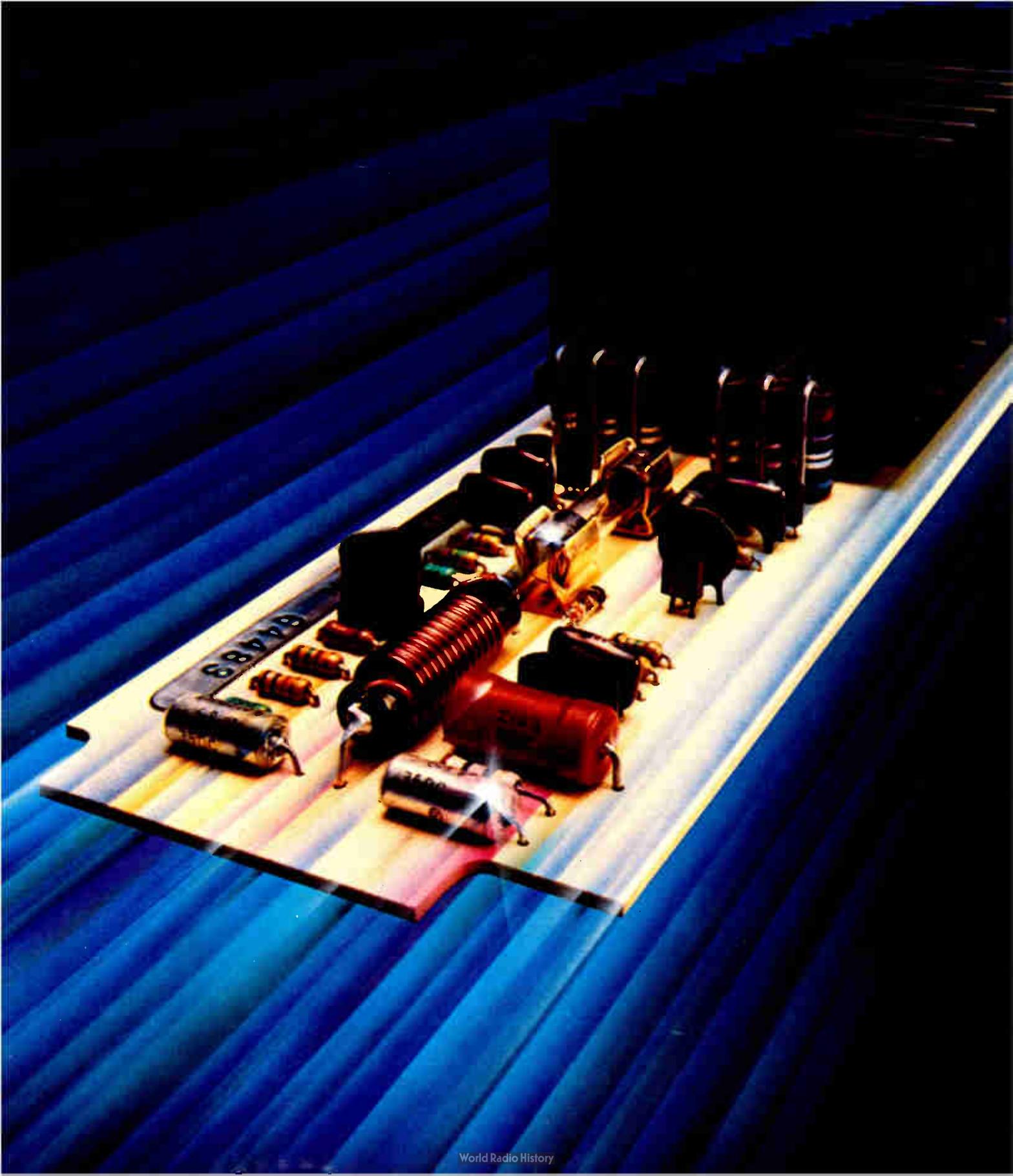
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For further information:

The 701 power amplification system may be seen at your local SPECTRA SONICS distributor.
SPECTRA SONICS, 3750 Airport Road, Ogden, Utah 84403. Phone (801) 392-7531.

SPECTRA SONICS 

(continued from page 48)

sort of "super room." "I was out to create... a one room operation with both audio and video... like somebody's house where they would come down and feel at home. I designed it myself in terms of its interior design, so that it sort of looks like somebody's apartment; almost like a living room setting."

The acoustic design is by Jerry Garszza, one of Steely Dan's engineers. "He has a great working knowledge of acoustics which we really trusted... we were not out to spend money (on the studio) that we could never repay as a business. Our emphasis was not on being a large studio to compete with The Power Station, or anybody else." Benanty was quick to add that other major studios in New York have given Soundworks their overflow, billed directly to those studios.

Some repeat customers who like the Soundworks concept are John Denver, Ian Hunter, Mink DeVille, Ricki Lee Jones, Harry Belafonte, and most notably, Steely Dan. At the time of this writing, Donald Fagen and Gary Katz were hard at work on the upcoming Fagen solo album.

Marvin Hamlisch, a leading songwriter for Broadway and movie soundtracks, is also a frequent guest. "Yeah," said Benanty, "we do a half a dozen movie soundtracks a year. It's nice for us because that's early morning work, and rock 'n' roll people, as you know, don't get up early in the morning! (laughs) And we're not really into the jingles or advertising market... it's a whole different industry."

The newest major client for Soundworks is Stevie Wonder, who chose the studio to put the finishing touches on his latest release, a "best of" collection that comes with an EP containing new material. Wonder recorded the original tracks for the new songs at his own studio, Wonderlove, in L.A. He then moved the project to Soundworks and brought with him a 3M 32 track digital recorder and his Sony PCM 1600 two track tape machine for mixdown. Wonder rerecorded the drum tracks, horns, Yamaha CS-80 overdubs, and all the vocals at Soundworks. The horns were recorded on the Studio 54 soundstage to lend a concert hall effect. Stevie's personal engineer, Gary "O" Olazabal, supervised the recording which took eleven days. Wonder also used Soundworks to digitally remix several of his previous greatest hits.

According to Benanty, Soundworks, like everyone else, felt the pinch in the slump of the record business in 1981. Although the studio

was 35-45% down in 1981 record business, they made up the difference with a major increase in video work. Benanty feels that without the insight he and Ramer had in 1976 when they conducted their study, the studio may not have survived.

The decision to locate Soundworks beneath Studio 54 was no fluke. Built originally as an opera house and converted by NBC in the early 1950's into a television studio, the duo saw it as the perfect soundstage for their video productions. Since the disco is vacant by day, Studio 54's owner profits by renting to Soundworks and opening to the public at night. Benanty and Ramer have saved substantially by not having to spend a million dollars on a TV studio.

Soundworks sometimes does productions inside Studio 54 at night. If the artist wishes to do a concert video, and Studio 54 feels the artist is appropriate with their clientele, the show is booked and Soundworks handles the production. Benanty and Ramer have installed over \$500,000 in theatrical lighting, as well as a sound system and collapsible stage, but the rest of the disco, including the TV control rooms and electrical and sound wiring were already in place, courtesy of NBC.

Soundworks is set up so anyone, whether an up-and-coming artist, or a major recording act can come in, record their album, and make promotional videos at the same time. Simultaneous audio/video production has obvious financial advantages, and Benanty believes video and cable TV music features have brought significant changes upon the record industry. "I don't really consider it a record business anymore. We're basically in a communications and information society. That's where we're heading... Being music people, we understand the music medium. Television people never understood the music business; we were always a stepchild... Everytime we went to meet with television people we were not appreciated. However, when we started meeting with the responsible people at the distribution agencies or the cable systems, they themselves were music people and could understand what we were all about. Speaking to someone from (network) TV is a whole different ballgame than speaking to someone from HBO. It's night and day."

Benanty and Ramer are now developing a monthly television music show featuring both established and unknown talent, produced entirely at Soundworks. The duo plan to market the show in late 1982 or early 1983

to cable TV viewers, via satellite. The show will initially air in the U.S., and international distribution is planned for later. "Our artists will be of an international nature. We will have Japanese artists, as well as German, English, French, *and* American artists. We feel that entertainment is really becoming universal and we really live in a global village. People can appreciate musical art from all over the world. It doesn't have to be just southern rock or midwestern blues."

Soundworks has already begun building their library of video musical software. They recently completed a production piece on British new wave vocalist Lena Lovich and are currently working on a video of The Manhattan Transfer. Benanty feels within a reasonable amount of time every serious music fan will own either a VTR or video disk player in order to view such productions.

Benanty says that most artists coming to Soundworks still arrive with audio recording in their mind first and foremost. "That's still the primary reason why they're here," he added. However, while completing the recording, many artists start discussing video plans and, having spent some time at Soundworks, they become familiar with the medium and start putting it all together.

"But what I'm really seeing a lot of is the interest of recording artists to actually get involved more and more on their own in their learning of the (video) medium and the technology of the medium. Right before Christmas, Pete Townshend came downstairs just to bullshit for a couple of hours and just to fool around and play with our visual machines... he is fascinated by the video medium over the past few years, and is working to understand the technology personally to the point where he is now designing and building some sort of video facility in his house along with is audio facility... it's like what people were doing ten years ago where a singer/songwriter had a 4 track machine... You're going to see more and more of that because video is getting cheaper and cheaper to put together. With the advent of $\frac{3}{4}$ and 1 inch tape, you don't have to worry about quality anymore. It's ridiculous to go to 2 inch."

Like Todd Rundgren and other music industry futurists, the people behind Soundworks are still mavericks. Their predictions of just a few years ago have become reality and the drastic changes in the record industry are finally making their mark. Since they were so well prepared for it, studios like Soundworks are able to roll with the changes and keep right on moving towards their visions of the future. ■

Artist Studios

CHARLEY PRIDE'S CECCA SOUND

by David Gans

"Dallas has been known as a music center for a long time," says Bob Pickering, Chief Engineer and designer of Cecca Sound. "There are two or three excellent studios in the area, but they've had to exist mainly on jingle and film-score business. They've done some record work, but it's really always been secondary as a matter of economics."

Pickering says he thinks Cecca will help turn Dallas into a big-league recording town because it's owned by country superstar Charley Pride, who's a burgeoning recording business all by himself. The name "Cecca" is an acronym of the first names of Charley, his wife and three children.

"People have talked for ten years about something happening in Dallas, and I think it finally is happening," says Pickering. "There are lots of good players, performers and songwriters—a lot of talent, and now something's going to start happening for them."

Cecca is located in a new office building owned by Pride. The decision to install a studio came while the building was under construction, and Pickering and builder Jack Homesley had a couple of interesting problems to face. "The tenant in the office upstairs had a parquet floor which we had to get rid of, and in the office next door there were two secretaries who sat about ten feet from where we have Marshall amplifiers cranked up," says Pickering. "The walls are treated pretty heavily, but there's still a bit of bass drum transmission through the walls. We're getting rid of it."

The inside of the 58-by-26 foot studio has many different surfaces, says Pickering. "There's quite a bit of glass in front of the control room, lots of rock around the drum booth, and plenty of cedar and panels. We put 2 x 2's of cedar vertically on the walls, spaced a few inches apart. It's attractive, and it makes the surfaces bright. The room has lots of angles; you can get different responses in different places."



Cecca's chief engineer Bob Pickering at the controls.

The console and recorders at Cecca are all MCI—a 538 board, JH-24 24-track, and JH-110 4-track, 2-track and mono decks. Monitor system includes UREI and Crown amps, UREI 813 (4), JBL 4313 and Visonik "Little David" speakers. Lacking space for live chambers, Pickering opted to purchase three plate reverbs built by Brian Hawkes of Dallas under the Audience brand. Cecca also has a Lexicon 224 digital reverberator, Prime Time, DeltaLab DL-5 Harmonizer, Marshall Time Modulator, Vocal Stresser, Space Station SST, EXR Exciter, dbx and UREI limiters, etc. The microphone collection includes AKG C-451's and C-414's; Milab VM-41's; Electro-Voice RE-20's; Beyer M-201's; Sennheiser 421's and 431's; Crown PZM's; Shure SM-57's, and more. They also have a Baldwin 9-foot grand piano and a Linn Drum Computer.

Pickering says that Cecca plans to add SMPTE and a second 24-track at some date in the near future. "There's a lot of film work in town, so it's an obvious addition," he says.

Since the studio was completed, Charley Pride's band has rehearsed there, Stella Parton has done a couple of vocal overdubs, and there have been a couple of demo sessions by local bands. "We haven't really opened the doors yet," says Pickering, "but the work that's been done so far has come out sounding really good."

"Cecca is meant primarily for Charley's own recording and mixing, and for some people like Janie Fricke and Sylvia," says Pickering. "Kraig Pride [Charley's son] and I plan to run the studio much like a production company, doing demos and looking for record deals. Eventually we might release some records ourselves." ■

THE BONZAI ZONE

EPISODE #4 "Video Rockheads"

by Mr. Bonzai

(In our last episode we found that Harry Liebman, the driving genius behind Impact Video, had enlisted Mr. Bonzai and his band, The Incredible Shrinking Heads. The plan is to produce an interactive musical rock video game.)

Sarah Bellum, lead singer for the Heads, interrupted the dealmaking with a cranky outburst. "While you bigshots are blabbing, me and the band are missing our gig in Tarzana."

Harry reacted in a cool and persuasive manner, speaking as a man with natural power and probably lots of cash. "Sarah, why don't you take our studio limo. The driver will wait until your show is done and meanwhile we'll set up for the taping."

"Well, yeah, I guess that would be OK..."

The band went away through the twisting halls of Impact Video as Harry, Layla and I began to lock into the dual project of shooting video for both his video game and my cable production.

"The limo is a trade-out," Harry began. "We'll just put a little 'promotional mention' at the end of your show. Alright—here's how the 'Rockheads' video game is going to work. You, the player, fire lasers, play music, and your image fights its way to the stage that the band is playing on. You have to cut your way through an angry crowd of 'Trashfians' that are blocking your way. If you miss and accidentally hit a member of the band, they explode and their musical track is cut off. If you make it to the stage, you get to do a bagpipe solo with the band."

"Wait a sec," I interrupted.

"How can you play bagpipe solo on a video game?"

"Each game will have a slide bar synthesizer on the controls, which are hooked up to the Central Game Computer (CGC). If you're good enough and don't hit any sour notes or clams, the song finishes and you and the band explode in a burst of video fireworks. That's why we wanted your particular band. They have such an **explosive** image."

"So what new stuff do we have to tape?"

"There's a sound stage next door," Harry explained. "I'd like to get about 50 people wearing trash bags and then actually tape the scene where you fight your way to the stage. Got any idea where we can get 50 extras in a hurry, for free?"

"Did you try getting an announcement on the radio?"

"Layla called most of the stations, but they wouldn't touch it—too risky."

"Did you try K-YOK?" I asked. "They're great—lots of surprises. You know, the 'YOK of the Eighties' station. They're losing their license anyway for making rude noises and operating without a limiter."

"I'll go try 'em now," Layla volunteered and as she left, Harry introduced me to the one-of-a-kind, state-of-the-art Impact Video control room. "ELVIS, our video synthesizer, interfaces with this PDQ-6000 Weed Valley switcher and editor. Here are the automated input switching buses and transfers, the wipe dissolver, follow, and Wiperama, the dynamic space shuttle and jog, tube tally, and X-MEM. Everything is stored on flaccid disc, of course."

"Of course," I agreed, not yet having a glimmer of how his video system worked. "So where's the sound stage we'll be working on? It must cost a fortune."

"It's right back here. We're very lucky to have built our production house adjacent to the old Goldwiz Studio. Nobody is there at night, so we just kinda use it."

"Kinda use it?"

Harry explained. "We just put everything back in order by dawn and get to use the lot for free."

Before I could find out more about Harry's odd arrangement with Goldwiz, Layla returned to tell us that she had just spoken with the program director at K-YOK, Rover Washington, and he was going to put out the request for rock volunteers in trashbags immediately.

We all proceeded to the rear of the building and slipped through a tiny door into the Goldwiz back lot. While the speedy crew set up the stage and lights, Harry told me more of the details.

"We'll have the kids in trashbags surround the stage and you'll race through from different angles wearing this blue jumpsuit. We'll chroma-key you out later and replace you with the alternate video from the ELVIS synthesizer."

"And I'm supposed to climb on stage and pretend to play a bagpipe solo with the band?"

"Right."

"Well, I understand how that fits into your 'Rockheads' video game, but what can I do with two lead bagpipers for my cable show?"

"Didn't you double the lead bagpipes? Harry asked. I nodded.

"Well, use your imagination," he continued. You can have Mickey Libido doubled visually by using ELVIS, and have both of the audio tracks as well. It'll be the first audio/video doubling."

I had to admit the idea was provocative and Harry's entrepreneurial enthusiasm was seriously affecting me. As the finishing touches were being added to the set and the lights were being brought up, Sarah and the band returned from the Tarzana engagement.

"What did you dildoes cook up?" She began in her thick Dutch accent "There are at least 5000 people out in front of the studio wearing trashbags—and they are really ready to **party**."

"5000!!" Harry and I spoke in unified amazement. We looked at Layla for an explanation.

"I just told them to announce that Andy Kaufman was throwing a party at Impact Video." ■

(to be continued)

The situations and characterizations in this column are purely fictional and do not reflect anything relating even vaguely to reality, living or dead.

SOUND ON STAGE

On The Road With Hill

by Pat Maloney

Way back in the 70's, hardly a week went by without hearing about the formation of yet another sound reinforcement company. For some strange reason, things have tapered off somewhat as of late, so news of the recent arrival of a British company to the States—Malcolm Hill Associates—piqued my interest. Intent on discovering why someone would start a large sound reinforcement business in this day and age, I contacted Dave Ash, head of stateside operations. As it turned out, Malcolm Hill Assoc. isn't *really* a PA rental company as we know it. Instead they are the visible—and audible—right arm of a sound reinforcement equipment sales organization based in Kent, England. This company, Hill Audio Limited, is in the business of designing, manufacturing and marketing a complete line of professional PA gear. As Dave Ash explained it, "The sound reinforcement company is purely our method of promoting and advertising the products we have for sale. It's where we really do all our design work. We've no desire to take over as a major PA rental organization. Instead we would much rather sell our products to everyone else and let *them* have the headaches of running a sound reinforcement company!"

The man behind this novel approach to the business is apparently as singular and unique as his company—Malcolm Hill. After leaving high school he started manufacturing professional



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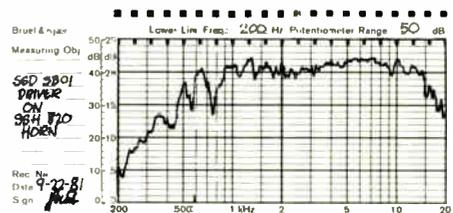


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power amplifiers and soon thereafter began designing and building mixing consoles to go with them. Eventually, his dissatisfaction with the general quality of product in the marketplace led him to design his own speaker cabinets as well. Joining together with another fellow who was already in the rental business, he formed Malcolm Hill Associates and set about putting his design concepts to the test.

One year later he put together a small club system for a relatively unknown band that has gone on to become one of the most popular groups of today: "AC/DC." As the group grew in popularity, so did their need for larger, more elaborate PA systems and

Malcolm Hill was more than happy to oblige.

According to Dave, the system has gone through quite a few radical changes since then, most notably that of utilizing an integrated full-range cabinet instead of the original separate bins and boxes. Named the "M-3," the single cabinet houses three ATC long coil 12" woofers, two Tannoy 10" ferro-fluid cooled, co-axial midrange speakers, built specially for them and a JBL 2441 driver on a Malcolm Hill-designed wide angle horn. The extreme high end is handled by the 1" tweeter in the Tannoys. The new Renkus-Heinz 3301 driver will soon replace the 2441, however.

Designed to be flown "in the American style," the cabinets come complete with hanging hardware already attached. A system of pre-rigged support frames and angled connecting bars permits the cabinets to be hung quickly in a wide variety of configurations. Once the hanging points are selected, Dave states that it only takes an hour or so to rig the entire system. Each cabinet is powered by a single Hill TX1000 tri-amplifier, the tweeter being passively crossed over. According to Ash, the bass section delivers 600 watts into 4 ohms, while the mid and treble amps each put out 300 watts into 8 ohms. Total power output from a single cabinet is said to be 130 dB at 10 feet. A total of 64 cabinets were used on the last AC/DC tour. Must have been loud.

Although the crossover points are variable, they are usually left alone once they have been adjusted to best reproduce the sound of a particular group. Dave agrees that it's easy to lose your frame of reference if you continually change your crossover points and levels and it detracts from the sound integrity of the full-range speaker. "Our philosophy here is that we have designed the system to be flat at the speaker," Ash states. "We feel that it will produce a very good sound as it is and therefore needs only minor adjustments from hall to hall. Most of our engineers believe it is pointless to spend 20 minutes EQ'ing a system with pink noise because it all changes once the 'walking carpet' comes in."

Ash claims a system frequency response of 50 Hz to 16 kHz plus or minus 3 dB with no corrective EQ. With a little tweaking, the response extends from 20 Hz to 20 kHz minus 3 dB. "A big design criteria of ours is that you should hear the artist and not the system," David pointed out. "Audio transparency is what we have been working toward since the beginning."

The house mix console used on the tour was the brand new Hill J-2. This is a 32 x 8 x 2 console with six auxiliary sends per channel, eight separate EQ controls, and Penny and Giles 100mm long throw faders. There's nothing I hate more than mixing a show on short throw faders, and David concurs. "This exact point stresses our design philosophy and this is precisely why we have the sound reinforcement rig. Everything we design comes directly from our own experience on the road. And we never let anything out on the road until we're happy with it from a design and construction point of view."

An interesting point to note is that there is no protection anywhere in the system in the way of limiters, compressors, etc. "We trust our engineers to not let anything get out of hand," (continued on page 60)

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VIDEO NEWS

by Mia Amato

HARDWARE: THE POCKET TV

It had to happen sooner or later: the tiny television that fits in your pocket or the palm of your hand. Sony, whose "Walkman" portable cassette player launched the current craze for pocket stereos, has begun marketing a hand-sized TV in Japan. The FD-200 is only 33mm (about an inch and a half) thick, and slightly over seven inches long and three inches wide. It's selling for about \$240.00 in Tokyo. No U.S. sales plans have been announced, but don't be surprised if you see a few on the beaches this summer.

The battery-operated black-and-white has a two-inch screen and a special flat glass picture tube. Features include automatic fine tuning, an earphone jack, and an antenna jack that hooks it up to a car antenna: just the thing for rush-hour traffic jams.

3-D TELEVISION SYSTEM DEBUTS

A new system for producing and exhibiting three-dimensional television images was unveiled at a recent two day video showcase at General Electronics Systems, Inc. (GESI), in Berkeley, CA. The system, designed and built by Lenny Lipton and Michael Starks, of Deep and Solid Inc., is based on the principle of occlusion, and is NTSC compatible for videodisks, videotapes, and cable systems. After being previewed at the January 1982 SMPTE meeting in San Francisco, Deep and Solid's 3-D television system was ready for public examination and became the hit of the GESI showcase which also featured computerized video editing, graphics, and animation systems.

For more information, contact:
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VIDEOWEST SIGNS DEAL WITH FILMWAYS

Filmways has inked a deal with Videowest for national syndication of *Backstage Pass*, a half hour musical series for television. San Francisco's

funkiest production firm is rapidly becoming a primary purveyor of pop music video programming, with current contracts in cable (MTV and USA Network's *Night Flight*) STV (ON-TV) and five major city television stations. The group had successfully negotiated its own barter-syndication deals with Boston, San Francisco,

Sacramento, Los Angeles and Milwaukee TV stations for *Backstage Pass*; but Filmways will be distributing the show on a cash basis.

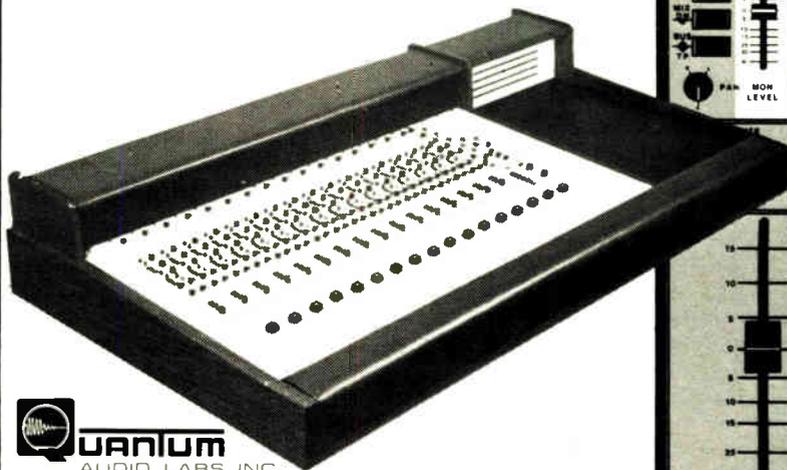
"We're not getting rich but we broke even in 1981," reports *Fabrice Florin*, the group's founder and head producer, "I guess that signifies we've gotten over the hump."

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Turning point for Videowest was a deal made last year with Warner's MTV to supply one-minute "news" segments for its 24-hour all music cable channel. A contract of 40 minutes per month enabled the group to rent better cameras and begin paying salaries to what had been an all-volunteer production company. Videowest also established "bureaus" in Los Angeles and New York to cover the rock music scene. Videowest crews covered **Jackson Browne's** arrest at the antinuclear demonstration at Diablo Canyon, took their cameras hot-tubbing with the **Rolling Stones** at the end of their recent tour, and reported on the nation's continuing fascination with video games and **Elvis Presley**.

"We've built a specialty in rock, but we'd like to expand to reflect our audience's interests in other forms of pop culture," says Florin. "It's not like the Sixties, when music was everything. Our other cable show, **Take Off**, which runs on USA Network, will have more variety."

Much of the video originally shot for the MTV news clips also appears on **Take Off, Backstage Pass**, and the ON-TV program, which is called **Rock On**. Florin calls this "recombinant programming." Videowest is still very much run on a shoestring, with very little video equipment and not much money, yet so far it seems able to survive its heady jump into the big league.

COMPANIES: SPOTLIGHT ON SOUND SMITH

Sound Smith Studios in Portland, Oregon, is mixing stereo tracks for video in a virtually untapped market area—corporate TV programming. The 24-track studio recently completed a stereo soundtrack for a Nike sportswear sales tape and one for a Freightliner Corporation show.

"We offer mixing to picture, and we're doing tons of sound effects," says **Tom Gandy**, engineer and part-owner of the studio. "When most of our industrial clients are on location, they're concerned more with the video than the audio, but they do need the effects. So we're the ones who put in, for example, the sound of that tennis ball hitting the racket."

The studio setup ties together a **BTX** Shadow System with either a **JVC** 6600 ¾-inch video deck or an **Ampex** two-inch VTR. There's an **Otari** half-inch 8-track for mixing as well as a **Nagra** for film work.

Sound Smith does location sound recording and mixing for local television and commercial clients as well as a smattering of album and demo work. The company has also

mixed some promo videotapes for local groups, "but nothing we really made any money on," Gandy explains. "We've been pushing big-screen TV, with stereo sound, as an alternative to multi-image for industrial clients."

The Freightliner videotape was originally shown on a video projection system at a company meeting, but is now being distributed on ¾" cassettes to the firm's other offices. On these mono decks the big two-channel roar of the company trucks would not be quite as impressive. "If you're mixing a stereo track for any video you have to be very aware of what it's going to sound like in mono, because most video is still going to be played back in mono," says Gandy. The company is, however, bullish on the future of sterec video. "On almost every job we do now, we arrange to have a stereo mix in the can," he says. "We're looking ahead and building a track record, and we'll be there when it happens."

AUDIO/VIDEO SEMINAR HELD

A multi-media seminar, held in Sacramento, California in March 1982 was an opportunity to present state of the art technology and relevant speakers to the recording and video people in Northern California. Dean Cull, VP and Director of Operations of WGN of California moderated the sessions which included the following speakers and topics: Leo de Gar Kulka, President of Sonic Arts Corp. in San Francisco speaking on Disk Mastering: Analog vs. Digital and Laser Disk; Russ Ide of Ampex Corp. on Video Developments; Tim Mungovan of Everything Audio on Teleconferencing—Earth Satellite Communications; Brian Cornfield of Everything Audio on the Future Outlook of Studio Equipment and Design; Mary Ellen Barro, independent producer, on Radio and TV Production—New Technology and Programs; Randy Kirkbride of Northern Star Video Systems on ENG & EFP Truck and Equipment Design; Jim Schifflett head of Vortech Studio, Los Angeles, spoke on The Studio of 2000 and presented slides and film of computer graphics; Helene Winnick, Sacramento entertainment attorney, spoke on legal developments in audio/video production. Exhibits were presented by Otari Corporation, Amek Systems and Skip's Music of Sacramento. Demonstrations of ENG trucks were presented by KOVR 13, KCRA 3, KVIE 6, KXTV 10, and Group Video Productions. The all-day seminar, planned and organized by Phillip Miller of Everything Audio, was

jointly sponsored by Ampex Corp. of Redwood City, CA; Heavenly Recording, Sacramento, CA; Houston Recording, Sonoma, CA; Northern Star Video, Sacramento, CA and Skip's Music, Sacramento, CA. Certificates of Merit and Appreciation were presented to participants by State Senator Diane Watson's office.

SHOWDATES: LAS VEGAS, NEW YORK

Now that cable television has become so corporate-minded—the annual confab of the **National Cable Television Association** May 2-5 may be less exciting this year.

It won't be as easy for you to sidle up to a program exec with your terrific idea for a cable music show, but the Las Vegas meeting is still the most important trade show for the cable industry and the most useful. NCTA has a special low-cost one-day fee for attendees; for more info call the organization at (202) 775-3550.

On the east coast, **Nam June Paik's** retrospective at the **Whitney Museum** in New York should not be missed. The show runs through June 27 and will present over 60 videotapes from the artist many consider to be the founding father on non-linear television. For more info call the Whitney at (212) 570-3833. ■

SOUND ON STAGE (continued from page 56)

David confidently stated. "Since it is a matched system we know exactly what is going on at each point and what the limit is for each component. We like to allow the full dynamic range of the music to pass through the system.

"You've got to keep in mind that Malcolm is completely self taught and so he tends to design things which are 'original'—if you know what I mean." Ash pointed out. "People have been known to take the cover off one of our amps, look inside, say something like 'This will never work!' and send it back without actually testing or using it! He's always been a few years ahead of his time so his products are a bit unconventional. But they really do work."

To back up this statement, I was told that there is a five year unconditional guarantee on all Hill electronic products. And although I won't discuss such mundane things as dollar amounts in this column, I will state that the electronics' prices seem incredibly reasonable. Not having actually heard the system however, I can't comment on their actual price-to-performance value. Perhaps in a future column. For more info, contact David Ash, c/o Malcolm Hill Associates, 2175 Mallul Dr., Suite 256, Anaheim, CA 92802 or call (714) 971-3306. ■

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Off the Record



THE SCRATCH BAND
featuring **Danny Flowers**
MCA 5300

Produced by Garth Fundis and Don Williams; recorded by Garth Fundis and Gary Laney at Sound Emporium and Jacks Tracks Recording Studios, Nashville.

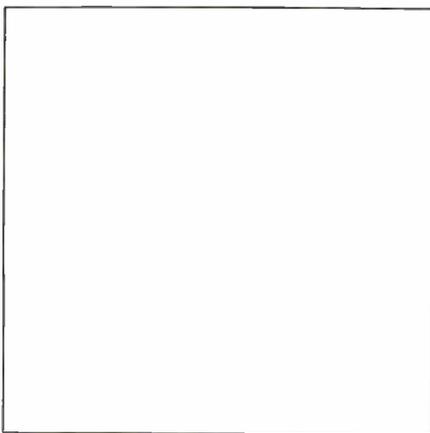
One of Nashville's most cookin' rhythm units, The Scratch Band, made a name for itself backing up Don Williams. On this outing, with Danny Flowers in front, they stir up a solid country groove powered by an easybeat momentum. Their stylistic influences are quite varied, running from spirited reggae to Memphis stew. Williams also seems to have inspired the bands' groove much the same way he did for Eric Clapton.

The recording is clean and strong, allowing Flowers' songs to blossom. And it's the songs that score on this album, with imaginative melodies and sensitive lyrics. In "You Are My Fire" he sings about lovers' fumbled communication:

Foolishly mind reading
Two people live this way
Soon discover they're not playing
Its getting clear to see they need the words
They both forgot to say.
And he hits home again and again with conviction. In "Such A Lonely Night" he warns:
Don't ever say a word
You don't feel inside
It only hurts someone
It happens all the time.

The overall sound is uncluttered, as is Don Williams' specialty with plenty happening to be musically interesting. This may be a sleeper as records go, but its worth getting up for.

—David Schwartz



THE BEATLES WHITE ALBUM
The Beatles
Mobile Fidelity MFSL 2-072



MAD DOGS & ENGLISHMEN
Joe Cocker
Sweet Thunder Edition 9

When the "White Album" was released in 1968, it was important enough that the local AM radio station played a cut from it every other song for an entire weekend. Can you imagine any record making that sort of impact today, or any radio station giving itself over so completely to an artist?

The album still holds up fourteen years later, from the inspired silliness of "Ob-La-Di, Ob-La-Da" to the delicate beauty of "Julia" to the wild raving of "Helter Skelter." The half-speed mastered super vinyl edition reveals, as usual, everything that The Beatles and George Martin put on tape, and shows us again that—96-input boards

and digital delays notwithstanding—there's no substitute for genius when it comes to making records. What they did more than a decade ago puts most of today's hit records to shame when it comes to spirit and originality.

A newer entry in the audiophile disk derby is Sweet Thunder Corporation. Like Nautilus Recordings, Sweet Thunder's half-speed disks are pressed on virgin Teldec vinyl, resulting in well-defined and durable platters that easily outstrip conventional pressings. The twelve titles they've released to date include *Taxi Driver*, Bernard Herrman's last film score; Supertramp's *Even In the Quietest Moments*; *Frampton Comes Alive*; *Great Scott*, by Tom Scott; and Joe Cocker's great live album, *Mad Dogs & Englishmen*.

The performances and choice of material on the Cocker album make it one of rock's greatest moments. According to the liner notes, Leon Russell put this all-star band together—including drummers Jim Gordon and Jim Keltner, saxophonist Bobby Keyes, keyboardist Chris Stainton, bassist Carl Radle, a ten-voice choir which included Rita Coolidge and Claudia Linnear—on a week's notice. Songs include Lennon-McCartney's "She Came In Through the Bathroom Window," Dylan's "Girl From the North Country," the classic "Cry Me a River" in a rave-up treatment, Leonard Cohen's quiet "Bird On the Wire," and Russell's own "Delta Lady" and "Superstar" (sung by Coolidge). Of the fourteen cuts on this double set, only "Space Captain" sounds dated, playing on Aquarian-age dreaminess. The rest is powerful, spirited blues-rock from Cocker at his very best.

—David Gans

At Long Last...

Watch for more details in June.

Introducing TDK AD-X. The normal bias tape with Super Avilyn technology.

New TDK AD-X is the first normal bias audio cassette to use TDK's Avilyn magnetic particle—based on the renowned Super Avilyn formulation that has kept TDK the leader in audio and videotape technology.

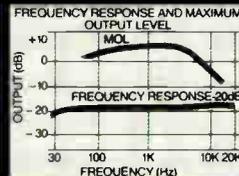
The Avilyn advantage offered in AD-X is demonstrably clear. You now can record and play back—in the normal bias/EQ position with complete compatibility for any cassette deck over a wider dynamic range and with far less distortion. Even at higher recording levels, the increased headroom in

new AD-X can easily handle strong signal input without over-saturation.

When you hear the brilliant playback resulting from the higher

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The new AD-X has truly versatile applications. Its higher sensitivity makes it ideal for all-round home entertainment use and also suitable for any cassette player.



Avilyn magnetic particle achieves higher saturation and lower noise.



Record at higher levels with far less distortion.

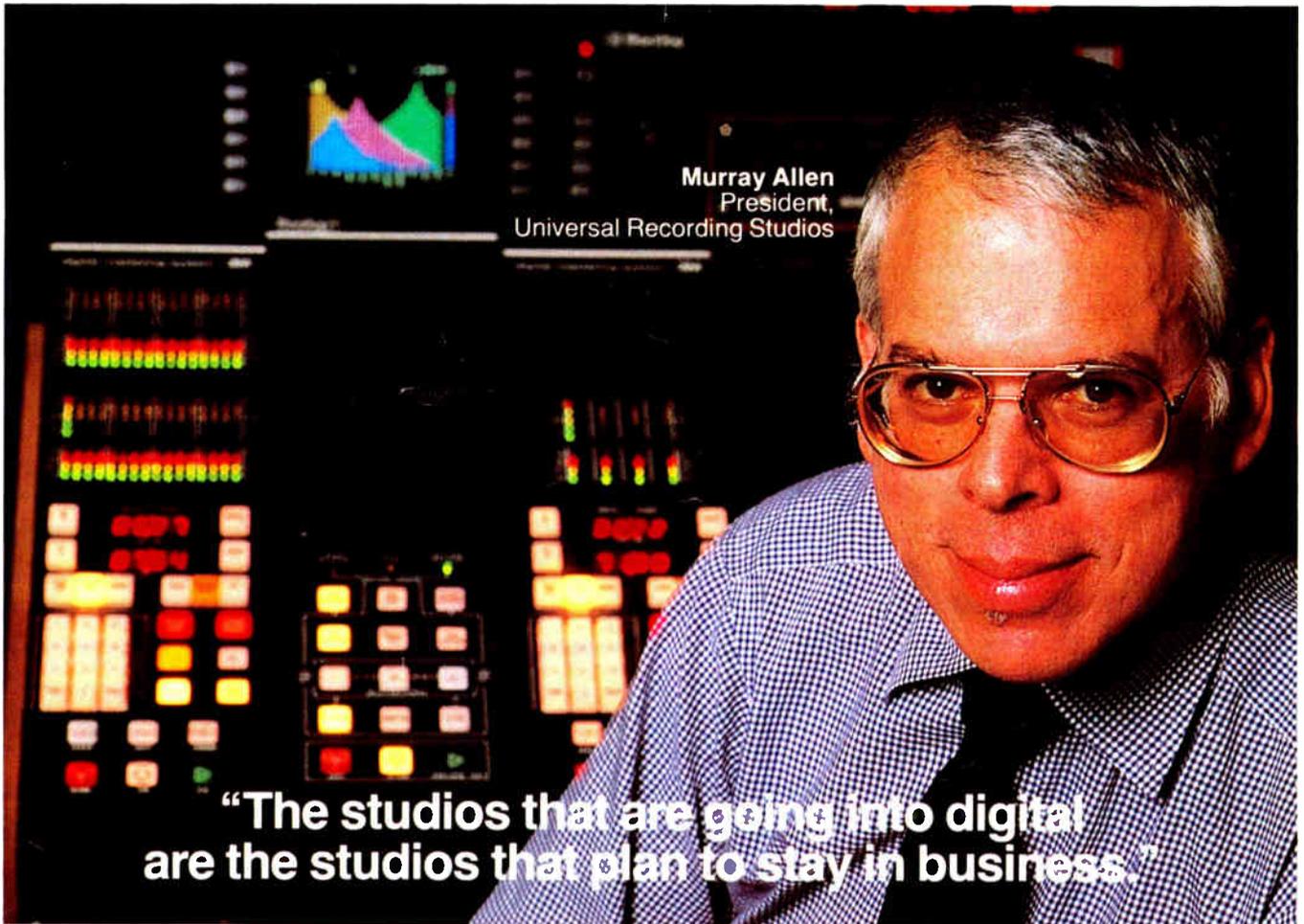
To ensure years of reliable use, AD-X is housed in TDK's Laboratory Standard Mechanism, and protected by TDK's lifetime warranty. With its distinctive packaging, you won't miss it.

So for high quality recordings in the normal bias/EQ position, snap in the new TDK AD-X. You'll discover that the Avilyn advantage means superior overall performance for you.

TDK
THE MACHINE FOR YOUR MACHINE



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Murray Allen
President,
Universal Recording Studios

“The studios that are going into digital are the studios that plan to stay in business.”

Murray Allen, who has been president of Universal Studios in Chicago since 1973, started performing professionally with the Glen Miller Band when he was 18. He says that if he has had one goal in life, it is to record music the way it actually sounds. And he claims that the 3M Digital Recording System just may be the answer to that dream.

Q: You're known in many circles as a management genius. In a depressed industry, how did you justify the cost of a digital system?

A: It's when times are tough that you've got to do something different – better, to stimulate business. Digital gives clients much more in terms of sound. And I find that a lot of bankers would sooner give you financing on digital, because they know analog is being replaced by something new.

Q: I understand your entry into digital has been quite profitable.

A: It made money right away. Immediately. It's currently running about 60 to 65 hours a week. And that makes money. We typically charge fifty dollars more per hour. And, we've yet to find a client that doesn't get hooked on it.

Q: So the added cost doesn't discourage clients?

A: Digital sells itself, and the added cost isn't that much. It's not that much more than doing double 24s. If you're talking about an advertising job, it might end up being three hundred dollars more. On a record date, people get more squeamish. But when producers and musicians hear the results, they realize digital is worth it. Because every little nuance comes through, artists actually play better.

Q: How do you find digital editing?

A: Electronic editing takes a little longer because our blade skills are so well developed. But, the extra precision and ability to preview and audition an edit more than make up for the time. Actually, our editing requirements have been small because of 3M's exceptional punch-in capability. We've done multi-track punch-ins of large vocal and instrumental groups right in the middle of a note . . . and you can't detect them.

Q: You were speaking earlier about commercials. Do you actually think, given the relatively poor quality of broadcast sound, that digital is worth it?

A: Yes. Commercials we've recorded digitally prove that TV can carry better sound, more impact. And impact is what the client wants. He can't add more lines of resolution to video but he can add punch to the audio.

Q: Any other applications you see as prime prospects?

A: Film scoring. We've done some already. Sound is so important to productions. When somebody does a film in digital, and releases it with digital playback, it'll be a mind-blower. And it won't be long.

Q: Any other comments about the future of digital?

A: It's catching on like crazy. More and more albums are digital because it sounds better, the musicians like it better. You're remiss in your responsibility if you don't give them digital.



3M Hears You . . .

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