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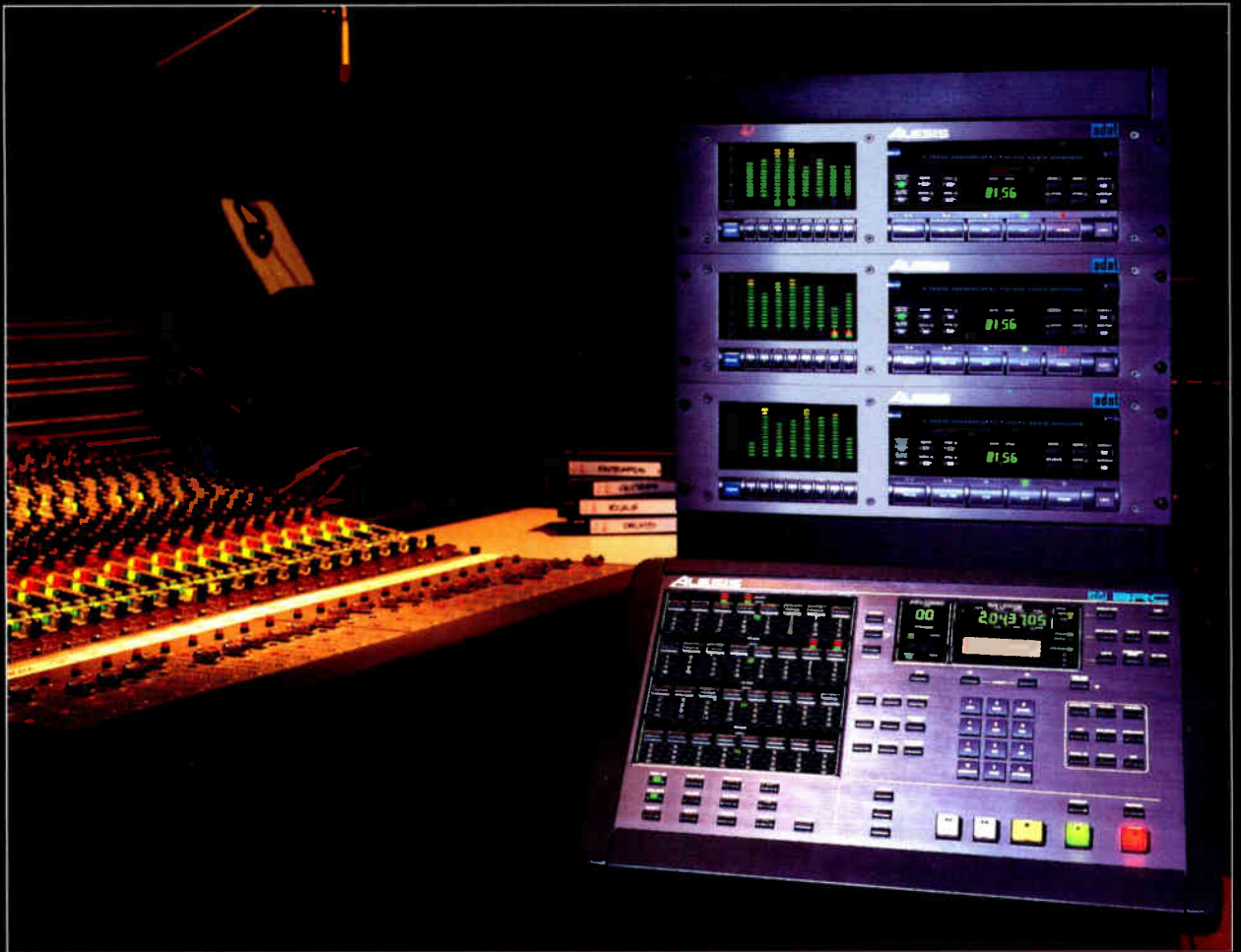
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PROFESSIONAL RECORDING • SOUND AND MUSIC PRODUCTION

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Cover: NYC's Greene Street Recorders boasts one of only two Amek/Massenburg APC 1000 consoles in the country and the only one on the East Coast. Quoted monitors, Studer recorders and a host of outboard equipment complement the state-of-the-art board. The SoHo facility is dedicated to album production.

Photo: Dave Bevan.



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ProDisk's new Graphical User Interface for Digital Editing (guide™) combines several windows into an intuitive, easy-to-use display. Far from just an EDL list, the relationship between all tracks is shown.

Sure, Otari's new ProDisk™ 464 is the only system to give you up to 64 tracks. True, it's one of the few to use standard SCSI devices so you won't be locked-in as technology advances. But as much as we'd like to tell you about the rest of its great features, the most important thing about the ProDisk system (given the changes that are certain to occur in this technology) is the Otari name up front — a name that professionals around the world have come to trust for product support and customer service.



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FROM THE EDITOR

What constitutes a truly great recording studio in today's ultra-competitive and financially strapped pro audio business? Does it have to do with the quick acquisition of the latest high-end equipment, backed by an extensive catalog of vintage gear? Or does it have more to do with the sound of the room, with acoustical control of every wave in motion?

How much of a studio's reputation has to do with the maintenance department and its record for minimum downtime from equipment malfunction? And what part do aesthetics play, for studios located in Paradise or those urban havens decorated for royal comfort?

Is greatness a function of the studio's track record of cutting hit after hit, just having the *right vibes* for an artist to be productive? Or does it have more to do with the *right people* running the operation, a hot engineer and a relentless group attitude?

As Terri Stone observes in "International Update," Britain's Association of Professional Recording Services has spawned an organization called the UK Studio Accord, essentially a coalition of the best of the best. This month, the U.S. Society of Professional Audio Recording Services board will consider creating parameters to define the ideal criteria for studio operation, and very likely this notion will take root in other countries where the recording industry is large enough to support a wide variety of facilities.

While some may consider this an elitist movement, others will look to those top studios as industry leaders and role models. And with the same spirit in which the TEC Awards were established to encourage quality manufacturing and services, such developments will very likely make some studios try just a bit harder to reach such a recognized and respectable level of operation.

We'd like to know how you readers feel about this type of qualitative delineation... is it valuable or exclusionary? And if you do feel it's valuable, what parameters do you feel are important in creating this type of recognition?



Keep reading.

David Schwartz
Editor-in-Chief

BPA Circulation independently audited and verified by Business Publications Audit of Circulation since 1985.

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CURRENT

AES Vienna Report

Nearly 8,000 international audio professionals converged on the music Mecca of Vienna, Austria, in late March for the 92nd Audio Engineering Society convention. Up 20% in attendance from last year's Gulf War-time get-together in Paris, this AES set a European record with 328 pro audio exhibitors from 70 countries, including the first ever from Russia: Kunstkamera, a production center for arts, advertising, entertainment and business located in the massive Moscow International Electronic Center (just a ten-minute walk from the Kremlin), came to Vienna to offer Russian professional media production services to the West at "attractive prices."

Hard disk recording and editing systems seemed to draw the most attention in the product domain. Among the more popular demos was Digital Audio Research's Sigma workstation, showing a networking capability with other Sigmas for the first time. Studer, which now employs former DAR founder Guy McNally as head of its workstation development group, unveiled the Dyaxis Lite to add a low-cost alternative to its disk-based product line. Publison of France showed its impressive 16-track, optical-drive Infernal workstation for multitrack recording and editing.

AKG broke new ground with the introduction of Direct, a complete 32-track digital recording system employing four 1-gigabyte optical drives. Developed as a joint venture with German company Direct Research, the unit is intended to compete with tape-based systems both in price and performance, while being compatible with DASH and PD formats at the input level. Not yet conceding the digital world to disk-based systems, Sony debuted its low-cost, high-capability 3324S, and Nagra joined the bitstream with its

Nagra-D 4-channel, self-contained professional digital audio recorder.

Additional products grabbed attention without even being shown, though they were promised by the

sites. In a prepared statement, BASF Corporation Information Systems said that the reason was to "take advantage of economies of scale and to place production close to BASF's

TEC Awards Announces Hall of Fame

The board of directors of the Mix Foundation for Excellence In Audio and the editors of *Mix* are pleased to announce the 1992 inductees into the Technical Excellence & Creativity Awards Hall of Fame. Bob Moog, Bill Porter and Phil Ramone will be honored at the TEC Awards ceremony, October 2, at the Westin St. Francis in San Francisco, the second night of the AES convention.

Bob Moog, now the owner of Big Briar Inc. (Leicester, N.C.), brought his first synthesizer to market in 1964, creating a new genre for musicians. Bill Porter, president of Allen-Martin Productions in Louisville, crafted the classic sounds of Elvis, Roy Orbison, the Everly Brothers and countless others in his more than 40 years in the business. And Phil Ramone, a leading light among record producers, has recorded scores of hits for artists such as Billy Joel, Paul Simon, Bob Dylan and Gloria Estefan.

For more information, call Karen Dunn at (510) 562-7519.

October AES in San Francisco, if not sooner. This category includes Tascam's HDR-1000 hard disk recorder, Neve's fully digital Capricorn music recording console, and SSL's upcoming entry into the digital post-production console market, the 38-input, 24-bus Scenaria. Big boards are definitely coming. One of the hottest rumors on the floor was that Rupert Neve is currently designing a super-console for Amek. Look for it late in the year.

Despite a shaky worldwide economy, most attending the European AES displayed optimism. While the pro audio business may be down a bit for some, it certainly wasn't evident in Vienna, and better days seem to be just around the corner.

—David Schwartz

BASF Closes Bedford Plant, Restructures

Professional audio tape production at BASF's Bedford, Mass., plant was discontinued at the end of April and moved to the company's European

research and development headquarters." Roughly 170 workers are expected to lose their jobs.

Group vice president Dr. Hans Schmidt said, "We deeply regret that this will be necessary. We are providing severance packages based on grade and length of service, which will also include continuation of health and life insurance, and outplacement counseling."

BASF also plans to strengthen its North American magnetics business by reorganizing regional responsibilities. The Bedford office, which handles U.S. and Canadian marketing and sales, will now handle Mexico as well. "The regional headquarters concept reflects our goal of a single business from Alaska to the Yucatan," Schmidt said.

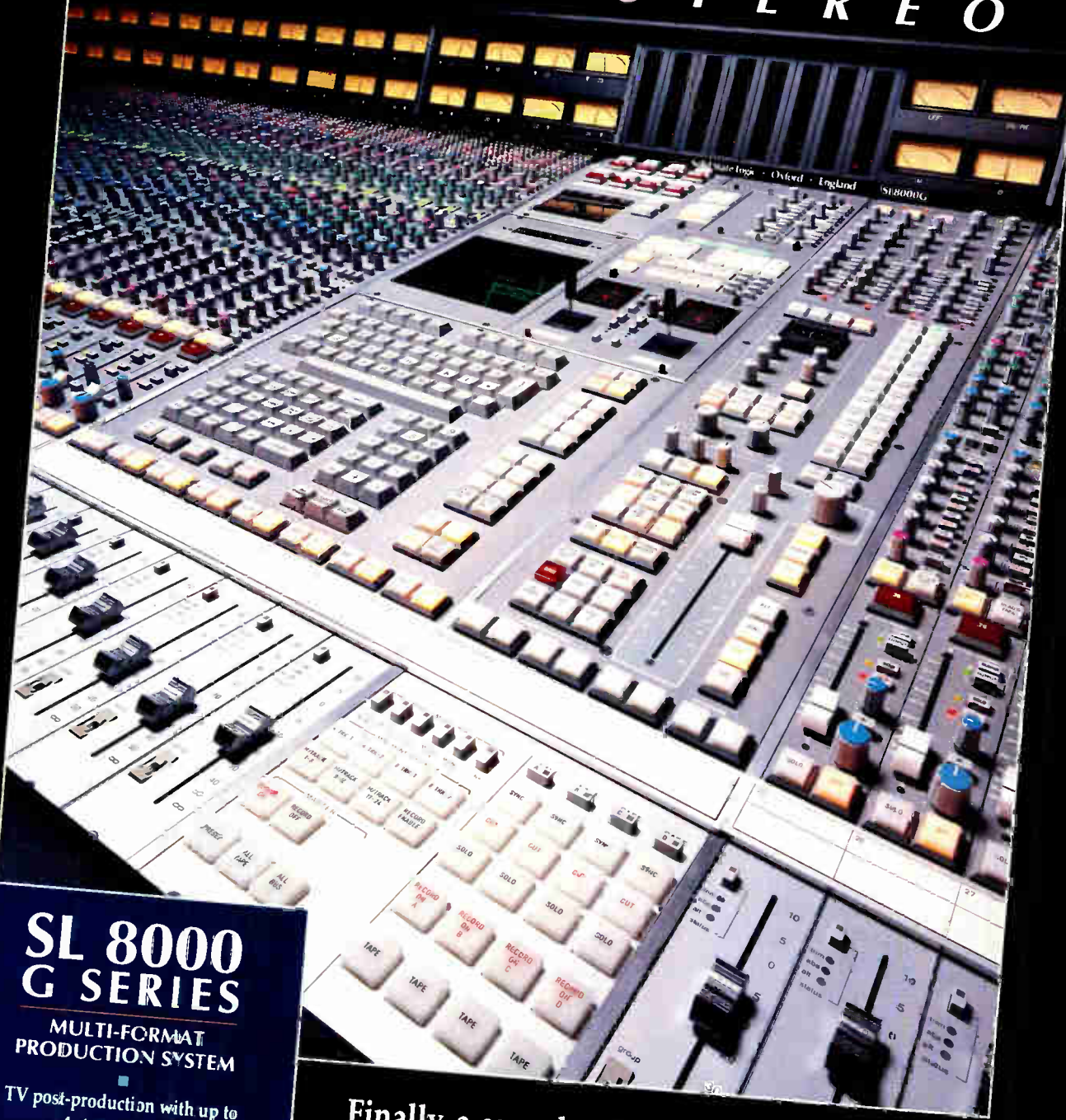
BASF Corp., headquartered in Parsippany, N.J., employs about 18,500 people at 41 production sites worldwide.

Murray Allen Joins Editel

It was big news back in November

—CONTINUED ON PAGE 12

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INDUSTRY NOTES

Hajime Hazama was named president of U.S. JVC Corp. (Elmwood Park, NJ) and its division JVC Company of America. Hazama was previously president of the UK-based JVC Limited...**New England Digital** (Lebanon, NH) reported some important changes: **George E.R. Kinnear II** was made vice chairman and **Brian N. Hamel** was appointed vice president of finance and chief financial officer. In addition, NED added eight engineers to its digital signal processing and human interface development project teams...**Seattle-based Symetrix Inc.**, long known for its analog signal processors, expanded into digital. The new digital division will be coordinated by **Christopher Hoskin** and **Allen Goldstein**. At presstime Symetrix had not announced what projects the division would undertake, but it did state that there will be some digital products coming to market in 1992...**Beverly Brignolo-Seidler** joined **Eastern Acoustic Works** (Whitinsville, MA) as director of sales operations...**InterOptica Publishing Ltd.**, a Hong Kong-based publisher of multimedia CD-ROM computer software, opened its first North American office, in San Francisco. **Ken Durso** is vice president. **Catherine Winchester** is managing director and **Victor Medina** is manager of operations. The office, which provides sales and technical support, may be reached at (415) 788-8788; fax (415) 788-8886...**AudioTechniques**, a pro audio and video dealer in the metropolitan New York area, appointed **David Schecterson** product manager for TubeTech/Lydkraft. Schecterson was previously a sales engineer in AudioTechniques' accessories division...**Ken Simons** of **Excellence Marketing** is the new sales rep for **Rane Corporation** (Mukilteo, WA). Excellence Marketing will cover the Minnesota, North Dakota, South Dakota and western Wisconsin territories...**Nakamichi America** opened a new retail parts

distribution center. **Ruppman Parts Distribution**, in Peoria, IL. The toll-free phone number is (800) 662-0504...**Bag End Loudspeaker Systems** of Barrington, IL, appointed **Innovative Sales & Marketing** as its new manufacturer's rep. IS&M operates out of Irvine, CA, and represents Bag End in California, Nevada, Arizona and New Mexico...**Meyer Marketing** of Deerfield Beach, FL, hired **Randy Millis** as the company's newest sales rep. Millis will staff the north Florida office and handle the area's sales...**Audio-Technica** (Stow, OH) promoted **Darius Bossinas** to manager of graphic services...**Philips Interactive Media International** appointed **Dr. Jean-Pierre Isbouts** as managing director of **Philips Interactive Media of Europe**. He will continue to develop European title activity and oversee conversion of Philips Interactive Media of America titles to European markets...**The Sony Professional Tape Division** donated \$1,500 to the **Harold E. Ennes Scholarship Fund**. The Fund was established by the Society of Broadcast Engineers to provide financial aid to students who are interested in the technical aspects of broadcasting...**The Music Technology** divisions of the **Berklee College of Music** and the **Utrecht School for the Arts** (based in the Netherlands) are jointly offering a "Music Through Technology" program, August 16-23. For further details, call **Beth Ford** at (617) 266-1400, ext. 408...**The Society of Motion Picture and Television Engineers**, Hollywood Section, is hosting a one-day seminar on Saturday, May 9, 1992, entitled "MIDI Control and Synchronization." The fee for the seminar is \$75; for more information, call **Herbert Farmer** at (213) 740-2920. SMPTE is also offering a book of papers collected from their 26th annual Advanced Television and Electronic Imaging conference held in February. Write to SMPTE Books, 595 W. Hartsdale Ave., White Plains, NY 10607. ■

—FROM PAGE 10, CURRENT

when **Murray Allen** resigned as president of Universal Recording in Chicago. Well, he's back, and as of March 1 he's been hired as an audio consultant with **Editel Chicago**.

"As I see it," Allen says, "my duties are to bring my vast years of experience and know-how, add it to Editel's vast experience, and make it a two-times-two-equals-six sort of thing. Basically, it's the Logic 2 console that excites me. The one thing I've been looking for all my life is digital top-to-bottom, and Editel's new Logic 2 is a very exciting system, because once the signal is in, it stays digital from beginning to end—no transfers or conversions."

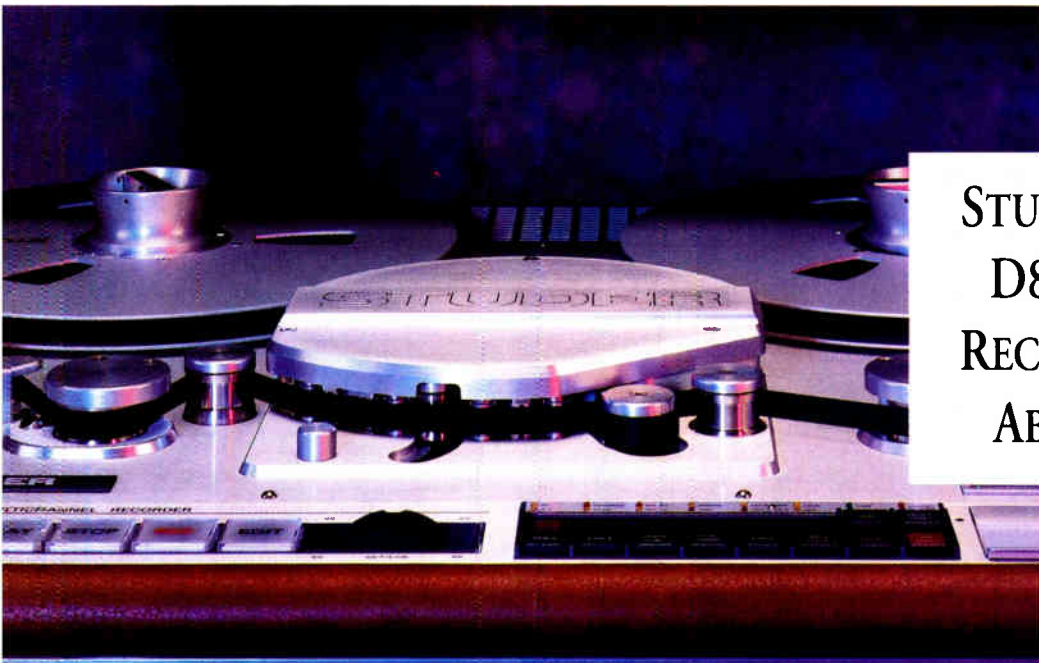
"Murray brings many, many years of knowledge, energy and excitement about the audio business," says **Richard Mandelberg**, president of Editel Chicago. "Everybody in the business knows Murray—and knows that he knows audio."

By the time you read this, Editel facilities in New York, Chicago and Los Angeles will have been sold by the Banta Group to **Unitel** of New York City. Editel Chicago hosted a grand opening of its Logic 2 room on March 19.

Convention News

The Association of Professional Recording Services will host **APRS 92** in London, June 3-5, at **Olympia 2**. It's the 25th year for the international APRS exhibition, billed as "The One Show" for the pro audio community in the new single market of Europe. Contact the APRS office for more information: phone (011) 734-756218; fax (011) 734-756216.

StudioTech '92, a regional pro audio trade show cosponsored by the San Francisco chapter of **NARAS** and *Mix* and *Electronic Musician* magazines, will take place at the **Golden Gateway Holiday Inn** in San Francisco, June 19-20. Contact **Beverly Sommerfeld** for more information: (415) 433-7112. ■



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Delay



Stereo Flanger



Ambience



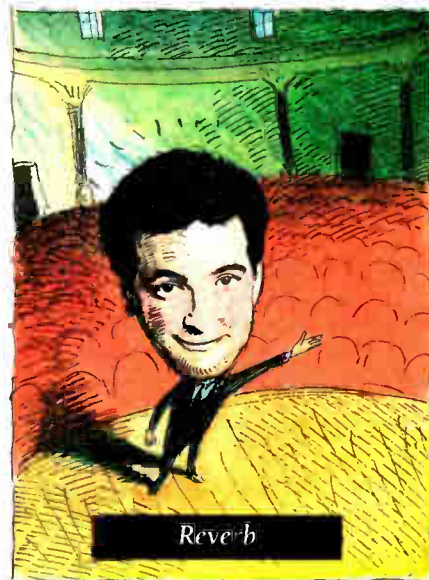
Rotary



Multi-Band Chorus



Phase Shifter



Reverb



Vocoder



Stereo Pitch Shifter

Yes, that's right. You too can become a schizophrenic.

All you have to do is buy an RSP-550 Stereo Signal Processor and follow these instructions. The possibilities are limitless—you can become 10, 20, even 30 different personalities—so read on and read carefully.

You can choose from as many as 39 personalities (algorithms). The somewhat disturbed illustrations to your left are examples of but 9 of them.

Technically speaking, these algorithms are as follows: (Please excuse us as we lapse into our decidedly multifaceted personas here. It can't be helped.)

1. The Delay algorithms range from

duces warm tube amp-like distortion.

5. When combined with Roland's pioneering high-definition chorus effect, the chorus algorithms sport innovative effects such as Multi Band Chorus. This particular effect features two separate stereo or four separate mono bands, each with its own adjustable parameters. With the Penta Chorus algorithm, the input signal is divided into different frequency ranges, with each range independently processed so that you'll experience the most subtle or radical sound.

6. The Phase Shifter also has independent left and right channels and provides a 12-stage phaser per channel.

7. The RSP-550's Reverb has the

pitch shifters simultaneously each with a four octave range.

There are 30 more algorithms where these came from, but more on this later.

One of the truly cool things about the RSP-550 is the true stereo ins and outs that both create spacious-sounding stereo effects and retain the integrity and panning of the input signal.

No doubt that by now you've already guessed that this machine is for serious users only. This is because only serious users will quite know what to do with a dynamic range of 95dB coupled with a frequency response of 15Hz-21kHz and a THD of 0.02 or less. Not to mention signal processing

Now, just about anyone can become a schizophrenic.



simple single-line to genuine stereo and multi-tapped delays featuring up to eight independent delay lines, with up to 2700 ms of delay time each. With the RSP-550's Tempo Delay function, you can automatically assign the delay time according to, believe it or not, tempo. Or, if you'd rather, you can simply tap in the delay time.

2. The Stereo Flanger can be used for bi-flanging effects or independent left/right flanging.

3. Ambience is an effect that simulates the pickup from an ambience microphone and may be further modified with the Edge Expander function to emphasize the attack of a sound. It lets you create a realistic "presence," for instance, with the ambience of a recording studio or small club.

4. The Rotary algorithm delivers a detailed simulation of the distinctive rotary speaker sound—complete with independent rise/fall times for the horn and rotor. An Overdrive parameter repro-

duces high-density spaciousness that acoustic environments create as well as a smooth and natural release. The Hall/Room/Plate algorithms feature options for a wide range of reverb time settings—0.1 to 480 seconds—with a frequency response of 15Hz to 21kHz.

Parameters such as Pre Delay Time and Early Reflection enable you to set the apparent "length" of the room while HF Damp simulates reverberation from different wall materials.

By the way, all of the reverb algorithms also include three-band EQ for tonal adjustment of effected sounds.

8. Only the RSP-550 has a Vocoder algorithm which superimposes your voice onto other sounds, such as brass or a jet taking off, to give your voice characteristics of that sound. Incidentally, brass makes you sound like a robot.

9. The Stereo Pitch Shifter allows an independent pitch shift per channel because it features independent left and right channels. Or you can use up to four

conducted at a CD-quality sampling rate of 48kHz, with fully independent 16-bit A/D and D/A converters for each channel.

Beyond all of these qualities, the gonzo-in-straightjacket effects, the commensurate professional sound quality and the ability to control effects via foot-switches, the RSP-550 has tremendous MIDI capabilities. With MIDI, you can control up to four parameters simultaneously from controllers, aftertouch, velocity, note range or pitch bender.

Now, as we promised, here's more on the 30 additional algorithms. To hear them, you need to visit a Roland dealer, who, in this case, can be thought of as a kind of reverse psychologist. If that makes any sense. It does to us, but then we're already schizophrenic.

No we're not. Yes, we are.

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USE READER SERVICE CARD FOR MORE INFO

by Ken C. Pohlmann

CD-I FULL-MOTION VIDEO

With the successful launch of CD-Interactive under its belt, Philips is aggressively pushing the diverse applications of this exciting new format in many directions, with many new co-ventures. One of the most interesting is the recent agreement between Philips and Blockbuster Entertainment to sell and/or rent CD-I hardware and software at

the move to market CD-I through Blockbuster's retail stores is particularly ingenious when you consider the next evolutionary phase of CD-I technology.

Specifically, later this year, Philips will introduce the second generation of CD-I players and titles (and provide upgrades for first-generation players), which accommodate playback of full-motion video from the compact disc. (For a closer look at audio production of a second-generation CD-I title, see this month's "Byte Beat.") A single disc will contain up to 60 minutes of digital audio and full-motion digital video program with VHS quality. It doesn't take a genius to realize that two CDs could thus hold a feature film and make an almost ideal playback medium. It's also a perfect rental medium for Blockbuster because it eliminates the two banes of videotape: tape wear and deadbeats who refuse to rewind the tape when they're done.

The secret to CD-I full-motion video (FMV) is the Moving Picture Experts Group I video and audio data coding standard, finalized last November by MPEG, a working committee sanctioned by the ISO and IEC standards organizations. Linearly encoded, real-time video requires a high data delivery rate. For example, the data delivery rate for natural pictures, as specified by the CCIR 601 standard, is 165 Mbits/sec. The achievement of FMV lies in reducing such data rates to within the 1.41 Mbits/sec data

delivery capacity of the compact disc. Using the MPEG video coding algorithm, natural pictures coded at the CCIR 601 rate of 165 Mbits/sec can be

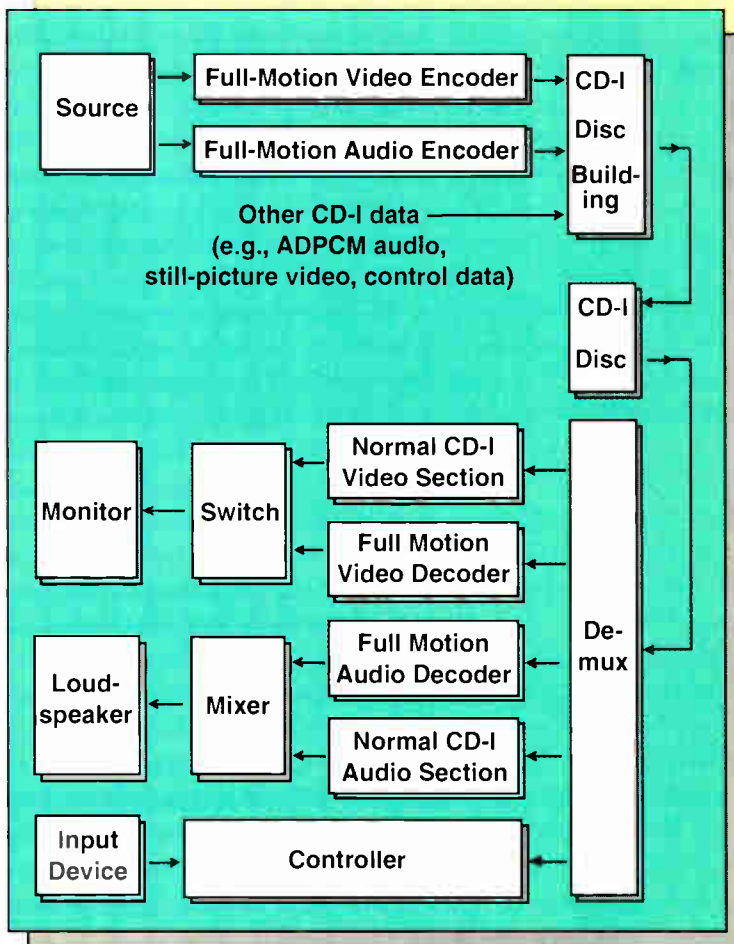


Figure 1

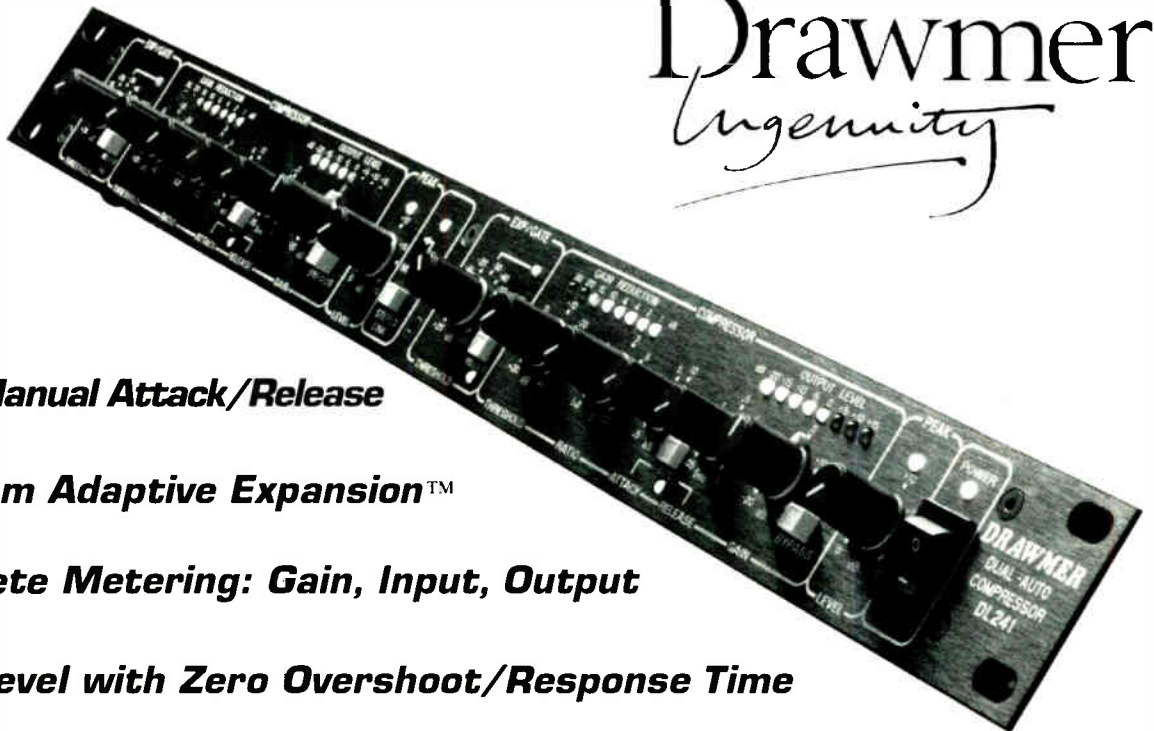
the 1,934 Blockbuster video rental stores. CD-I is already selling well at over 1,000 retail outlets, including Sears, Radio Shack and Circuit City, but

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reduced to approximately 1.2 Mbits/sec, a compression ratio of 140:1. Even higher compression ratios are available for the lower picture qualities that are acceptable in many applications.

Similarly, the MPEG audio algorithms can reduce the CD-Audio data rate of 1.41 Mbits/sec to about 0.2 Mbits/sec, a ratio of 7:1. The video and audio data are combined into a single datastream with a total rate of 1.41 Mbits/sec—the CD's maximum capacity. As with any well-behaved datastream, this one provides for syn-

chronization between decoded audio and video, initial and continuous management of coded data buffers to prevent overflow and underflow, random access start-up, and absolute time identification. In addition, the format allows multiplexing of multiple simultaneous audio and video datastreams, as well as privately defined streams. Frame rates of 24, 25 or 30 fps support both 50Hz and 60Hz source material. Of course, the full-motion video format is in addition to existing CD-I audio and video formats and may be authored and replayed together, as shown in Fig. 1.

To achieve this, MPEG I coding uses time stamps to specify the decoding and display time, derived from a 90kHz system clock. This method permits various video and audio data coding rates and allows great flexibility in decoder design. It ensures, for example, compatibility with future hypermedia decoders.

The video coding method was finalized after three years of scrutiny. It can perform over a wide range of bit rates and picture-resolution levels. Encoding algorithms are not fixed, thus allowing optimization for particular visual phenomena. The data reduction algorithm itself is based on the discrete cosine transform (DCT). It uses spatial redundancy in sequential video frames and motion-compensated interframe coding, which can account for past and future correlation in video frames to reduce the data rate. In other words, because static image information need not be redundantly stored, the algorithm can achieve the substantial reduction in data needed to represent a sequence of frames. Information from the DCT can be coded with Huffman code processing to further reduce the bit rate. In addition, the algorithm exploits the visual characteristics and limitations of human vision to place coding impairments in frequencies and regions where they are perceptually minimal. In this way the perceived picture quality is enhanced. The video quality of the MPEG standard used in CD-I is similar to the quality derived from the VHS format.

A rectangular spatial format is used, with a maximum picture area of 352 pixels by 288 lines, but the picture area can be used flexibly. For example, a low and wide area of 768 pixels by 132 lines or a high and narrow area of 176 pixels by 576 lines could be coded. During playback, the entire decoded picture, or other defined parts of it, may be displayed, with the window's size and shape under program control. The video decoder recognizes five modes: play forward, freeze, single step forward, slow motion forward, and scan. During the scan mode, a sequence may be scanned in forward or reverse direction as a series of still pictures.

The audio coding algorithm also received scrutiny for three years, and it permits a variety of coding rates and sound-quality levels. Depending on applications, three layers of coding with increasing complexity can be



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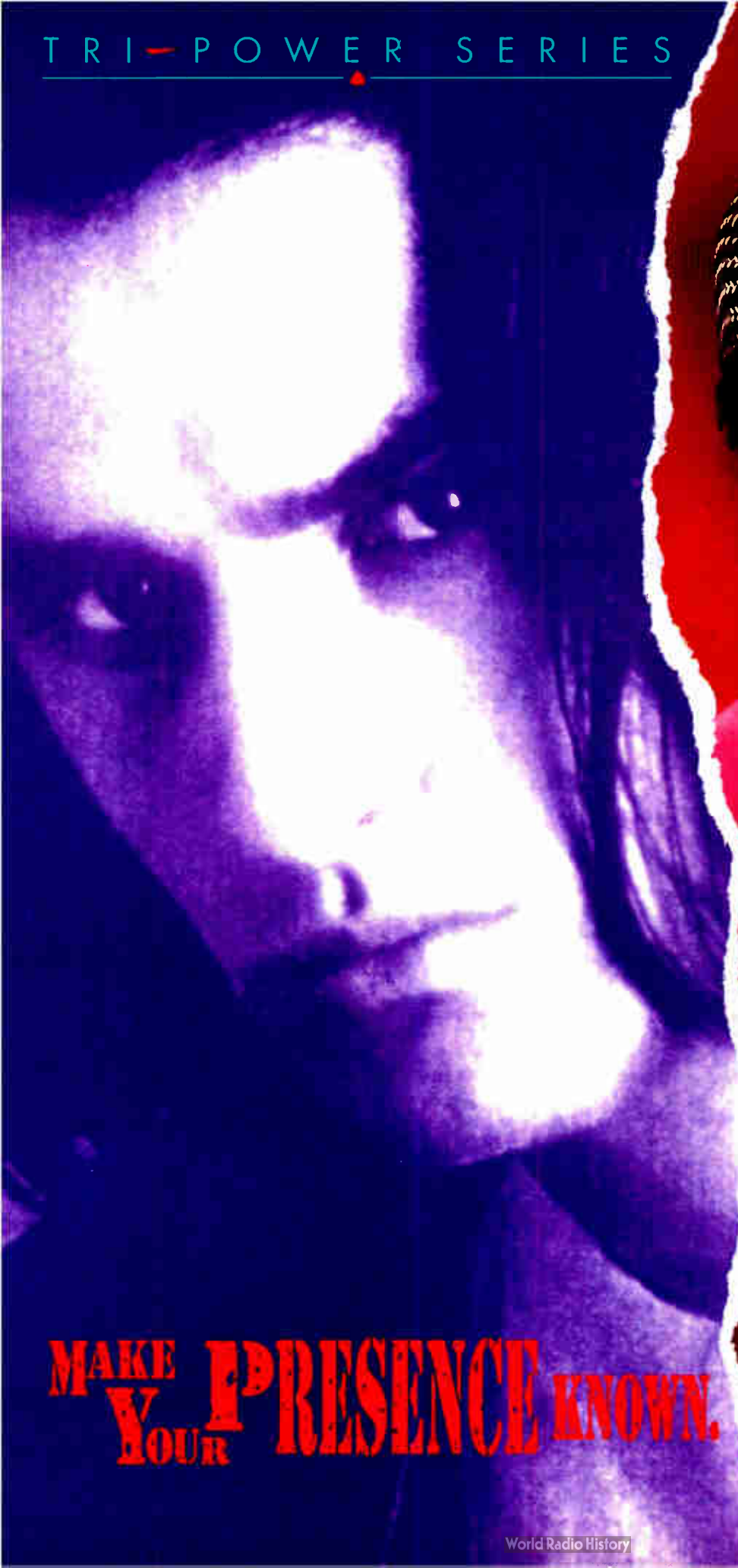
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employed. In all three layers, the time-domain input audio signal is converted into a frequency-domain representation. In Layers I and II, a filter bank divides the signal into 32 sub-bands that are quantized and adaptively blockwise-coded with the help of a psychoacoustic model. Layer II achieves greater reduction through more precise quantization and removal of redundancy in the scale factors. Layer III achieves still greater reduction through a hybrid filter bank in which each of the 32 sub-bands are

further split by a linear transform that operates on 18 sub-band samples. These higher-resolution frequency lines are non-uniformly quantized and coded with adaptive segmentation and entropy coding, as well as a psychoacoustic model for greater coding efficiency.

Stereo bit rates range from 64 Kbits/sec to 448 Kbits/sec, and the standard also supports mono audio coding of 32 Kbits/sec. In addition, in the stereo modes, stereophonic irrelevance and redundancy can be optionally exploited to reduce the bit rate. Audio bit rates below 256 Kbits/sec are useful for

applications that require more than two audio channels while maintaining full-screen motion video. Rates above 256 Kbits/sec are useful for applications requiring higher audio quality and partial screen video images. In either case, the bit allocation is dynamically adaptable according to need. Designers claim that the 256 Kbits/sec rate yields an audio quality that is subjectively indistinguishable from CD-Audio playback.

In addition to the MPEG I standard used in CD-I, MPEG has called for two other standards: MPEG II for digital television and computer-quality images, and MPEG III for HDTV-quality images. These standards may require data rates of 5-10 Mbits/sec and 60 Mbits/sec, respectively. The MPEG II standard will use the same basic algorithms as MPEG I to ensure compatibility with CD-I. The MPEG standards could have applications for CD-ROM, DAT, computer disks, and possibly communications channels such as ISDN, local area networks and digital broadcasting.

In a base case model, FMV is not incorporated in a CD-I player. In other models, FMV may be added by plugging an optional upgrade cartridge into the player. In still other models, FMV is an integral part of the CD-I player. As with all CD-I applications, discs using FMV are compatible regardless of their country of origin; the MPEG decoder chip permits full-motion video to be shown at either 30 (NTSC) or 25 (PAL/SECAM) frames per second. All discs using FMV are playable in the NTSC (525 lines) and PAL/SECAM (625 lines) environment.

With the addition of full-screen, full-motion video technology, CD-I becomes a complete interactive multimedia system for home entertainment that has worldwide universality. Eventually, audio-only CD players will seem antiquated and will largely disappear from the market. The small extra cost of CD-I decoding chips will make them a standard feature. New disc titles will deliver everything from Shakespeare to *Pretty Woman*. And you won't even have to paint the edges green.

[Some of the material in this article is taken from the newly available second edition of Ken Pohlmann's Compact Disc Handbook.] ■

Ken Pohlmann once heard John Cage say, "The ocean is full of water. Why? We'll never know."



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by Stephen St. Croix



DC5

(AND OTHER BRITISH CONTRIBUTIONS)

We have a red, white and blue flag, they have a red, white and blue flag. We speak what we call English, they speak what they call English. Outside of these two similarities, we have absolutely nothing in common.

They can't spell aluminum, helicopter or color; we can't use "wanker" properly in a sentence. They boil their hamburgers (and call them wimpy burgers—rightly so); we fry ours (thereby assuring a *manly* dose of both fat and carcinogens). We think

shortest, cleanest, most direct signal path possible, while our British friends have made it a national quest to design the longest, most convoluted signal path possible, utilising (Queen's English spelling) the highest number of components possible. They also strive for the maximum use of those little, stretchy, rubber joint cover things (which means, of course, that they must use the maximum number of hand-soldered, wire-to-pin junctions, so that they have places to put these

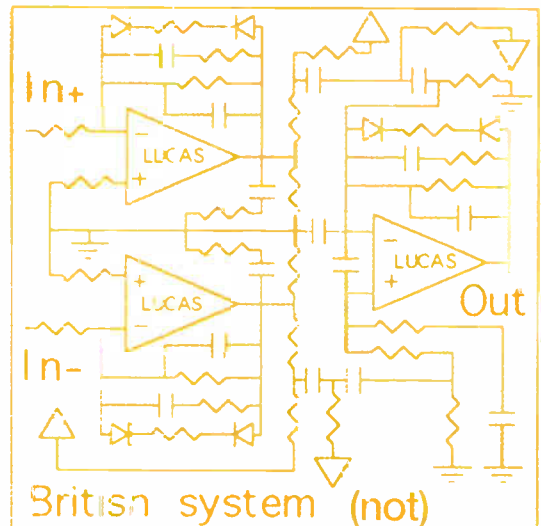
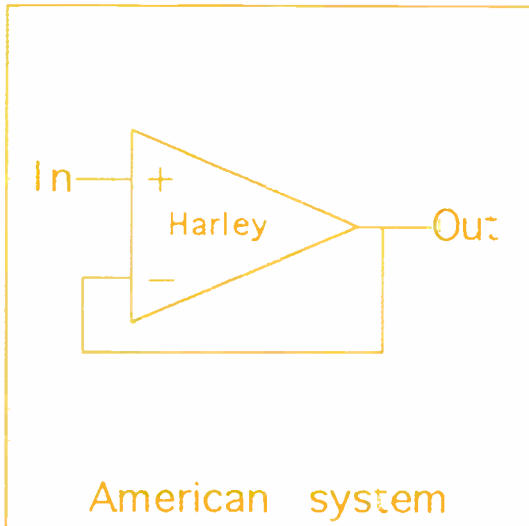


Figure 1 that a golden bronze tan—something, say, the color of teak rubbed in hot olive oil—is attractive. Translucent china-white skin—something on the order of thin-cut halibut sashimi—is the color (colour) that drives them wild.

We put our sewage pipes inside our walls, they stick theirs on the outside of their buildings.

We sit at consoles, they sit at desks. Nothing even remotely similar here, either.

When it comes to non-computerized mixing equipment, American consoles have worked toward the

rubber sleeves).

We don't even *have* these things, while they have them in 13 sizes and six colors!

For example, Fig. 1 shows a schematic diagram of a single-unity buffer amp stage (voltage follower) in an American Harley Davidson recording console. And Fig. 2 shows the same buffer amp stage in an English desk. (Figures are not to scale.) Look carefully, now. Please take your time. See the difference? So what is the real audio result of these two vastly divergent approaches?

Figure 2

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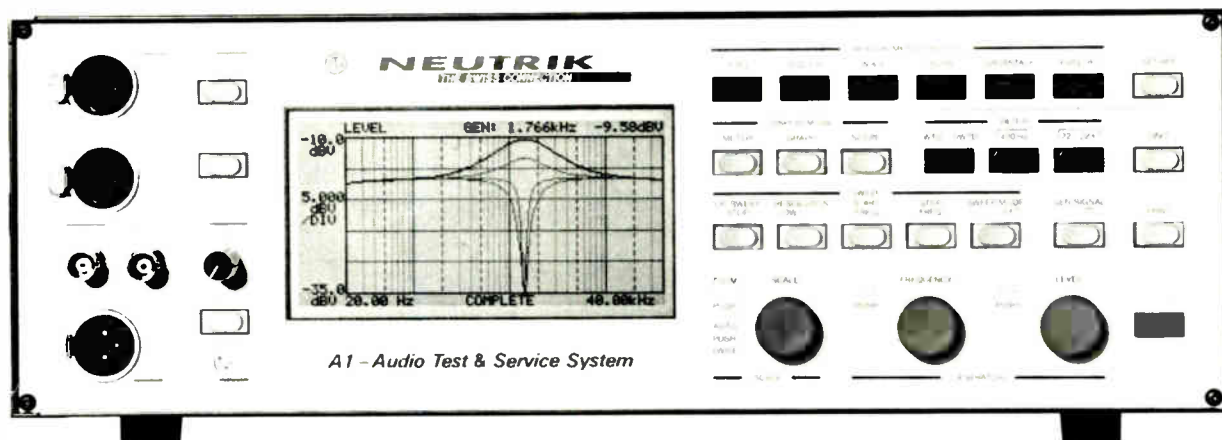
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Well, the American concept seems to make the most sense to *me*: Keep the signal path as short and clean as possible, and there will be less accumulated thermal noise (fewer active gain stages to contribute transistor noise), less induced artifacts (smaller physical layout means less likelihood of buzzes and RF) and less distortion (fewer amplifiers to color the sound and limit slewing, fewer coupling capacitors to roll off the bottom end and to do all those other horrible capacitor things to the top end).

The British approach is usually a bit

more convoluted than ours, to say the least. There *is* actual logic behind it. You know, if you wax an airplane and buff along the fuselage from the nose toward the tail, you will get up to an extra two knots of air speed for the same thrust and conditions...valid logic, yet one must consider the 150 bucks worth of Carnuba and the 650 bucks of labor for a 0.7% flight efficiency increase. It seems that there just might be a point where logic and applied reality converge, or at least intersect.

For the last two decades, serious English audio designers have been consistently concerned with such concepts as DC offset, offset of DC,

direct current offsets, accumulated DC components, non-AC artifacts and zero reference shift (all together now) in the audio path. Since everybody knows that it is next to impossible to design an op-amp gain stage with zero DC offset over real-life gain and temperature ranges, it is known practice to "decouple" these stages with capacitors.

For reasons far too complicated to go into here—specifically, resistor values that are optimum for important parameters such as gain, noise, slew and frequency response (gee, I guess it wasn't too complicated after all)—these DC blocking (decoupling) caps can be rather large. In this case, the electronic term "large" means both physical size and value, or amount of capacitance. In the words of some Nobel Prize winner (whose name escapes me at the moment): "If they ain't big enough, you got yerself no steenk-in' bass..."

When caps get large, they are generally one of two types: tantalum (an amazing metal foam that gives you high values in impressively small sizes) or aluminum (two very long, very thin strips of tinfoil rolled up into a tube and insulated from each other by an electrolytic chemical process).

One of the significant problems with both these capacitor types is that they only work *in one direction!* Stupid, but true. This means that they can only block voltage of one polarity. Technically, you can't put audio directly into these things because half of the signal (more or less) would be the wrong polarity, and it would actually hurt the cap physically, damaging the electrolytic insulation and rendering it weak and confused, like a mix engineer at sunrise.

This is one of the horrible, little, ugly secrets that electronic engineers throughout the entire world—no matter what their education or even their language—have conspired to keep hidden for all time, because if the people ever found out, they would laugh at them. Loudly.

One of the other amusing problems applies only to the aluminum ones: they usually *sound* pretty bad. However, they are used extensively in consumer and pro audio, because they are dirt cheap. (Actually, some are *cheaper* than good topsoil.) Ultra-high-end gear sometimes contains these compact Japanese aluminum electrolytics, but with very good-sounding,

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tiny, monolithic capacitors wired directly across them to clean up the damage to highs and transients that the aluminums are known for. This actually seems to work well, and many people buy new gear, open it up and slap these little monos on all the big aluminums before they use it the first time.

The tantalum's only unique problems are that they are very expensive, and if you blow one up, the vapor they release is fatal to carbon-based life. Luckily, humans apparently have a tantalum vapor-detection gene. When we get the tiniest whiff of the stuff, we gag and run screaming out of the room, thereby assuring the continuation of the race.

Back to the aluminums, because they dominate by 30 to one. Since they can't tolerate reverse voltage, the proper way to wire them is to mix a DC-offset voltage into the audio before the cap (see Emily Post, "Proper Electrolytic Biasing Techniques," AES Journal, 1967), so that the bipolar excursions of the audio signal never actually cause reverse currents.

In other words, in order to avoid a 0.1-volt DC offset of unknown polarity that may or may not be coming out of an op-amp, the British manufacturers will typically take this AC audio signal of, let's say, 20 volts peak to peak (approx. ten volts either side of zero), mix it with a DC offset (bias) of about +15 volts and shove it into the poor unsuspecting capacitor. Then even the peaks of the -10-volt audio swing are actually still +5 volts above zero, so the cap survives. Then, after it has made its way through, another bleeder resistor gets rid of any new residual DC offset (did I mention that these caps leak?), and you end up with audio *sans* DC, ready to go into the next gain stage and do it all over again. All for a couple of measly millivolts. It just goes to show you, it's always *something*.

A popular variation on this circuit is to do the entire thing, and then do it all again, backward, and wire them directly (back-to-back) together. Twice the number of resistors and capacitors. Putting two caps back-to-back like this (series) makes the final total value only half as much, so the size of each cap then has to be doubled. I don't know why they like to do this, but it *does*

support my theory that they are trying to design the longest and most tortuous signal path possible, with the highest possible component count, in order to make servicing, well...unpleasant. If they get into balanced audio, the component count doubles *again!*

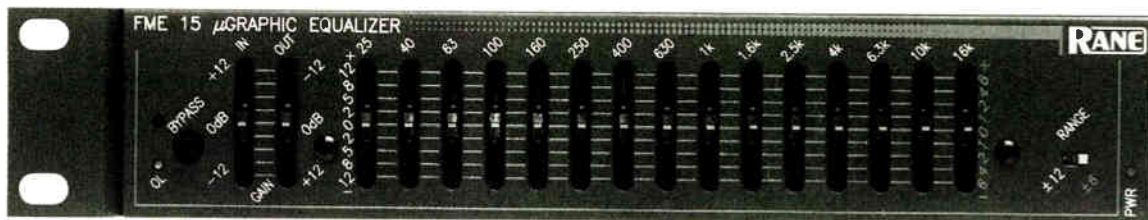
British electronics and Mayan Pyramids have long interested historians. There is a cruel running joke about British electronics (although in this case it refers to the automotive industry). It is far too tasteless to print here, but it goes like this: "The British drink warm beer because their refrigerators are made by Lucas." Those of us who have owned Triumphs, Jags or MGs know only too well that humor often comes from truth.

The amazing thing is that, after all this silliness, these machines often sound *great*, contrary to short-path design logic. Oh, well, I guess science is an art after all.

Don't get me wrong; some of my best friends are British, and so is my desk. ■

Stephen St. Croix has no bio this month because his history had been pulled for updating.

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by Mel Lambert

DIGITAL LIFE MADE SIMPLE

DIGITAL INTERFACING AND SYNCHRONIZATION SOLUTIONS

Interfacing and synchronizing multiple digital sources is not without its problems. The presence of both professional and consumer-grade I/Os, together with non-synchronous sampling rates, can often lead to frustrating situations for even the most astute facility owner.

This need not be the case, however. With proper care and attention, a basic understanding of the various I/O formats, plus access to the proper hardware, you can establish meaningful communication between a wide selection of digital components and subsystems. Several exciting new units are now available that directly address the problems of digital interface incompatibility, sample-rate conversion and system synchronization. Here are some brief product descriptions, with apologies in advance to any firm whose hardware, through my oversight, has been omitted.

APOGEE MODEL AD 500 PORTABLE STEREO A-to-D CONVERTER

While handling the obvious translation from analog to digital domains, the AD 500 can be switched to accept a vari-

ety of sync references, including internal crystal, external word clock (32 to 54 kHz), AES3 sync, optical I/O, S/PDIF (consumer) or conventional video sync (59.94/60Hz NTSC or 50Hz PAL). In addition to AES3 digital outputs, the unit provides S/PDIF and optical ports, plus an isolated word clock driven from the internal, low-jitter clock. Particularly useful is Apogee's proprietary "1.001" circuitry. It provides switchable up/down conversion between 29.94 and 30 fps NTSC video rates when you need to derive a video-referenced 44.056 or 44.1kHz word clock. The AD 500 serves as a flexible source of digital sync signals and is capable of serving as a master clock source for recorders, processors, digital mixers, etc.

Apogee Electronics Corporation, Santa Monica, Calif.; (310) 399-2991.

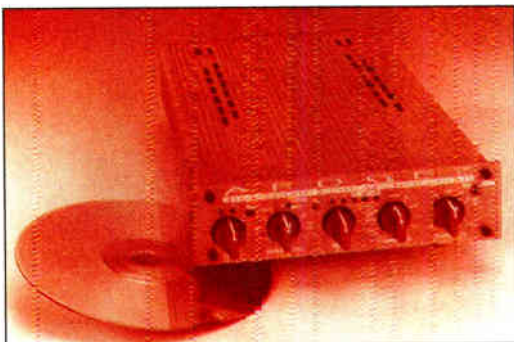
AUDIO PRECISION SYSTEM ONE

This test rig connects to an IBM-compatible PC running comprehensive analysis software. It will both measure and generate AES3-format test signals, including variable-frequency sine/square waves, impulses and multiple sine waves. All Channel Status bits can also be displayed and edited. Inputs are XLR-type, with fiber-optic and coaxial connectors for consumer-grade equipment. The unit will lock to a studio word clock reference for high-precision analysis of digital I/Os.

Audio Precision, Beaverton, Ore.; (503) 627-0832.

DAR DASS 100 DIGITAL AUDIO SYNCHRONIZING SYSTEM

The DASS 100 offers sample-rate conversion, format conversion, sample-



Power Trio



Vision

Opcode's Vision and Studio Vision® are the premier sequencers for the Macintosh computer, and are used by professionals on today's top albums, film scores, and TV commercials. Version 1.4 features *revolutionary* real time editing of MIDI and digital audio, on-screen control of audio and video tape transport controls, input quantize, SMPTE locked markers, drum machine-style loop record/editing, auto locate, fast forward and rewind/shuttle, and more.



MIDI for the '90s: powered by the same kind of microprocessor as your Mac, the Studio 5 has more MIDI interface channels (240), more merging, more RAM patches (128), more processing, more live performance features, and more SMPTE synchronization configurations than any other interface available. And visionary software, OMS (Opcode MIDI System), ties it all together: create your custom OMS studio setup so Vision and Galaxy know what your MIDI connections are, and display your devices by name. You can forget about keeping track of all those cables—OMS does it for you. Version 1.2 with networking of multiple Studio 5 interfaces is the most *integrated* system at any price.

"The Studio 5 is a true monster... its immense processing power and ultra-hip Macintosh user interface sets a new standard of excellence."

Keyboard Magazine

Studio 5 Award Nominations:

"Hardware Innovation of the Year"

Keyboard Magazine

"Best Music and Sound Product"

MacUser Magazine



Studios everywhere use and depend on the standard of Opcode patch librarian and editing software. For the first time anywhere, Galaxy Plus Editors offers an integrated package of universal librarian with compatibility for over 140 synths, effects, mixers, modules and *comprehensive* editors for over 50 of them—and we're always adding new ones. Galaxy—The Universal Librarian is also available. Version 1.2 adds a Find command for databasing and searching sounds, plus the Yamaha SY77/TG77 editor.

Trademarks: Macintosh, Apple Computer, Inc.; Galaxy, Galaxy Plus Editors, Studio 5 and Studio Vision, Opcode Systems, Inc.

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S Y S T E M S I N C

Opcode Systems, Inc. 3641 Haven, Suite A Menlo Park, CA 94025-1010 (415) 369-8131 FAX (415) 369-1747

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rate synchronization, gain adjustment, digital mixing and sample-clock generation from video (59.94/60 or 50Hz PAL), word sync, time code (24 film, 25 PAL or 29.97/30 fps) and other sources. For true sample-rate conversion, the DASS 100 handles fixed sampling frequencies of 32, 44.1 and 48 kHz, with up to 2% deviation. (Varispeed sampling frequencies can be within $\pm 10\%$.) Inputs can also be synchronized to a



master internal or external clock reference (video sync, time code, word sync or AES3 sources) to provide bit-for-bit transfers between subsystems that exhibit small variations of sampling frequency or phase. A typical application might involve matching the offspeed clock of a free-running, non-sync DAT machine to a master word clock source for transfers against video sync into a workstation. The DASS 100 handles conversion between AES3, S/PDIF, SDIF-2, ProDigi (Mitsubishi/Otari) and Yamaha Cascade I/Os. It also generates variable-frequency sine, square and sawtooth digital test signals and allows viewing/editing of Channel Status plus other data bits.

DAR, Chessington, Surrey, UK, distributed in the U.S. by Sam Ash Professional, (212) 719-2640; Audio Intervisual Design, (213) 469-4773.

DIGITAL DOMAIN FCN-1 FORMAT CONVERTER

This device accepts either AES3 or consumer-type digital inputs and produces four transformer-isolated outputs. Front panel controls allow the user to preset various Channel Status bits on the output datastream, including sampling frequency, emphasis, copy-inhibit, generation status, category code and other parameters. Options include polarity inversion, digital overload indication, channel reversal and optical-format digital inputs and outputs.

Digital Domain, New York City; (212) 369-2932.

HARMONIA MUNDI BW 102

The bw 102 provides sample-rate conversion (to/from 44.1 or 48 kHz); format conversion (from/to virtually

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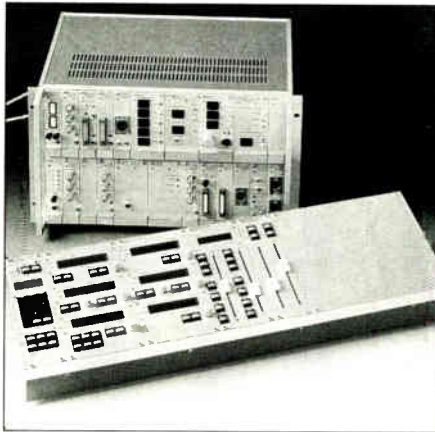
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M-X 5/92

JUXTAPOSITIONS

any I/O); sample-rate synchronization; level control and digital mixing; signal processing (parametric EQ, dynamics control, limiting, de-essing); external computer control; and sample-clock

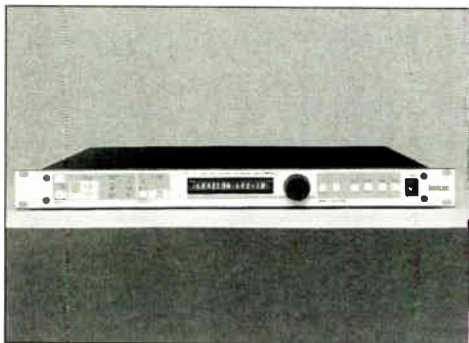


generation from word sync and other sources. An optional 8-channel Optical Transceiver provides conversion between AES3-format signals and fiber-optic connections, for improved serial transmission over long distances and/or to reduce RFI plus jitter problems with conventional cabling.

Harmonia Mundi, Freidburg, Germany; U.S. dealer: Gotham Audio, (212) 765-3410.

LEXICON LFI-10 FORMAT INTERFACE

Some of the many useful functions offered by this unit are digital I/O conversion (from/to AES3, S/PDIF or



SDIF-2); front-panel display and modification of various auxiliary data, including Channel Status, CRCC errors, Validity and Parity bits; and display of input and output sampling rates. Sampling rates of 32, 44.056, 44.1 and 48 kHz are supported.

Lexicon, Waltham, Mass.; (617) 736-0300.

NVISION NV1000 AND NV2000

NVision provides various interface and transmission modules for generating a video-locked AES3 Digital Audio Reference Signal (DARS); 18- and 20-bit A/D converters plus 20-bit DACs; multiplexer and de-multiplexer cards for communicating between analog and digital I/O modules; and AES3 digital distribution amplifiers. Also available: the stand-alone Model NV-448 Digital Audio Sample Rate Converter, which handles AES3, S/PDIF and SDIF-2 signals at synchronous and asynchronous rates between 28 and 54 kHz.

NVision Inc., Nevada City, Calif.; (916) 265-1000.

PRO-BEL MODEL 6510 DIGITAL AUDIO ANALYZER

Various electrical parameters for AES3, S/PDIF or SDIF-2 digital inputs can be measured with the 6510 (including amplitude, sample rate, EyeWidth, biphasic mark and jitter), as well as internal bit structure (including Channel Status, CRCC and other flags). Format conversion is available to AES3-compatible outputs. The firm also produces a range of high-precision Model 5120/5121 A-to-D and Model 5230/5231 D-to-A Converters (AES3-compatible I/Os, with internal/external sync reference); Model 5241 Digital Audio Distribution Amplifier for splitting a single AES3-format input into ten isolated outputs; Model 5243 AES EBU Digital Audio Reframer for eliminating bitstream corruption during crosspoint switching; Model 5245 Digital Audio Reference Signal Generator for providing an AES11-compatible DARS locked to PAL or NTSC video sync; and the HD Series Digital Audio Router for switching up to 256-by-128 AES3-format signals.

Pro-Bel Ltd., Reading, UK; U.S. distribution: HEDCO/Leitch Inc., (800) 231-9673.

PRISM SOUND DAS-90 AES/EBU-S/PDIF CHANNEL STATUS EDITOR

The DAS-90 is a combination hardware card for IBM-compatible PCs and software for displaying and editing Channel Status from both AES3 and consumer-format inputs. The unit also provides a word sync output and on-screen level displays of the digital signals with custom meter scales. Time code can also be injected into the bitstream.

Prism Sound, Cambridge, UK; U.S.



Prism

dealer: Gotham Audio, (212) 765-3410.

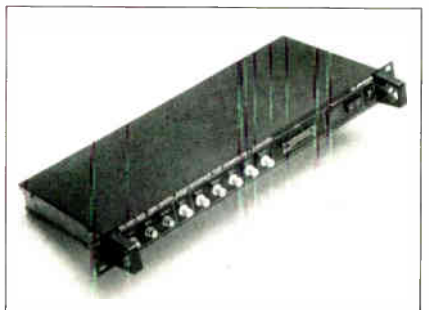
SONIC SOLUTIONS SS-612 SDIF CONVERTER

This unit provides simultaneous, bidirectional conversion between SDIF-2 and AES3/consumer formats, with switch-selectable Channel Status data (pro/consumer I/O from byte-0/bit-0) and emphasis. For SDIF-2 conversions, the timing relationship between word sync and the input—or generated data—can be adjusted in 1/8-bit increments. The firm also produces a Universal Clock Module for deriving master sync references from various digital inputs (SDIF-2 and AES3 via XLR/BNC and optical), word clock and/or video sync (composite video or 24, 25 or 29.97/60 fps time code). The system generates word clock (128 times the sampling rate) as well as 29.97/30 fps time code referenced to the video sync source.

Sonic Solutions, San Rafael, Calif.; (415) 485-4801.

TC ELECTRONIC MODEL TC8201 AES/EBU INTERFACE ANALYZER AND TEST GENERATOR

The TC8201 allows measurement of various electrical parameters for AES3 and EIAJ CP-340 (consumer) outputs—including sync lock, parity, clock stability, sync plus validity—and displays frame rate, Channel Status and user data. The unit, designed to be operated from an IBM-compatible PC,



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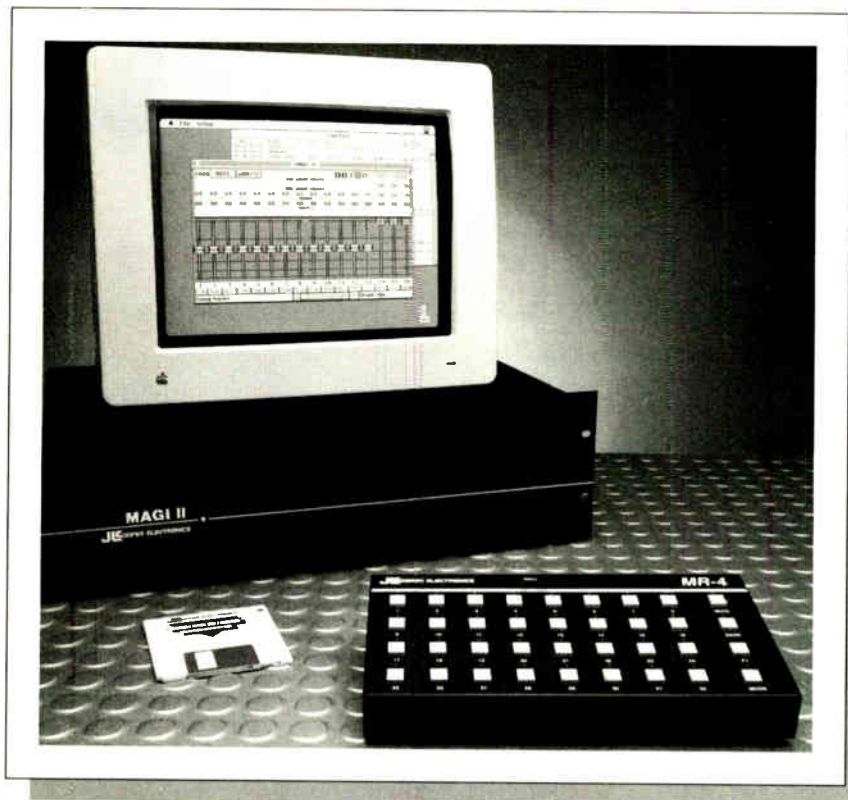
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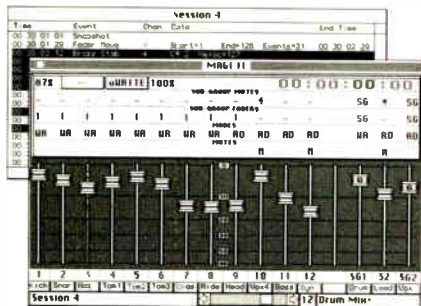


MAGI II Console Automation. Proven Performance.

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The MAGI II internal version retrofits into consoles with minimum installation time and without costly fader replacement. Its straightforward and sophisticated editing features compare to systems costing thousands more.

The MAGI II external version simply patches into the audio patch bay or insert points to automate any console.

MAGI systems are automating consoles from Allen & Heath, Sony, DDA, Harrison, D&R, Neotek, Tascam, Soundcraft, Amek/TAC, Ramsa, MCI, Trident, and others.

Contact JLCoooper today to find out how MAGI systems can save you time, money, and extend the useful life of your console.

GET THE VIDEO

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generates various digital waveforms and converts from/to AES3 S/PDIF (BNC and optical connection), with or without reclocking.

TC Electronic, Bradrand, Denmark; U.S. distribution: Virtual Designs Ltd., (805) 373-1828.

TIMELINE AUDIO CLOCK GENERATOR FOR THE MICROLYNX SYNCHRONIZER

The unit generates word clock (128-, 256- and 384-times sampling rate) for synchronizing workstations to various time code rates during audio-for-video production. The unit handles most time code rates and compensates for common pull-down/pull-up conversions, (for example, true 48 kHz at 29.97 fps time code rates).

TimeLine Vista Inc., Vista, Calif.; (619) 727-3300.



In next month's "Juxtapositions," digital audio meets digital video: We'll explore how synchronous and non-synchronous I/Os need to coexist in the multimedia facility of the near future.



A word of clarification: The graphic in my March column, which described AES11 synchronization schemes, lacked an additional shade of gray to distinguish between AES3-format digital signals (arrows indicating direction of data flow) and the master Digital Audio Reference Signal that allows each subsystem to remain in bit-accurate sync.

By the way, within "The Digital Studio" section of *Mix's* upcoming 15th anniversary issue in July, I'll be providing additional information about master synchronization schemes and the system-wide configurations that can be operated using such techniques. ■

Attempts to imagine a world in which the lack of hydrogen bonding causes water to exist in a volatile, gaseous form at NTP only mean that Mel Lambert probably could have made a respectable living as a chemist turned sci-fi writer. Instead, the dazzling world of professional audio became his day-to-day reality. So it goes.



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If you have an older console, you just may be in the market for something new. And if you've been thinking of replacing your console with some fancy new model, you may be in for quite a surprise when you see what some consoles are going for these days.

One economical solution is to retain your current board and install an automation package. For a comparatively modest investment—compared to buying a new mixer—an automation system can turbocharge your console with a host of extra features and flexibility, while perhaps giving your studio an edge over the competition.

Light years ahead of the cumbersome controllers in use a decade ago, today's automation systems combine vastly improved user interfaces, SMPTE and/or MIDI Time Code, and computer control, either integrated into the system or via an external PC. And in spite of all the speed and precision that automation provides, nine out of ten mixes take longer to do in the automated console environment. Studio owners like that.

It's plain and simple. Automated mixes require more studio time than manual mixing because automation eliminates the need to settle for a mix that's merely "pretty good." Run a couple more passes on an automated mix, and you can achieve exactly the desired level on that all-important maraca fill on the second chorus. The automation takes care of every mundane detail. It's audio nirvana. Clients like that.

So automation becomes a win/win situation for client *and* studio owner. Besides increasing studio time revenues, automation can also put off the need to replace an older console for a couple of years. And the latter makes a very convincing argument in these times of financial uncertainty.

AUTOMATION CONSIDERATIONS

Automation systems fall into a few basic types. The simplest is mute-only automation, providing control of the console's channel and/or group muting functions; often controlled by MIDI, this is becoming an increasingly popular feature in small- to mid-sized consoles designed for the project or smaller studio. VCA systems use voltage-controlled amplifiers to vary signal levels. Moving fader systems incorporate tiny, high-speed servo motors to actually move the console's faders, thus changing level.

One variation of the VCA versus moving fader debate is Ultimotion from Solid State Logic. Available only for SSL consoles with the onboard G Series computer, Ultimotion uses dual-path circuitry (VCA and analog) that provides the ability to update fader moves without using complex subgroup software. A microprocessor selects the most appropriate signal path according to the needs of the engineer.

If you're in the market for a new console, investigate the automation

BY GEORGE PETERSEN



AUTOMAT ION

NEW LIFE FOR YOUR CONSOLE

**For a
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an automation
system can
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and flexibility.**



provided. A typical 32-channel system has a pro user price of \$45,000, including faders, cabling, time code reader/generator, MIDI interface, PC boards, software and power supply. A rack-mount PC (386 for up to 72 channels or a 486 for more than 72 channels) and monitor are additional.

Available for 8- to 64-channel consoles is the System 990, an 8-bit system with fader resolution of 256 half-decibel steps. Each block of eight faders requires a microprocessor board (mounted beneath the faders), and the installation makes use of the existing console fader panels, as automation mode status is displayed on the screen only. A typical 990 Series 32-channel system is priced at \$26,350, without the required 386 computer, but including motorized faders in groups of eight, cabling, time code reader/generator, MIDI interface, software and power supply.

Distributed by Group One Limited, 100 Sea Lane, Farmingdale, NY 11735; (516) 249-1399.

A-D SYSTEME

Fairly new to the U.S. market—although no newcomer to automation, with nearly 300 systems delivered worldwide over the past nine years—French manufacturer A-D Systeme is now shipping its 3-D Optifile Version 3.0. Operating from SMPTE time code, this VCA system combines the power of a two-rackspace, 68000-based computer with a compact keyboard controller that can be hand-held or placed

options offered by the manufacturer. The right automation package may be the deciding factor when comparing two otherwise similar consoles. When budgets are tight, consider the possibility of buying a console that's "automation ready," thus allowing the addition of a few components—with minimal downtime or installation hassles—to add full automation at a later date.

When looking for an automation system for an existing board, begin your search by contacting the console manufacturer. Many companies build automation systems tailored to their own boards. For example, Amek's Supertrue automation is designed expressly for its mixers; Dynamic Mix automation is only available for the Euphonix Crescendo; and Tascam recently unveiled a moving fader retrofit for its M700 Series.

The following section outlines a number of companies (listed alphabetically) that manufacture console automation systems retrofitable into a variety of boards. Addresses are provided so you can contact the companies directly for more information.

AUDIOMATION SYSTEMS

Audiomation's Uptown is PC-based automation with moving faders and muting controlled to time code, available in two series: System 2000 and System 990. Both systems use Uptown's MIX software, offering online help, trackball-controlled operation, tape transport control (with your appropriate synchronizer), a 500-point cue list and MIDI compatibility. Offline mix editing includes programmable crossfades, fader adjust, mix splicing, snapshots and the switch event editor. The latter controls one switch per channel in System 990 and at least four—up to 16 on some consoles—switches per channel on System 2000.

The top-of-the-line System 2000 has a capacity of up to 96 faders, each with 10-bit fader resolution (in 1,024 one-tenth dB steps), along with four automation status mode LEDs on each fader panel. Each motorized fader supplied with the system has an onboard microprocessor, and new fader panels (painted to match the console) are also



on the console.

Optifile can handle up to 64 channels in blocks of eight; the system also incorporates machine control (currently for the Adams-Smith Zeta 3, soon for the TimeLine Lynx), with transport buttons on the remote. A high-resolution RGB color screen indicates the status of 32 tracks simultaneously, including relative fader positions, grouping and the automation mode status (read, write or update) of the individual channels. Mute automation selection is via the console's mute switches, and installation requires no modification to existing faders. Fail-safe relays auto-

matically switch the console to full manual control in the event of automation power loss or failure.

A 24-channel system is priced at \$12,800 (U.S.), complete with computer. Additional channels can be ordered in blocks of eight. Options include machine control (a \$1,000 plug-in card) and a switching matrix card (also \$1,000) to incorporate switching on each channel into the system.

Sascom Marketing Group, 635 Weyburn Square, Pickering, Ontario, Canada, L1V 3V3; (416) 420-0718.

—CONTINUED ON PAGE 40

GOING OUTBOARD: AUTOMATION ALTERNATIVES

Sure, installing an internal automation system in your console is a wonderful idea—especially if you have the bucks for a big-ticket installation *and* expect to keep your mixer for a couple more years. However, if your responses to either of the previous points is uncertain, outboard (external) automation systems provide a sensible solution that offers most of the advantages of the big systems, yet at a price nearly anyone can afford.

Let's take a look at systems from three manufacturers, each having different approaches to outboard automation.

MegaMix from Conneaut Technologies Inc., Conneaut, OH, provides real-time control of levels, muting, solo, panning and grouping, while its IBM, Macintosh or Atari ST host computer offers onscreen mix merging, copy, bounce and trim, along with SMPTE event listing and MIDI control. Systems can be configured from eight to 80 channels (in multiples of eight tracks), with the 24-channel MR-24 system priced at \$3,190. Optional is the IFI-8 (\$1,695)—a hardware controller for MegaMix Software or any sequencer—with eight 100mm faders, a dual-digit LED (for displaying channel assignments) and a 32-character alphanumeric display for visual control of edit parameters.

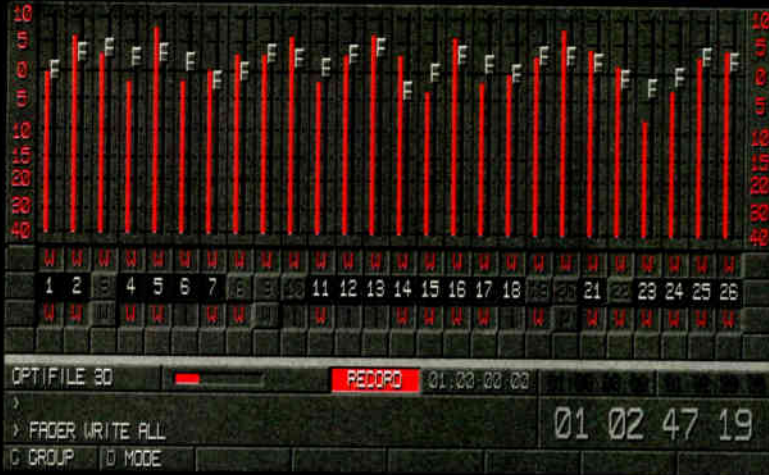
Like its internal-installation cousin, MAGI II *external* system from J.L. Cooper (Los Angeles, CA) is Macintosh-based automation that supports up to 64 channels, with expandability available at any time by adding 16-channel, rack-mount modules with dbx VCAs. The system includes SMPTE synchronization and can read/write time code at all standard frame rates. An MR-3 remote control provides 16 100mm faders, four dedicated subgroup faders and can address any of up to 64 channels (with auto-punch, bank select and auto

—CONTINUED ON PAGE 41

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CTI

Available in inboard and outboard versions is MegaMix, distributed by Conneaut Technologies Inc. The Inboard Series consists of up to 64 individual VCA fader modules, with a rack-mount APU-100 automation processor and control software for Atari ST, Macintosh or IBM PC-compatible computers. Each fader panel has discrete read/write, mute, solo and group switches, as well as status LEDs for each function and a hard-wired switch for bypassing the VCA on any individual channel. Automation status is updated every quarter-SMPTE frame.

All current MegaMix systems include MegaGate™, an automated gating system with programmable control of open/close threshold, hold, and attack and release times for each channel. The MegaMix software also provides full control of MIDI outboard gear, for incorporating MIDI effects automation into the system.

A 32-channel 200 Series system with gate-mode switching available from the fader is priced from \$18,683.

Conneaut Technologies Inc., Box 120, Conneaut, OH 44030; (216) 593-1111.

JL COOPER

Another system available in both internal and external versions is JL Cooper's Mixer Automation Gain Interface (MAGI II). Offering VCA control of 16 to 64 channels—expandable in blocks of eight—MAGI II uses the console's existing faders with prewired bypass switches for each channel. The system consists of a rack-mount automation controller, 8-channel VCA cards, driver card, remote unit, power supply and software. A Macintosh computer and MIDI interface are required.

MAGI II features display of fader read, write and update modes (with onscreen fader movements), fader and mute subgrouping, SMPTE synchronization, cue list offline editing and recording, and play of MIDI events for automating MIDI-controllable effects and devices.

A typical 32-channel MAGI II system is priced at \$8,565, less computer. Optional are special configurations for automating stereo faders or monitor pots, and for VCA-equipped or automation-ready consoles. Cooper recently unveiled the P-1, a hinged, under-console mounting pan that allows the installation of the MAGI II electronics

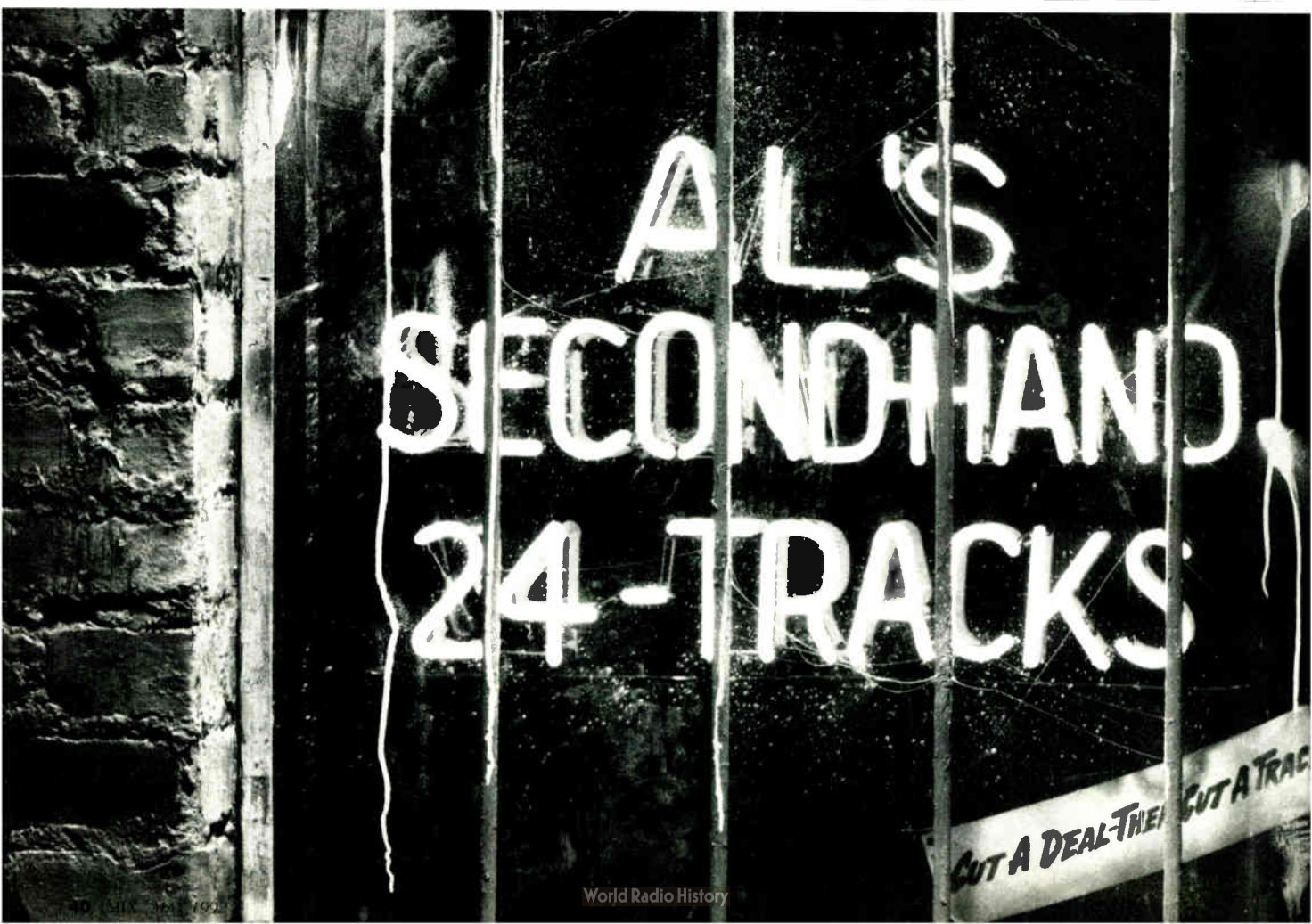
in consoles—such as the Trident 24—that previously could not accommodate internal automation circuits due to size limitations.

Designed solely for Sony MXP-3000 consoles is the JL Cooper MS-3000, a Macintosh-based VCA automation system that uses the Sony CAF-3000 console automated faders and remote keypad for user input. A JL Cooper SMPTE reader/generator is built into the system, and the software uses the Mac's second serial port for real-time MIDI recording and playback, for triggering samples at specific SMPTE times or automating effects devices. The MS-3000 is priced at \$8,495, less Macintosh.

JL Cooper Electronics, 12500 Beatrice Street, Los Angeles, CA 90066; (310) 306-1131.

GML

From George Massenburg Labs comes the Series 2000 Moving Automation Environment, with up to 256 moving faders. The CPU is a VME-based, dual 68020; the software offers recall, extensive mix/edit functions, control of up to eight switches on each module, and integration of machine control for



—FROM PAGE 38, GOING OUTBOARD

screen select modes, as well as external MIDI devices, such as signal processing). A 32-channel system (less Macintosh) is \$6,740, complete.

Distributed by the Russ Jones Marketing Group (Northridge, CA) is the Niche ACM Audio Control Module, a MIDI-driven console automation system priced at \$479. The single-rackspace unit uses a non-VCA design to control levels

of up to eight channels; multiple ACMs can be chained for more channel capacity. Unveiled at the Frankfurt Music Fair was the Mix Automation Station, a hardware controller for ACMs, with 16 faders and mute/solo buttons, four continuous MIDI controllers, data entry wheels and tape recorder-style "transport" buttons for controlling sequencers. U.S. deliveries should begin soon.

—George Petersen

all parallel-interface analog/digital audio machines and Sony/JVC 9-pin serial protocols. A trackball controls graphics recall, and a pan and zoom feature automatically moves the graphics display to center itself on any block of controls, whenever a control in that particular block is adjusted.

All systems now include video post/film re-recording configurations, and data can be input in SMPTE or in feet/frames addresses. Options include true stereo faders, software-nested grouping and VCA-style auto null mode. New features include an SSL mix data

conversion utility, additive grouping (this resembles the "update" mode on SSL and similar VCA systems), an improved Neve VR file capture routine and the ability to convert Flying Faders data to GML format.

System pricing for a typical 32-channel system is \$70,000, including custom Penny & Giles motorized faders with an accuracy of 0.1 dB, computer with 40MB hard disk, and 1024-line, ultra-high-resolution display.

George Massenburg Labs, 7821 Burnet Ave., Van Nuys, CA 91405; (818) 781-1022.

JMS

Dutch company JMS is probably best known here in the States for C-Mix, a VCA-based fader automation system that can be installed in many consoles. The system can handle a maximum of 64 channels, in blocks of 16. VCAs are made by dbx, and the system includes bypass relays for overriding any VCA channel at any time. Besides the usual mix editing features, C-Mix provides an "Auto Gate" function, which is selectable to automatically mute any channel whose audio level falls below a preset threshold.

Typical pricing for a 32-channel system is \$10,833. System requirements: Atari 520ST, 1040ST or Mega computer.

Distributed in the U.S. by D&R USA, Route 3, Box 184-A, Montgomery, TX 77356; (409) 588-3411.

NEVE

Designed in cooperation with Martinsound Technologies, Flying Faders is Neve's fourth generation of moving fader automation. Expanded 12-bit resolution provides 4,096 fader steps, with level storage in 0.1dB accuracy and a maximum system size of 256 faders. The Hewlett-Packard Vectra

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computer uses 80286 and 68000 microprocessors with 2 MB of RAM (expandable), 40MB hard disk and VDU high-resolution VGA color monitor.

The system's total mix memory imposes no limits on the number of mixes kept: All mixes or passes can be stored. Other features include multi solo (allowing the soloing of all channels in a group when any module in that track is soloed); global, local fader and mute mode controls; master/slave and Necam-style grouping; an automatic calibration system that aligns the servo system in less than ten seconds; and comprehensive machine control.

While originally available only with Neve V and VR Series consoles, Flying Faders can now be retrofitted into mixers from a number of other manufacturers, as well as older Neve boards. An option for post applications is Mix Conforming, which allows dubbing mixers to insert a scene into the cut version of a film, without having to reconstruct any existing automated mixes for following scenes. Announced as we went to press is Flying Faders Junior, which eliminates some of the full system's more sophisticated features and is priced at \$50,000 for a 48-

channel system.

Siemens/Neve, 7 Parklawn Drive, Bethel, CT 06081; (203) 744-6230.

OTARI

Available in moving fader or VCA versions for Otari or other consoles. Diskmix 3 is a time code-driven system using the power of multiple microprocessors and 10-bit data conversion. The PC-AT computer hosts the Diskmix 3 processing board and handles mix data computations, editing, storage and graphics.

Features common to both versions are unlimited mix data storage direct to hard disk, mute trimming on a frame-by-frame basis, a SuperGroup™ function allowing the creation of any number of subgroups, and complete offline editing, with splice, merge, copy, insert and delete. Diskmix 3 Moving Faders uses Penny & Giles faders under 68000 co-processor control, with touch-sensitive faders for automatically entering update mode by touching any fader. All mix files can be transferred directly between studios equipped with VCA or moving fader systems.

A 32-channel moving fader system

is priced at \$51,962. A similar VCA-based system is \$31,883.

Otari, 378 Vintage Park Drive, Foster City, CA 94404; (415) 341-5900.

SOUNDTRACS

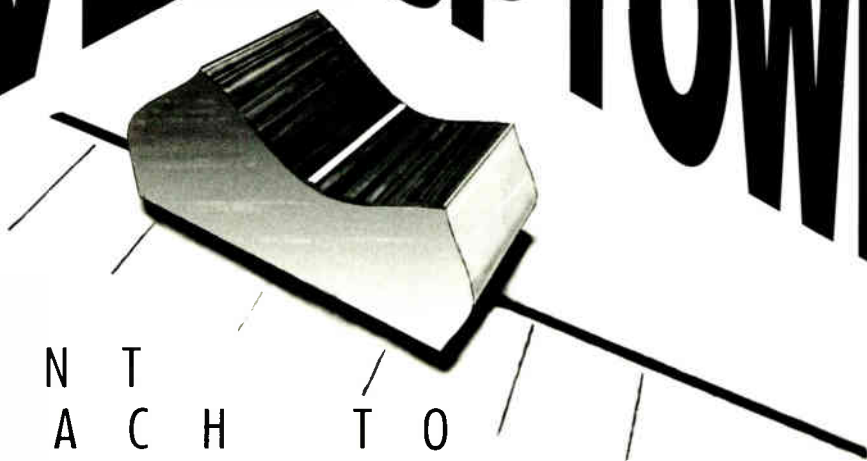
Previously available only for Soundtracs consoles is Tracmix II, a VCA-based fader and mute automation system. The entire system comprises a two-rackspace computer, remote compact keyboard, and up to 64 VCA fader modules, installable in 8-channel increments.

In addition to the VCA grouping, MIDI generator and fader bypass functions of Tracmix I, the new automation offers extensive offline editing, such as merging, mute editing, master trimming and autofading of any number of channels. Track MIDI software optimizes the system's flexibility when used with a console already equipped with MIDI mute automation, offering time code-locked operation with plug-in ease of installation.

A typical 64-channel Tracmix II system is priced under \$12,000.

Distributed by Samson Technologies, 262 Duffy Ave, Hicksville, NY 11801; (516) 932-3810. ■

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THE ART OF MIX

TIPS AND TECHNIQUES FROM

Life would be so much simpler if there were only one way to do something. Like mixing. Too bad we can't just look in some mixing textbook and follow an easy-to-read chart that tells us everything we need to know. But there are as many ways to mix as there are styles of music—even within genres there is disagreement concerning how to go about mixing. And it's difficult to talk about mixing without also addressing the earlier stages of a music project. Although tracking and mixing tasks are sometimes handled by different engineers these days, the two are still interrelated.

In choosing participants for this forum, we looked for top engineers from the Northeastern U.S. who worked in different musical styles, to provide some perspective on the myriad approaches to the art of mixing. Alas, there's no way to really impart information about "feel," that great intangible. But we hope you'll find some useful tips in the blend of philosophy and nuts-and-bolts information

about specific projects that follows.

JOSIAH GLUCK

The day we spoke, Josiah Gluck was a happy man. As fate would have it, the previous night, an album he'd engineered and co-produced, B.B. King Live at the Apollo, won a Grammy in the category of Best Traditional Blues Album. Although Gluck works on many different styles of music, he is best known for his seven-year stint in the '80s as chief engineer and technical director for jazz/fusion label GRP, working with people like Kevin Eubanks, Dave Valentin, Eddie Daniels, Billy Cobham and many others. These days, his favorite studios in Manhattan are Sound on Sound and Sear Sound.

Tracking and Mixing:

None of this is gospel, of course—it's only the way I've done it and what's worked well for me. I like recording as live as possible. On the new Dave Valentin album, the section consisted of acoustic piano, electric bass, drums, percussion and flute, all tracked live. Dave may, after the fact, take another shot at a solo, and we may add little hand toys and percussion later. When we're

tracking, I'm always listening and thinking ahead to where the mix may be. I always record dry. When it comes time to do the mix, I build up drums, bass, percussion and then add in keyboards and other instruments. If it's an album with a prominent soloist, I get the band right first and then start adding in the lead instrument. Then you know where your rhythm section is going to sit relative to your lead instrument or your vocalist.

I envision the mix so there's a cushion of sound behind the soloist, rather than everybody being in a straight line. Then, with delay, echo—or just balances—I make a little space for those people to be just ahead of that semicircle of players. Lately, I've been using shorter reverb times and more delay effects, with a Lexicon Prime Time II and standards like the 480L.

The Subtraction Reaction: In some ways, mixing is a very subtractive process. When many people begin mixing, the first instinct is to push something up, and if you push one thing up, you'll start pushing everything up until everybody is full-tilt boogie. I'd rather look at what's covering things up as a place to start—and see what's in the way, rather than what's too low.

On Working with Kevin Eubanks: With a

player like Kevin, you really have to make room for the acoustic guitar in the arrangement and the mix, because the way he plays guitar, it's a very delicate instrument, and he plays very quietly. So my main concern is always that I hear enough of him within the mix. I've experimented a lot with miking techniques on him, and now I usually use a coincident stereo pair, so I'm able to hold a good hard center within the mix but also get a sense of space and air around it. I usually like to use Neve limiters when I'm mixing, probably hitting a little harder than most people would like to use them, usually at a 1.5:1 or 2:1 ratio, with very fast attack and recovery times, because Kevin is very percussive. It's almost like bebop acoustic sometimes, and I want to make that stand out in the mix so you can really hear the melody lines.

Kevin gives me a lot of latitude when we're mixing. On the new album, called *Turning Point*, there's a tune where he has an acoustic rhythm part, and I put a nice wide flange on it, sort of spread it out behind the way a synth pad might work, and he really liked it. I like to

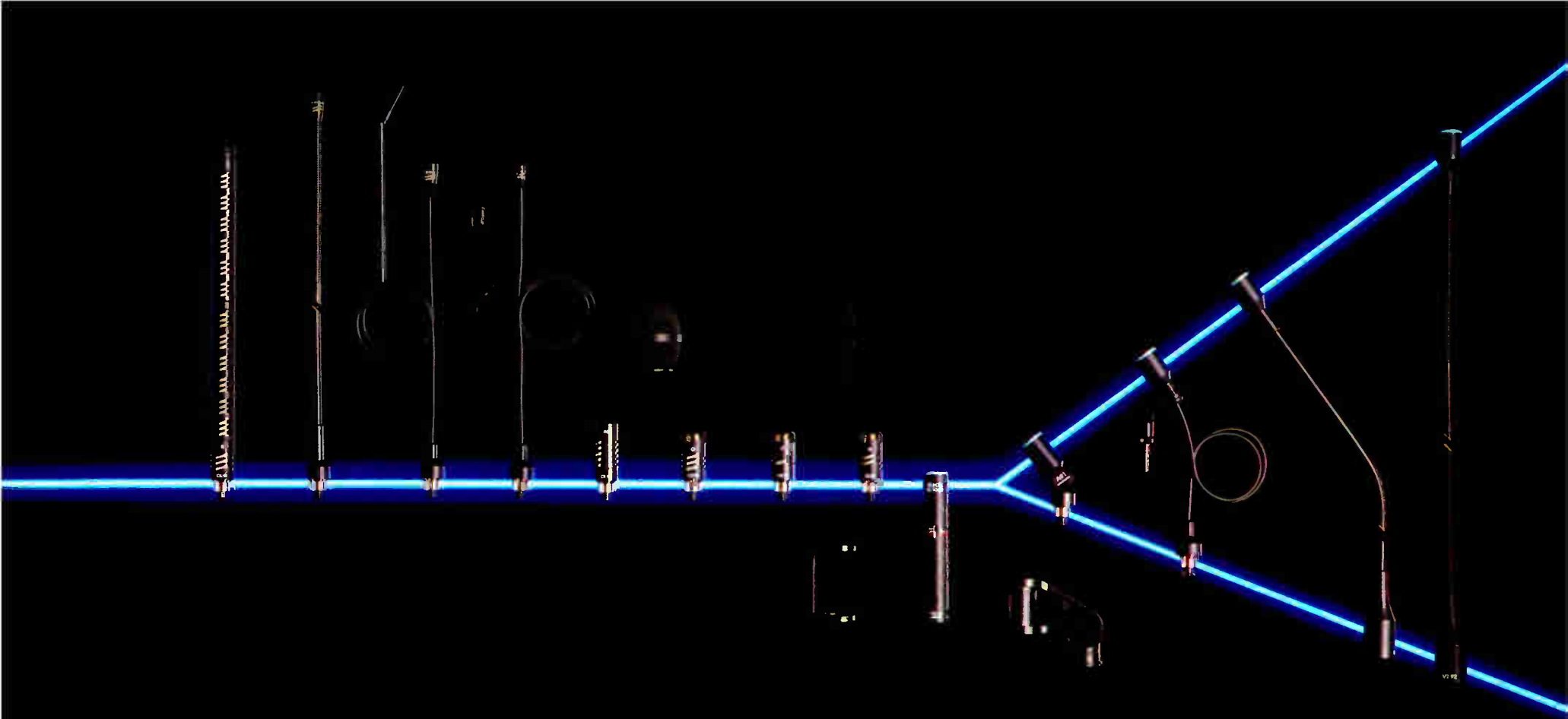
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experiment.

On Automation: Ironically, the two Grammy nominations I've had for engineering—Dave Grusin's *Cinemagic* and *Happy Anniversary Charlie Brown*—were on work that I did on a Neve 8058 without any automation, 28 faders and that's it. Some other records I'm really proud of—Kevin Eubanks' *Face to Face*, Eddie Daniels' *Blackwood*—were also manually mixed. For me, moving faders is a very nice step up. For some intangible reason, I like that constant graphic representation of where everything is rather than having to look up at a screen, at a bargraph or anything else.

MITCH GOLDFARB

As a co-owner and engineer at Kajem Studios, located outside of Philadelphia, Mitch Goldfarb has seen a multitude of top artists come through his studio's doors over the years, ranging from Teddy Pendergrass to Cinderella to DJ Jazzy Jeff & the Fresh Prince to Queensryche. He spoke primarily about his philosophy of mixing and about the differences of working in various genres.

The Visual Analogy: I come from a visual background—I relate to things visually, like photography and film—and my personal approach to a mixdown is that you have to see a movie play. For example, if you're doing a hard rock record with a ripping solo, you gotta see the guy with bent knees diving across the stage with his hair back when he's wailing. When Teddy or Patti LaBelle is singing a love song, you have to see the dim red lights and the close-up on the face, feel the whispering in your ear. You've got to get those movies to play in your mind. That way the listener walks into the piece of music—surrounded and taken on a voyage.

Some of it can be done using different vocal treatments in the mix. There are so many different effects I can do to widen the voice and make it very personal for a ballad, or I can use screaming echo or a tight room on a rock vocal, and play with different EQ and compressor settings.

Vive la Différence: Certain R&B records have to be very silky and sparkly, depending on the artist. For example, when I work with Teddy Pendergrass, as opposed to someone like Crimson Glory, I'm going to have to take an entirely different approach to mixing—not only because the artist

demands it, the material demands it. It's something you have to address from pre-production through the final mix; it has to do with song choices, vocal performances, getting the recording down and readjusting in the mixdown process. Obviously, the bottom on a dance record is not going to be the same as it is on a heavy metal record. You have different punch requirements for the clubs where it's played, whereas [on the metal record] the high end and the midrange have to be very, very aggressive and in your face. That's something you have to be aware of when you're tracking or mixing.

Staying Flexible: You don't want to ever close yourself to new ideas when you're mixing, because sometimes you'll stumble onto something that never occurred to you, and it works perfectly for the song. While cutting tracks with the artist, you usually get a preconceived notion of how you're going to approach the mix; together you figure out what sort of effect you're going for with the total song. Then, when we get to the mixdown, if everything is cut right, we can take it to another level and make it that much more exciting—really get it to sparkle.

On Automation: It gives me a chance to really listen to what I'm doing rather than getting lost in physically doing it—riding faders and turning knobs. With the SSL or any of the other automation systems that are equally as good, you can program almost all your effects and then sit back and listen to what you're doing. It gives you a chance to really scrutinize everything.

DAVID COOK

Working out of Dreamland Studios (a one-time church in Bearsville, N.Y., noted for its wonderful natural acoustics), David Cook's recent projects include albums by the Golden Palominos, Buckwheat Zydeco and Graham Parker's exceptional (and, as usual, overlooked) most recent album, Struck By Lightning. We used that record as a springboard for our talk...

Thinking Ahead: I start thinking a bit about the mix as soon as I hear a song. [For *Struck By Lightning*] Graham gave me some demos before we did the record. They were mostly just acoustic guitar and vocals, so they left a lot to the imagination, but they gave me an idea about the songs and the attitude of the record. Certainly that influences

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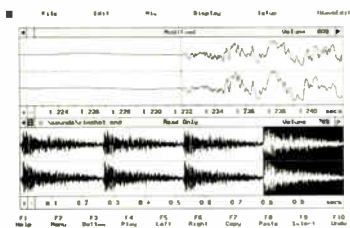
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how you eventually mix it. We cut the basics as a trio—acoustic guitar, bass and drums. At that point, the songs were pretty much *there*, and I was thinking about the overall atmosphere, tune-to-tune. On some, we'd pile on a bunch of reverb, others were drier. There was a tune called "Over the Border," where we came in for a playback and we actually took all the room and effects *off* it: Suddenly, it was like he was sitting in your living room. That's the way this mix went—a couple of small overdubs, but a live vocal, live atmosphere.

On some of the tunes, we went a bit wet, because we wanted a grandiose sound, so we used a lot of wider reverbs and a lot of the natural room sound for the drums. But aside from that, we wanted to keep it fairly natural—we didn't want to use a lot of delays and compression. We wanted it to sound warm and natural.

The mixing stage is where you can soften things up if they're a little too hard, and vice versa. You can soften a song by using different types of reverbs, a little less bright reverbs. On "They Murdered the Clown" [on *Struck By Lightning!*] I had a mix set up, and it wasn't harsh enough—Graham wanted it a little nastier because of the lyrical content, so we worked on the snare drums and the guitars specifically. "The Kid with the Butterfly Net" was the opposite. I had it a little too hard, so I toned down some EQs and brought up the softer elements, like the violin, to take off the edge.

Using the Room: Obviously, I'll record the room tracks separately, and I've gotten to the point now where I'm able to control the close mics to where there's almost no room in there if I don't want it. So I have the option of using the room or not when it comes time to mix. If I do some guitars outside the big room, sometimes I might mix in a little of the room if it calls for it.

I'm not a huge fan of digital reverbs, and if I use them I'll tend to use them as reverbs and not really create a room with them. For example, I use the Yamaha SPX1000 a lot, and it has a digital quality that lends itself to a lot of tracks, but I have a warm-sounding room at Dreamland, so I'll use that whenever I can.

A Different Emphasis: When I'm mixing tracks with a singer/songwriter, I like to get the voice and guitar sounds together first—a balance between them—and start thinking about what kind of effects I'm going to put on,

which is usually just a bit of reverb. Then I try to fit everything in around that instead of going for a bass drum, snare drum sound and trying to squeeze the singer in around that. Usually, the vocal and guitar are the focus on that kind of music, so I want the rest of the band around those, rather than the other way around. It's different than dealing with a rock band.

The Joys of Manual Mixing: I actually prefer mixing manually on a lot of the stuff I do, because each pass tends to have more of a human feel to it. Any automated mixing I've done is because the music called for it—you can get mixes *perfect*, which is what's needed on a lot of stuff. But on more song-oriented things, I lean toward manual mixing, because it's more of a performance. With whatever assistant I'm using—and we have some good ones at Dreamland—we get a feel for the song and end up "playing" the console as an instrument, and it works great. In fact, Graham [Parker] is in England right now working on his next record with John Jacobs, and he's coming back here to mix it specifically because he wants our unautomated API.

GARY CHESTER

Veteran Gary Chester heads the engineering team at The Edison Studios, another facility noted for its acoustically excellent main recording room, regarded as one of Manhattan's best for orchestral tracking. During his long career, Chester has engineered nearly every type of session (though he acknowledges rock has never been his bag); these days, film soundtrack work and commercials occupy most of his time.

Troubleshooting Ad Spots: Commercials are usually 24-track, but sometimes 48 on Coke or Pepsi spots where there's a lot of singing. [For the tracking] we set it up with strings—stereo violins, cello, viola, bass; for the woodwinds we'd have flutes, clarinets, bassoons, and English horn and oboe—maybe four tracks of that. On all of the real hard hits, they want some serious isolation so we can move them around when we mix. I look for the things that might become a problem—interfering with the copy or storyline—and I try to isolate those things. Once you hear it a couple of times, you know what the problem's going to be, whether it's the piccolo or those bells or whatever, and the way you record those things affects

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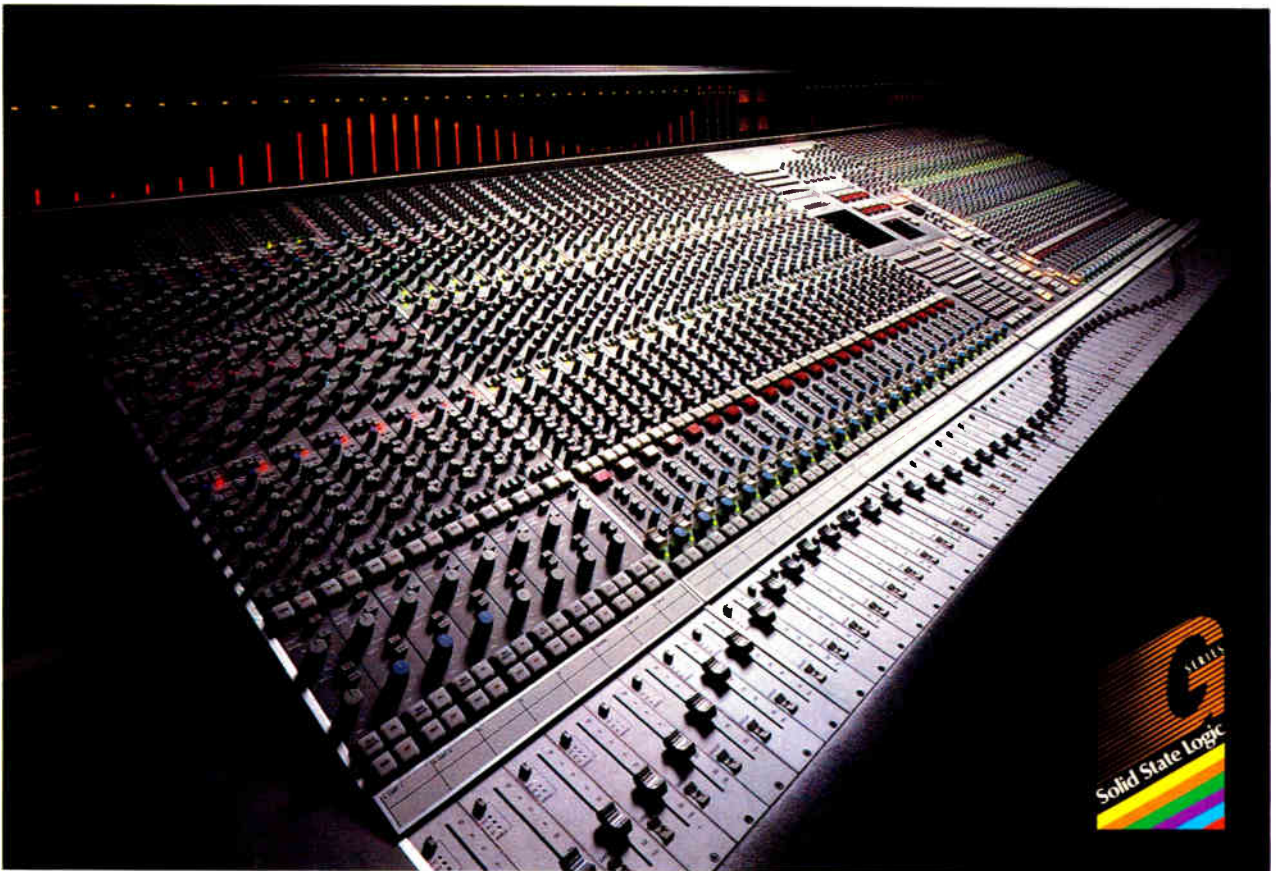
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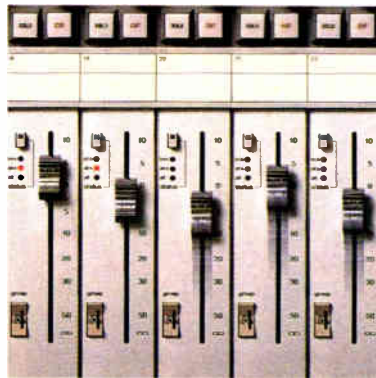
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what you can do with them when you mix. I try to open-mike everything so it sounds big. One thing you can count on is [the ad clients] always want it to sound like twice as much as it is—if it's 20 pieces they want it to sound like 40. If it's 40, they want it to sound like 80.

Miking and Mixing: When I mix an orchestra, I start with a string section, basically because the string section has the most other stuff in it. If you want a big string sound and you don't want it to sound harsh, you can't get too close [with the mics]. So if you use nice microphones on a section and you get [some distance] away, you get 60 percent strings and 40 percent peripheral stuff. Then [when you mix] you add the peripheral stuff according to what the strings allow you to leave. I always record dry except for the room.

Working with singers: I love the first session; that's my root. When I mix it, I put up the basic track and the singer, and I add all the additional stuff later. I don't build a big gigantic track and then put the singer in there to fight it. I figure this is what we loved, this is the song and now here's the embellishment.

FRANK FILIPETTI

Often working out of Right Track Studios, Frank Filipetti has long been considered one of the top independent engineers in New York City. Among his most interesting projects from the last couple of years are albums by The Bangles, Carly Simon and a relatively new artist who's making some noise on the charts right now, Beth Nielsen Chapman. On some projects he works exclusively as a mixer, on others he does the tracking, too.

Getting the Mix Started: There are no real rules or guidelines in popular music, but there are certain things that are important to me as a mixer. There's a certain relationship that always exists to me between the drums and the bass—it's a feel thing, and actually it varies from song to song, but there's a particular relationship I'm looking for. But with someone like Beth Nielsen Chapman, my main concern in mixing is getting the vocal right first. That sets the tone for the rest of the song.

I'll get a rough balance up and then put the vocal in and see where it goes—what the vocal's doing in relation to the instrumental tracks. On Beth's album there were several songs where I brought up the vocal and

listened to the track, and they weren't compatible to me. I ended up mixing by eliminating things like the drums and bass from the mix. Beth would come in at the end of the day and ask, "What happened to the drums and bass?" And I'd say, "Those things are fighting what you're trying to do with this song." At first she wasn't sure, but as the night wore on she really got into it. She'd been bothered by something on those tracks, and I let her see why. Eventually, she asked me to produce her next album.

A Proper Distance: On some of the Foreigner records, there were times when we'd spend five or six hours on a guitar sound, or a whole day on some incredible synth sound. Obviously you love that sound—you created it, you were part of the creation of it—and you have almost an emotional stake in it being prominent in the mix, whether it fits or not. When I'm *just* mixing and not doing the tracking, I can listen to the drums, bass, guitars and all the ear candy that's put on the track, and if it makes sense to me objectively as a listener, I'll use it. And if it doesn't, I don't have a problem with not using it. That's what makes mixers a valuable tool in today's market. Whereas ten or 15 years ago you'd go in and cut a record in four or five weeks and it'd be done, now records can take six, seven months—we spent 11 months on [Foreigner's] *Agent Provocateur*—and it's easy to lose your perspective on them.

On Cooperation and Collaboration: I'm not one of these guys who loves to work without the artist or the producer in the room. There are some who go so far as to say, "Send me the tapes, and I'll send you the mixes." I've done that, and I don't have a problem with it. But I enjoy working with the artist, especially someone who's as creative as Susanna Hoffs [of The Bangles], Carly Simon, Mick Jones, James Taylor or any of these others. These are the people who started the project, and they've lived with the songs for a long time, and I'm hoping I can provide some insight into some new ways of going. But they can also provide me with some insight as to what it was they were after. I like listening to demos of singer/songwriters to hear where the song is coming from, then listen to the [multitrack] tapes and listen to where the producer and the artist have taken it, and then I can put the mix together based on both of those things.

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On the Bangles' record, I got this mix up, and it was big and crashing. Davit Sangerson [the album's producer] came in and thought it was great. Three of the girls [in the band] came in and they all loved it, and then Susanna Hoffs, who was the writer of the song, came in and said, "That's not right. That's not what I had in mind at all. My vision of this was really much darker and smaller." I have an enormous respect for her, so I said, "Let's try something else." So I spent a couple of hours, reset it in a totally different direction, and she was right. It was the right way to go. The last thing I want to do is fight the artist. If I have a creative vision and I think it's right, I'll certainly put up my argument, but in the end if the artist feels very strongly and they've listened to my best effort and it's not right, I'm prepared to see what I can do to make it work.

There was another song on the album called "Eternal Flame," which was a different animal. I went in and mixed it, and I felt very strongly that the song needed a big finish and a big snare drum going on every fourth beat. There wasn't a snare drum on the tape, and rather than putting a sample on, I took a little percussion instrument they had that was running through the tune and just did some wild EQ on it, compressed it, put it into about two or three different reverbs and came up with this effect that sounds like a big snare. At first they came in and were saying, "Hmmm, I dunno." But they let me go through it for a while, and after about an hour they started to hear it the way I was hearing it, and in that instance they ended up loving it, and it became a big single for them.

On Automation: I think automation created the mixer. Twenty years ago you'd have seven people standing over the board doing a verse and a chorus and editing the whole thing together at the end. Automation has allowed us to play around with balances—with ideas and with effects and so forth—in a way we never would have been able to do. The dangers are obvious, as well—it means you can spend three days on a mix that might take four hours otherwise. But it's allowed us incredible flexibility in what we do. At one time, if you had a bad vocal you were pretty much stuck with it. With automation, you can put the vocal on six different faders—and I've had to do this—EQ it for when the vocal sings low, EQ for when it sings high, EQ for when there's a midrange,

and compress on one fader, don't compress on another. That way I can run down a track and have it sound good all the way through, and then I can go through the rest of my mix based on that vocal and not have to listen to a bad vocal while I'm working on the guitar. The same applies to drums or any instrument. With automation you can just put it up on three or four faders and tweak until it works.

PAUL GOODMAN

A recording veteran of nearly 30 years, Paul Goodman engineered and mixed close to 90% of RCA Studios' classical sessions for many years. These days RCA is called BMG, but Goodman remains, doing some classical, but more Broadway show recording (as well as the occasional jazz date). His specialty is recording direct-to-2-track, and thus mixing live, but for his Broadway work he uses 24-plus tracks in one of BMG's many top-flight rooms.

A Classical Approach: For a [2-track] classical mix, or even a Broadway mix, which is generally a classical approach, I try to get a monitor balance in the studio and then put that on tape. So if there is any mixing later, it's for something that you couldn't quite catch in the studio during the live recording, like a trumpet that leaned into the mic a shade too much, or we raised the gain a bit late for a trumpet solo.

In that type of music, you're not looking for any type of isolation; you're looking for control. If you have as much as, say, 3 dB of what you're aiming for above the background sounds in one microphone, you have enough to do all you should need to do. The balances should be close enough that you can work from that. The sound of an orchestra comes from what's leaking to other mics. You have to have a balanced sound before you can put anything down on tape.

In the old days, engineers were really going for the balance, mono or 2-track. It's all they had to work with, and they were really attuned to it. I'm one of the few left of the old school who likes to work with 2-track. Most of the younger guys are into multitrack, and they will just get stuff on the tape and then sort of put the monitors up to hear what they want to hear; later, they'll spend a couple of days mixing.

Broadway His Way: Mostly we put the vocals and the orchestra down at one time; usually, there's very little overdubbing. There's some editing

THESE CONSOLES SO MANY FEATURES COULDN'T FIT THE ALL ON THIS PAGE



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normally. We may do three takes of any song, and there might be some corrections, so we edit from there. If you record it right, there's very little equalization required. Ambience depends on the studio. If we use our large studio here, you have to add very little because it's 6,000 square feet, all wood. It's a wonderful room.

On multitracks, I try to divide up the orchestra, so if I need to do any mixing, I can do it easily. If it's a Broadway session, there'll be maybe two tracks of the first violins, two tracks of second violins, one of viola, one of celli, one of bass, two of trumpet, one of the bones, one of French horns, and usually six woodwind players on three tracks. I start with an outline of what I like. I listen to the band or orchestra in the studio rehearsing to get a feel for it. Then I try to come up with a mix that is close to what I'll eventually want, but not exact. Then I turn to the producer and say, "Okay, where would you like to go? Am I missing anything as far as what you're hearing?" And we work together on it.

ACAR KEY

These are good days for Acar (pronounced "ah-jah") Key, a rising independent engineer who has worked extensively the last couple of years with the mega-popular C&C Music Factory. Key began his career as an assistant at Manhattan's Unique Recording, working with folks like Tom Lord-Alge and Keith Diamond. He still does some work at Unique, but his main room now is at Axis Studios. Key did the dance remix for Michael Jackson's "Black or White," and most recently he's been working on the latest grooves from Gerardo, so we figured he might be a good source to talk to about mixing R&B dance music.

Some General Comments: You can make anything sound good if you mix it right. But if you *record* it properly and then do the mix, you can make it really great—something that jumps out of the radio. I try to record the way I think I'm going to make it sound in the mix, but not all the way. Sometimes when you mix you have to do some weird things to make it sound right, and you don't want to do those things while you're recording or you're stuck with them. You don't want to do any wild EQing, really.

Building the Dance Mix: I'll come in and set up the console with some effects returns that I always use—the Publison, the Lexicon 480, some other

effects—then I'll cross-patch all the tape on the console so that the drums are all sitting together, even though they might be recorded separately. Then I work on the rhythm section for maybe an hour or an hour and a half—the drums, bass, percussive keyboards—because that's the backbone of the mix. Then I start adding the vocal. I believe very strongly that on this kind of music, nothing in the mix should be louder than the kick drum, the bass or the vocals. That's your main beat, your main melody and the vocal. Those three things should be as prominent as possible.

Then I put on some effects to make it sound like the musicians are all playing together, because the majority of the things I've been mixing have been machine-oriented. So what you have to do is simulate the size of a room that you think all these people can be in, depending on the type of song, the tempo, how percussive or syncopated it might or might not be. If you have something that's very busy, chances are that a large hall [reverb setting] would not really work, because it would get muddy; you need tighter reverbs. At that point you can pick the thing you want in the biggest hall besides the vocal, and then work in from there. If you want something to stand out, don't put the big hall on it; put something a little shorter on it, or leave it dry, or whatever.

The other thing I like to do is have something in the mix moving at all times, either panning left to right constantly or just moving a little for accent, because it creates an image of intensity, and that's what I'm going for a lot of the time. When I'm mixing, I want people who hear it to feel like they're inside the music and not just hearing it come out of speakers.

The Value of Extra Tracks: The Axis mix room has a Mitsubishi 32-track and an analog 24-track, so when you come here with two analogs, you bounce one of them to digital, and you end up with ten extra tracks. It's a big help in mixing when you can print some of your effects. If you want a specific wild effect or a vocal delay throw or something like that, you can actually print it to tape and just use it and return it to the console tape return instead of using up two or three faders—or maybe your last delay—just for that one effect. ■

Blair Jackson is managing editor of Mix.

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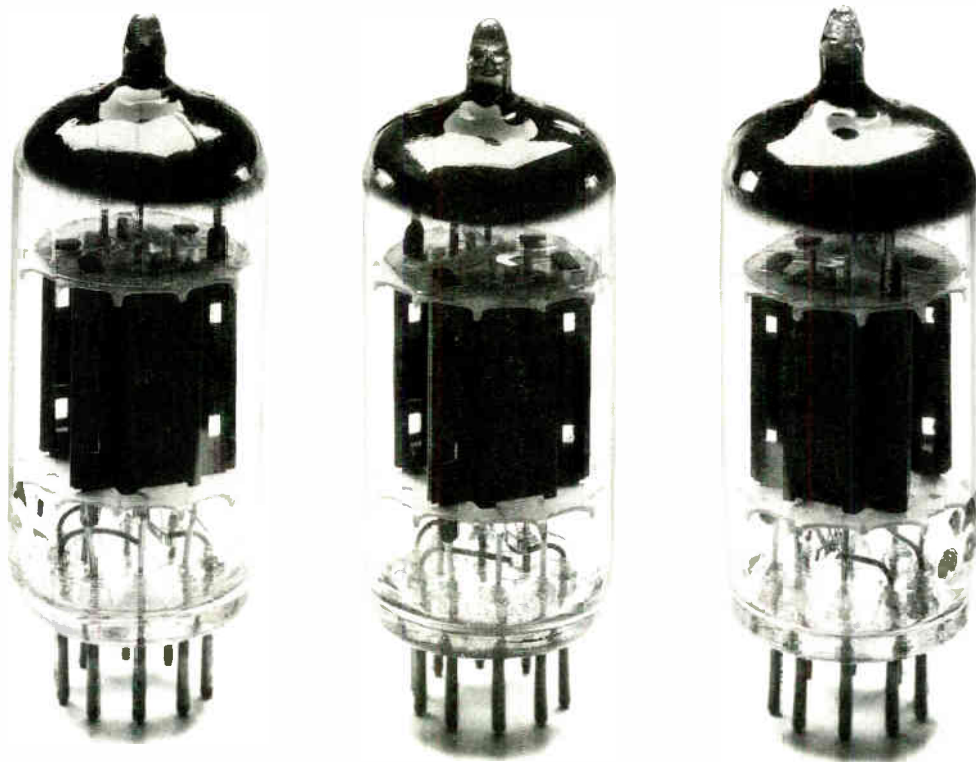
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by Paul Potyen

AUDIO PRODUCTION FOR CD-I

AN INTERVIEW WITH INTERACTIVE AUDIO'S GARY LEVENBERG



“I’ve always been intrigued by interactive entertainment,” begins Gary Levenberg in describing the mission of Interactive Audio, a San Francisco-based audio production group. Levenberg and his associates just completed audio production on their first CD-I project for Philips Interactive Media [see “The Byte Beat,” October ’91], and they have recently expanded, renting space at Focused Audio prior to beginning work on a second CD-I title.

Interactive Audio currently includes Levenberg, producer/composer Nic tenBroek, musician/composer JD Reilly and composer/arranger Richard

Greene. Although their backgrounds are diverse, they all share an enthusiasm and aptitude for cutting-edge recording technology as well as for the artistic side of music production.

Levenberg’s background includes a master’s degree in computer music from Indiana University in the early ’70s. “We had D/A converters to generate files on a mainframe,” he recalls. That piqued his interest in audio. “I also did laser shows for many years, where we projected into smoke instead of a screen, and people walked around this smoke-filled environment.”

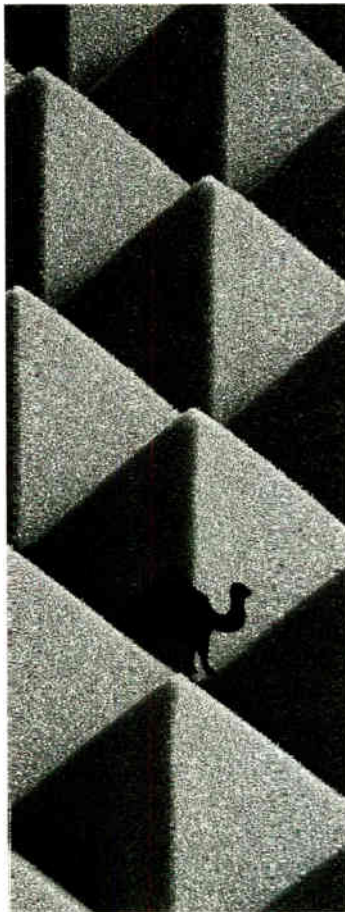
Then it was on to video games at

Sente, Nolan Bushnell's ill-fated successor to Atari. Bally eventually bought Sente, and Levenberg became director of special projects there. One of his mandates was to come up with interactive entertainment ideas for Six Flags Amusement Parks (owned by Bally at that time). Levenberg met Nic ten-Broek in '87, and they decided to try to get some work on their own.

One of their first contracts was with computer game giant Electronic Arts. "Then Rob Fulop of Interactive Productions hired us to do audio on an interesting product for Hasbro: Using a TV, VCR, black box and a special VHS tape with four video tracks and 16 audio tracks, the program would select and switch among the sets of tracks as the tape played," Levenberg says. "It was similar to interactive products of today, but without the random access."

At this stage they formed Interactive Audio. JD Reilly was brought on board, and the group created audio for Apple's mixed media CD-ROMs. Last year, Fulop started producing CD-I titles and hired Interactive Audio to work on "Third Degree," a game show Levenberg describes as a cross between *The Dating Game* and *Candid Camera*. "Two to six people play it. Each chooses a name, and then when it's your turn the host addresses you by that name. You pick a dilemma and are asked to choose a solution. Another player makes a choice about what they think your decision was, and the scoring is based on the answers of all the players.

"The visuals are shot with a Sony disk-based still camera," Levenberg continues. "The audio includes music, dialog and sound effects. Our job was to produce the audio, including the voice tracks, for all the dilemmas, as well as all the responses. Several versions of voice tracks were recorded, with different inflections, and the game selects one version at random so they don't become repetitive. Also, over 600 names were recorded by male and female hosts in two different inflections. Then add to that all the different music themes." Levenberg estimates the disc contains about three or four hours of audio. "The challenge was to achieve a natural flow in timing, level, musical content and dialog content, no matter what branch of the game was taken."



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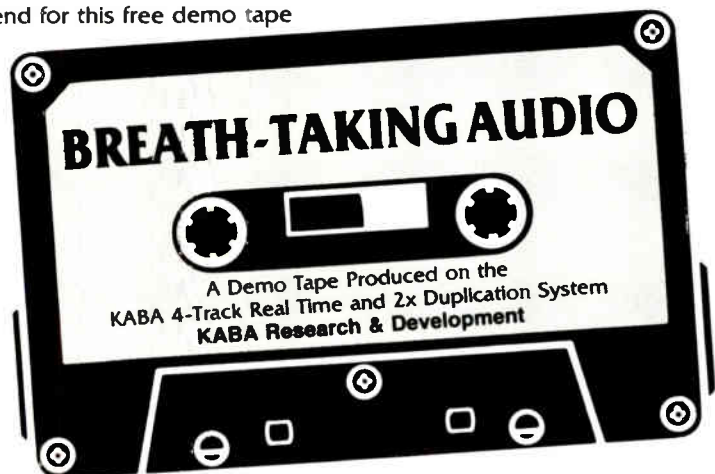
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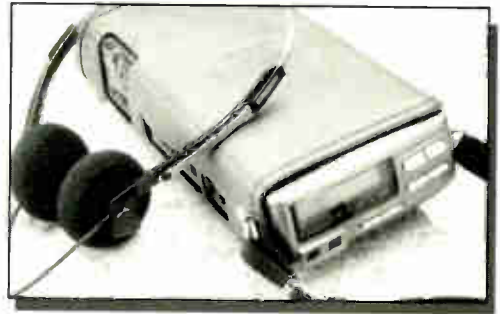
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The first project didn't involve a lot of synchronization, because it's primarily stills and animation. However, Levenberg describes the new CD-I project as an interactive movie. The footage comes from a 1940s film that Philips Interactive Media licensed for this purpose. Of course, using an old movie minimizes production costs.

Says Levenberg, "If you understand radio drama, you have a good grasp of what we're doing. The interactive aspect focuses on the audio more than the video." Digital video takes up incredible amounts of space on a CD and is only now coming of age in this technology through the use of video compression techniques. "Until those techniques are improved and perfected, I believe you need to focus on audio if you really want to get interactive," he adds.

In this case, a whole new movie is being created by writing a new script, much in the same manner as Woody Allen's *What's Up, Tiger Lily?*, only it's interactive as well. "The music brings the movie up to date, and the dialog is much more dramatic than the original," Levenberg notes.

As with the first CD-I product that Levenberg's team was involved in, PIM hired Rob Fulop to deliver the final product. "He gives us the video, the script and a flow chart of the branches for the film," explains Levenberg, whose job is to hire the voice talent and record the dialog, as well as the music and sound effects. "All the dialog is done in our vocal booth, and we have a MIDI suite with a Mac Plus, Korg M3R, Akai S900 and a bunch of Roland and Alesis gear." Tielines connect the digital editing room to the MIDI suite, allowing control of MIDI devices from the Macintosh Quadra 900, either from Mark of the Unicorn's Performer, Opcode's StudioVision or Digidesign's ProDeck.

Five Mackie mixers handle the audio for the two rooms. The digital editing room has JBL 4125 monitors to stay consistent with the monitoring system at Focused Audio for those projects that use both facilities. Other equipment includes a Panasonic 3700 DAT and 7350 VHS deck.

The music and the sound effects—both prerecorded and created—are transferred digitally into the Quadra. A recent upgrade is an 8-track version of ProDeck (see "Field Test," April '92).

k.d. lang

DEMANDS

DOLBY SR



Ben Mink, k.d. lang, Marc Ramaer, Greg Penny

Dolby SR reproduces a depth and clarity unlike any other medium. Instruments and vocals maintain their harmonic integrity."

Marc Ramaer, mixer/recording engineer

"Ingénue represents both a stylistic departure from, and a direct link to, our previous work."

k.d. lang, Ben Mink

"The sound of Dolby SR on acoustic instruments is stunning. Silence has never been louder."

Greg Penny, producer, engineer, songwriter

"Whether it's k.d.'s voice or the delicacy of acoustic instruments, Dolby SR recordings reproduce with an integrity that lets the listener hear it the way we did."

Ben Mink, composer, arranger, producer, instrumentalist



"Ingénue" (Warner Bros.) recorded at Vancouver Studios, Vancouver, B.C. and mixed at Saylor Recording, Los Angeles, CA

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THE BYTE BEAT

which allows the producers to edit all the elements into a final set of tracks, in sync with the video.

"We sync the audio to the video using SMPTE," Levenberg says, "but because the video is in the digital domain, all we need to do is deliver digital audio files on a Syquest or Exabyte tape, and it syncs up to the video on their system."

"The movie allows you to choose any character you want to assume," Levenberg continues. "Then you make successive choices about where your character goes and what they do. This brings up several design issues: whether the music should loop in the background, or stop when you are faced with a choice—if you do loop, how long should the loop run; how do you manage segues to different sections, and so forth. The flow chart helps determine those things."

This new media differs from traditional audio production in that the process is a lot less straightforward. "Interactive media has a lot more variables," Levenberg says. "It's harder to predict production times. Having al-

ready done one CD-I, we expect a lot of unknowns, so we are developing a five-minute version of our new project to give us a handle on all the steps involved and help us come up with the right tools and techniques to get the job done. That way we can make a better estimate of what the whole job requires."

According to Levenberg, an audio engineer/producer planning to expand into this area needs certain tools and skills to succeed. "A non-linear audio system is ideal for interactive audio production, and it is best used by people who have learned how to think non-linearly. You have to be able to think in those terms, to not be afraid of it. You also have to be willing to investigate the various formats your potential clients want. We can handle 24-track SR and AudioFile through Focused Audio, as well as 8-bit audio for a Multimedia PC project."

"It's also important to have a familiarity with the requirements of incorporating digital audio in its various formats to a wide variety of applications, such as video, CD-ROM or other computer-based digital systems," he adds. "In terms of tools, the Prosonus

SRD test disc is great for calibrating digital audio on a DAT tape for transfer to video and other media."

Commenting on the future directions of this medium, Levenberg feels, "The technology will have a strong presence in education. Instead of sitting in front of a movie for a half-hour, kids will sit in front of some kind of interactive application that lets them explore, say, the geography or the agriculture of France. And if it works for education you'll see it more and more in the corporate world. As the bandwidth increases, we'll see it used for games and entertainment. The payoff for the interactive technologies is a long-term proposition. Even if CD-I flops, everything we learn about incorporating those elements of a CD-I title will be beneficial."

"Producing an album used to cost much more than it does today, given equivalent production values," he notes. "This new industry will emerge as the cost to produce video decreases, as it has with audio. The biggest films have budgets around \$100 million. CD-I projects cost about half-a-million dollars. A video game costs from \$50,000 to \$100,000. We're not set up



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You're hearing them already, but now listen carefully. Each recording listed here was produced (and often mastered) using the SV-3700 Pro DAT. □ **Aire LA Studios** *Chuckii* produced by Chuckii Booker; *Tuff* produced by Howard Benson; *Brian Wilson* produced by Brian Wilson & Eugene

Landy; *Timmy T* produced by Jon Ryan. □ **The Castle** *Lee Greenwood* produced by Jerry Crutchfield; *Ricky Skaggs* produced by Mac McAnally. □ **Chung King Recording Studios** *Run DMC* produced by Jam Master Jay; *3rd Bass* produced by Sam Sever, SD-50, KMD, Prince Paul & Marley Marl; *L.L. Cool J* produced by Marley Marl; *Nikki D* produced by Sid Reynolds. □ **D & D Recording** *Vanilla Ice* produced by Gail "Sky" King; *Big Audio Dynamite* produced by Jr. Vasquez; *Herb Alpert, Ziggy Marley* produced by Bobby Konders. □ **Electric Lady Studios** *Queen, West World* produced by John Luongo & Gary Hellman. □ **Emerald Sound Studios** *Hank Williams Jr.* produced by Barry Beckett, Jim Ed Norman & Hank Williams Jr.; *Alabama* produced by Josh Leo & Larry Lee. □ **The Enterprise** *Winger, Warrant* produced by Beau Hill; *Nelson, Trixter* produced by Mark Tanner; *The Fixx, Rebel Pebbles* produced by Tony Peluso; *Gladys Knight* produced by Michael J. Powell; *Henry Lee Summers* produced by Ric Wake; *Nia Peeples* produced by Howard Hewitt. □ **Mad Hatter Recording Studios** *Chick Corea Elektric Band* produced by Chick Corea and Co-Produced by Dave Weckl and John Patitucci; *Lee Ritenour, David Benoit* produced by Mike Abene for "Shannons' Deal." □ **Magee Audio Engineering** *Los Angeles Philharmonic Orchestra, Pacific Symphony Orchestra, Terry Trotter & Friends* produced by Joseph Magee. □ **Mobile Fidelity Sound Lab** *Igor Oistrakh Trio* produced by S. R. Britton & Edward Shakhnazarian; *Gennadi Rozhdestvensky & The USSR Symphony Orchestra* produced by Krieg Wunderlich & Tori Swenson. □ **Music Mill** *Eddie Rabbitt, Earl Thomas Conley, Oak Ridge Boys* produced by Richard Landis; *Anne Murray, Tanya Tucker* produced by Jerry Crutchfield. □ **One Up/TMF** *Mussingtons, Dumpa* produced by Dianne Norris; *Anita Baker* produced by Michael J. Powell; *Natalie Cole, Smokey Robinson* produced by Terry Marshall. □ **The Plant Recording Studios** *M.C. Hammer* produced by Felton Pilate; *Mariah Carey, Michael Bolton, Peabo Bryson* produced by Walter AfanasiEFF; *Tony!Toni!Toné!* produced by Tony!Toni!Toné!; *De Anna Eve* produced by Shake City Productions. □ **Royal Sound Studios** *L.A. Guns* produced by Michael James Jackson; *Art Laboe* produced by Art Laboe; *Festival Fountain at Caesar's Palace* produced by Champ Davenport. □ **Sixteenth Avenue Sound** *Ziggy Marley* produced by Ziggy Marley & Glenn Rosenstein; *Michelle Shocked* produced by Michelle Shocked & Glenn Rosenstein. □ **Studio 4 Recording** *Phil Collins* produced by Phil Collins; *D. J. Jazzy Jeff & The Fresh Prince, Schooly D.* produced by Joe "The Butcher" Nicolò. □ **For information on the SV-3700, contact Panasonic, 6550 Katella Ave., Cypress, CA 90632 (714) 373-7278. For more great music, listen to:** □ *Taj Mahal* produced by Skip Drinkwater. □ **Studio PASS** *Defunkt* produced by Bob Appel; *Nic Collins* produced by Nic Collins; *Paul DeMarinis* produced by Paul DeMarinis; *Tom Cora* produced by Tom Cora. □ **Keith Thomas** (producer) *Whitney Houston, Amy Grant, Carman, BeBe & CeCe Winans.* □ **Triad Studios** *Queensryche* produced by Peter Collins; *Michael Tomlinson* produced by Dan Dean & Michael Tomlinson. □ **Trevor Rabin** *Yes.* □ **Unicorn Studio** *Roger Hodgson.* □ **Unique Recording Studio** *Mariah Carey, Lisa Lisa & Cult Jam* produced by Robert Chivilles & David Cole; *Madonna* produced by Lenny Kravitz; *Lisette Melendez* produced by Carlos Berrios. □ **Don Was** (producer) *Bonnie Raitt, Glenn Frey, Paula Abdul, Neil Diamond, Lyle Lovett.* **And this is just the beginning.**

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to do high-end, big-budget productions. We want to be affordable, yet do high-quality work. By understanding the technology we can participate in these half-million dollar products.

"All this stuff we're doing is leading towards new media," he claims. "Something that will reshape our living rooms, board rooms and training rooms. Creating audio that syncs to picture—whether film or video—is part of that new technology, and

CD-I has begun including video, especially with the new video compression techniques for the computer."

Levenberg hastens to add that he doesn't want to limit his activities to new media forms. "Producing audio for interactive media is our focus, but we are musicians as well as a technical group." To illustrate his point, he mentions that they have just completed production of a Pontiac commercial for national TV. And there is a long list of other commercial and industrial credits.

"From a music production point of view," Levenberg concludes, "we provide a wide range of services. Our focus has been in areas where traditionally people try to do it themselves. We tell people, don't do it yourself, we'll do it the right way for you." And with repeat business from Apple, Philips and others, Levenberg seems to be able to deliver on his promise. ■

Paul Potyen is an associate editor at Mix, and a freelance composer/producer.

Chip Shots

Avid Enhances Media Composer Systems

Avid Technology (Burlington, MA), developer of digital editing systems for video post-production, has announced a number of new features added to its Series 200 and 2000 Media Composers. Most significant from an audio point of view is the incorporation of 4-channel 48kHz playback with scrubbing. Also of interest are video motion control, including slow, fast and reverse; improved video image quality; and jog/shuttle control. New Avid systems use the Macintosh Quadra 900 platform for increased speed and performance.

Circle #201 on Reader Service Card

PLI's New Data Storage Devices

PLI (Fremont, CA), manufacturer of SCSI-based storage solutions, has announced availability of two new devices for the Macintosh: a 21MB Floptical drive, and a 1GB Max-Optical drive. The Infinity Floptical 21MB reads and writes DOS-formatted 21 MB Floptical disks as well as 1.44MB and 720K floppy disks. Said to be more reliable than standard floppy drives, the device is available in internal (\$639) and external (\$699) versions. Floptical media has a suggested retail price of \$49 per disk.

PLI's Infinity MaxOptical 1GB drive is capable of using both high-density 1GB cartridges and 600MB ISO/ANSI Standard cartridges. Average access time with the 1GB cartridges is between 25 and 35ms. The MaxOptical 1GB can be installed on PC, Macintosh and NeXT platforms. Suggested retail price is

\$5,699 for an external and \$1,999 for an internal drive.

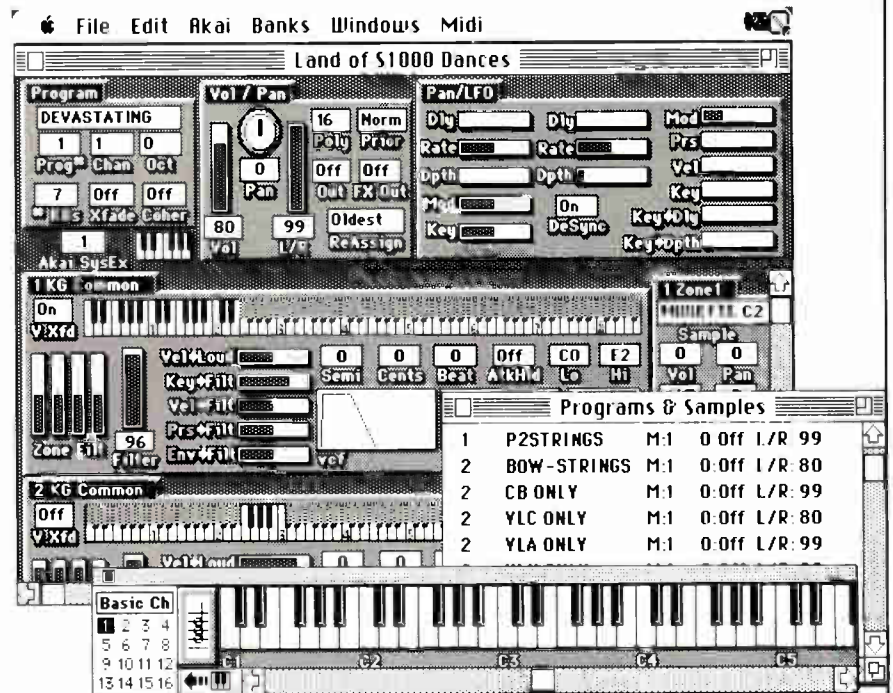
Circle #202 on Reader Service Card

Interval Music Systems Announces sEDIT for Akai S1000/S1100 ▼

Interval Music Systems' (Los Angeles, CA) sEDIT is a program and keygroup editor for Akai S1000/S1100 samplers and the Macintosh. The software package presents all of the Akai's program editing screens in graphic form on the Mac screen for more efficient editing of parameters. sEDIT runs under

E-mu SoundEngine Upgrade for Media FX

SoundEngine, a digital sample-based audio daughter card from E-mu Systems (Scotts Valley, CA), has been designed as an audio upgrade for Headland Technology's Video Seven Media FX card. Media FX is a Multimedia PC compatible, high-performance audio card providing mono and stereo recording capabilities and FM synthesis audio playback for PC-based computer systems. The technology employed in SoundEngine is reported to be closely related to that used in E-mu's



MultiFinder to complement sample editing software such as Alchemy and Sound Designer. It's also compatible with System 7 and Apple's MIDI Manager, and is priced at \$189.

Circle #203 on Reader Service Card

Proteus line of instruments. Retailing at \$599, the SoundEngine upgrade raises the level of the Media FX card's audio playback capabilities to 16-bit CD-quality.

Circle #204 on Reader Service Card

by Dan Daley

LINE LEVEL GENERATORS

FROM MY LINE TO YOURS

The first paragraph of this article was originally the one that follows. However, I wanted to get the attention of a wide range of readers, and I didn't want the term "project studio" to turn away those who think there's nothing here for them. There is. Read on.

Project studios have limited physical space. But you don't need a lot of space for line-level recording of synthesizers driven by MIDI sequencers—the centerpiece of most project studios in their early days, as they still are today, though abetted by other MIDI-controllable sound generators and sampling systems.

One trend that emerged in the late-'80s involved increasing and enhancing the physical space that project studios occupy. That was motivated by the need for an acoustic space for vocals, voice-overs, acoustic instruments and some in-house sampling for personalized sound libraries. This new



SansAmp

breed of recording facility began receiving the serious regard of industrial and music clients.

But these spaces weren't—and still aren't, for the most part—really sufficient for the instrument that's made the most remarkable comeback recently: the guitar. Specifically, the heavily crunched axe, which, if you haven't heard—seen enough of it on the radio and MTV/VH-1, has been doled out at potentially lethal doses on the airwaves via beer commercials.

The New Black Box

You can record guitar amps in a million different ways, limited only by the number of microphones available, the available space for mic placement and your imagination. However, space is hardly a hallmark of the project studio. And with increasingly tight time constraints imposed by the lean budgets from labels, music houses and agencies, traditional recording studios are also looking for time savers.

The roots of today's guitar processors can be traced back to the early 1980s and Tom Scholz's Rockman. The highly compressed output of the early models afforded little variety, and you could aurally spot them a mile away on recordings. But the Rockman was perfect for the emerging breed of personal multitracks that were gaining



Zoom 9030
with foot
controller.

breed of recording facility began receiving the serious regard of industrial and music clients.

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momentum, and it was a turning point in ampless, micless guitar recording. The past couple of years have produced a new and more sophisticated generation, and they have come, significantly, from the MI manufacturers whose role in professional audio gets bigger every week. The old standby of the direct box—sometimes referred to as DI, from the techno-archaic Britishism of “Direct Insertion” into the channel module—has taken on very new dimensions with the maturity of the guitar-dedicated black box.

One of the most interesting approaches to contemporary DI is Tech

21’s SansAmp, literally a black box: a footswitch with rotary controls for output, overdrive and timbre, and eight DIP switches for creating 64 amplifier sounds. By combining the DIP switches with the lead/normal/bass and rotary controls, thousands of permutations are possible.

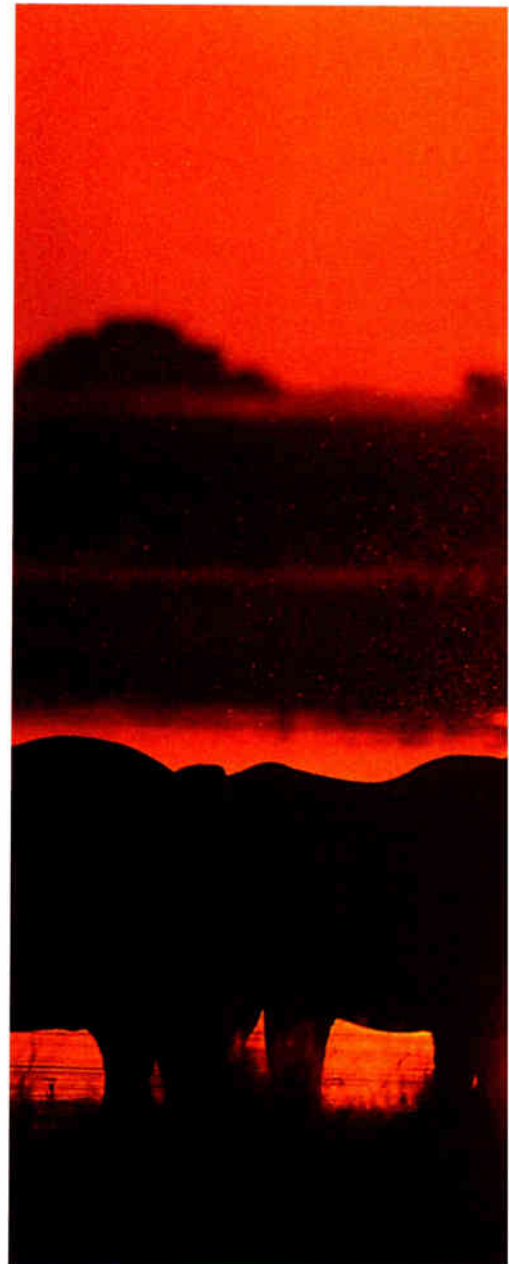
The SansAmp grew out of inventor Andrew Barta’s frustration with the time-consuming task of schlepping and miking Marshall amps. “I realized that you don’t need a couple of hundred watts to get the 100 millivolts, which eventually wind up on tape,” he says. “The reason for the power is to generate a certain type of harmonic content. I decided to try to get that for

myself out of a box.”

At first, Barta—who repaired and hot-rodged amps out of a shop in the back of Manhattan’s Rogue Music—was looking only for a solution to his own problem. But once Mick Jones of Foreigner got hold of one of Barta’s early efforts, the SansAmp took off commercially.

The SansAmp’s character stems from the interactivity of the DIP switch-activated circuits, designed to mimic the various components that make the sound of different guitar amps, centering on the preamp. At January’s NAMM show, Bartha unveiled an expanded, rack-mount version of SansAmp, with continuously variable

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character controls for tonality, gain structure and harmonic content, along with an XLR output for pro studio/live sound applications.

"DI is changing dramatically," Barta says. "An iso booth or a large room was critical for an authentic guitar sound at one point. But with the growth of home recording and project studios that don't have recording rooms, something had to evolve. The early efforts sounded kazoo-like." Barta also notes that sound reinforcement is being affected by the new generation of DI devices, as amps begin disappearing from stages, replaced by customized front ends and processing before going to the P.A. mains—without ever

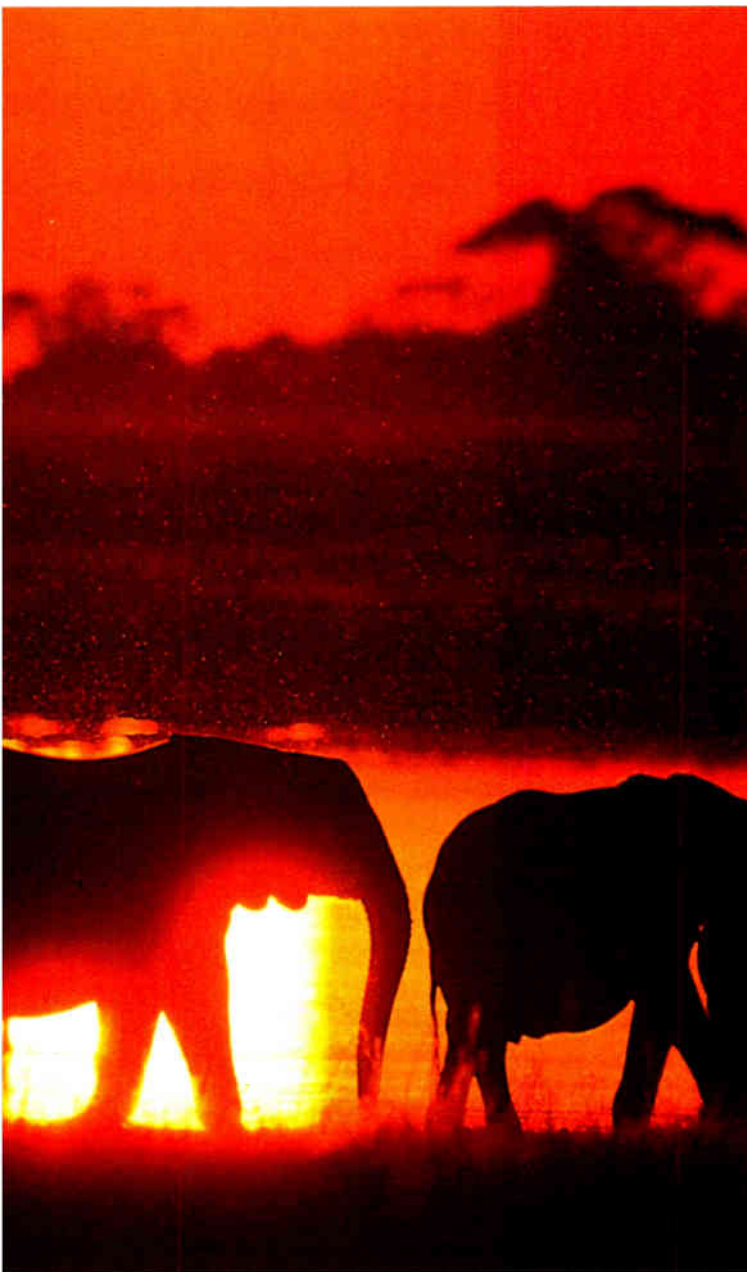
passing through a microphone.

Mixing Analog and Digital

"People want to spend more time making music," says Peter Rodgers, national sales and marketing manager for Zoom, makers of one of the more comprehensive direct processors on the market. The 9030 unit is a half-space unit with 99 locations in its bank, each with access to the many analog (compression and distortion modes) and DSP features, which are controlled by soft knobs on the front panel. Zoom's unique approach includes cabinet simulations such as stack and combo, and a number of EQ styles, most of which are based upon

the front panel of a guitar amp. An adjustable comb filter is included for tailoring the midrange timbres of electric guitars.

The 9030 also offers a range of digital reverbs and delays, as well as special effects, i.e., bombs and metallic sounds. Such exotic effects are relatively new to electric guitars. "With the new DSP chips, there's the opportunity to open up whole new areas of expressiveness for guitar and other instruments that haven't been addressed before," Rodgers says. "The next window we're working on in the software is real-time expression control—delays, pitch bend, auto-wah, portamento. It's stretching the bound-



STUDIO THREE A2000045 ©PHOTO: PETER JOHNSON

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STUDIO VIEW

Two Masters, Three Musical Instruments



Master engineers Tom Jung of DMP and Bob Ludwig of Masterdisk.

"Analog to digital conversion has always been the weakest link in the CD chain. Wadia has set a new standard of musicality."

— Bob Ludwig

"Simply put, the Wadia A/D does a more accurate job of converting music to digital. It transfers more information to the digital medium than any converter I have heard."

— Tom Jung

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aries of guitar voices and creating not so much a parity but a new connection with synthesizers. You need effects that tweak and challenge the imagination."

Rodgers points out that Zoom isn't just for guitars, although many of the features and nearly the entire first 50 presets are so dedicated. In addition to bass guitar, there are keyboard-type patches. "It's primarily an instrument processor for direct recording, not just for the guitar," Rodgers observes. "There are a number of sax and violin players, such as David Ragsdale of Kansas, who use it for recording. These new products on the market give going direct a whole new dimension and allow you to expand sounds and control them more easily without having to work a room."

In building new direct recording units, Rodgers says that it's more than a matter of putting good sound capability and wide-ranging effects into a single box; they need to have some relationship to each other. "The EQ points have to bear some relationship to the distortion sounds," he says. "You have to zero in on the frequency ranges that certain distortions work with."

Now that is an unabashedly subjective point of view, and Rodgers acknowledges as much. But subjectivity seems to be a point that works in the favor of some of these devices, which, more so than many processors, are built by musicians who have put a personal attitude into them. It's been said that of all the classical rock 'n' roll instruments, the guitar is the most personally expressive, maybe for no other reason than that its percentage of wood content is higher than a synthesizer's. I don't know about that, but the new round of DI processors has made more capability more widely accessible to an equally new generation of recording studios.

While occasionally a frustrating task—depending on the obsessiveness of the guitarist—miking a guitar amp remains an activity with all the rewards of finding the Holy Grail of crunch sonics. But the same technology that's given us the project studio now provides various means to create things that were otherwise unachievable in small spaces. What you plug into the insert point today is light years ahead of what came only a decade before. ■

Dan Daley is Mix's East Coast editor.


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FOR MORE INFO

by George Petersen

PRODUCT

CRITIQUES AND COMMENTS

JBL 4208 Studio Monitors

At last year's AES convention in New York, JBL unveiled some unusual looking monitors, christened the 4200 Series. With their sculpted Multi-Radial™ front panels, these new speakers were described by some as having an "Alfred Hitchcock" or "Buddha" profile; some said they looked pregnant; and to others they just looked weird. However, there's a lot more to these baffles than mere appearances would dictate.

signed for. Small variations in driver alignment are more forgiving as the speaker-to-ear distance increases. Less pronounced diffraction anomalies are also minimized by the curved face of the front panel. The removable grilles are recessed into the front baffle and don't contribute diffraction problems.

Electronically, the 4208s are a straightforward, two-way design, with an 8-inch woofer crossing over at 2.6 kHz to a 1-inch, titanium-dome tweeter. The 17.75 x 11.25 x 9-inch cabinets



Most apparent is the fact that the curved surface places the two drivers' voice coils in acoustical alignment. This improves imaging and coherency while reducing phase errors, which is critical at the 3- to 5-foot near-field listening distances the 4208s are de-

are rear-ported, with injection-molded ABS front baffle and a particle-board enclosure with gray vinyl finish. Despite their size, the 4208s are surprisingly lightweight—approximately 20 pounds each. These should pose no threat to most console meter bridges.

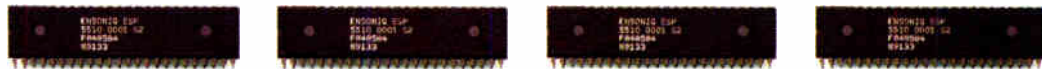
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4 outputs...



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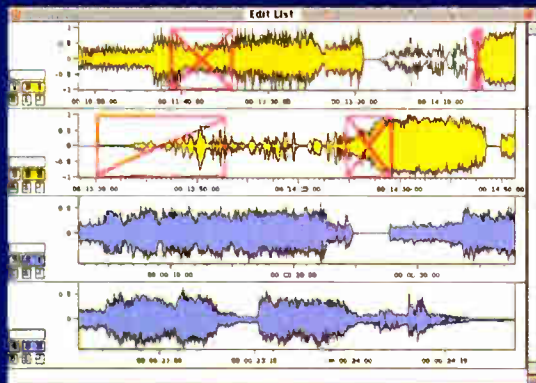
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AUDITIONS

Both models in the 4200 Series (the 6-inch 4206 is the 4208's smaller cousin) are designed specifically for use in the near-field. In addition to improving phase alignment, the baffle's outward bulge places the front of the woofer cone about two-and-a-half inches past the edge of the meter bridge, thus reducing early reflections from the console surface.

The monitors perform best in vertical use, which may cause some difficulties in certain applications. Placed upright, the center of the tweeters are about 14 inches off the base, and if you're mixing on a deep console with a high meter bridge and a low chair, your ears could be quite some distance from the monitors. I always prefer placing small reference monitors such that the tweeters are as close as possible to ear level. However, the height of the monitors is obviously much less of a problem with smaller studio installations.

Enough theory...I began hooking the speakers up and found that the rear panel has only spring-loaded connectors; I was pleased to see that these were spaced precisely to accommodate dual banana connectors, as well as 10-gauge wire. The back of the speaker states a maximum power handling of 75 watts, but this is an extremely conservative estimate based on continuous pink noise. So after starting my tests with a 75W/ch amp, I changed to a 200+ watt model with much-improved results. Of course, I wasn't driving them full out, but with the 4208's rated sensitivity of 89 dB (1W/1m), they provide an ample 109 dB from a 100-watt input—with plenty of headroom to spare—more than enough for any sane near-field listening application.

I should take a minute here for a confession. In the past I've tried, but I've never had success mixing on JBL's small two-way monitors (such as the 4406 and 4408 models), so my expectations from the 4208s were not high. But I knew something was different this time when I fired the 4208s up and liked what I heard from the start. I didn't experience any of the "wait 'till you get used to these" syndrome common to many other monitoring systems.

This same experience was repeated time and time again, using the 4208s on tracking and mixing sessions over a

period of weeks—on album dates, radio mixes and video sweetening sessions. The monitors incorporate internal magnetic shielding and caused no picture distortion, even when used flush alongside video monitors.

The 4208s really shine in high-frequency dispersion, which creates an extremely wide sweet spot for mixing. Tonal balance stays consistent, even if you have to reach for outboard gear that's off to the side. No tweeter adjustment control is provided, which is no problem, as the 4208s sound fine just as they are.

The LF section provides a tight, well-defined and nicely balanced bass that was never boomy or excessive. JBL indicates a frequency response that goes to 60 Hz (-2dB), but the 4208s go well beyond this and were actually capable of reproducing torturous 30Hz continuous sine waves, although at a reduced level of -20 dB. The midrange was a bit harsh around the lower crossover range (2 to 2.5 kHz). This could be improved by employing a separate midrange driver in a three-way design, rather than relying on the upper end of the woofer's response, although such trade-offs are typical in many two-way loudspeaker designs.

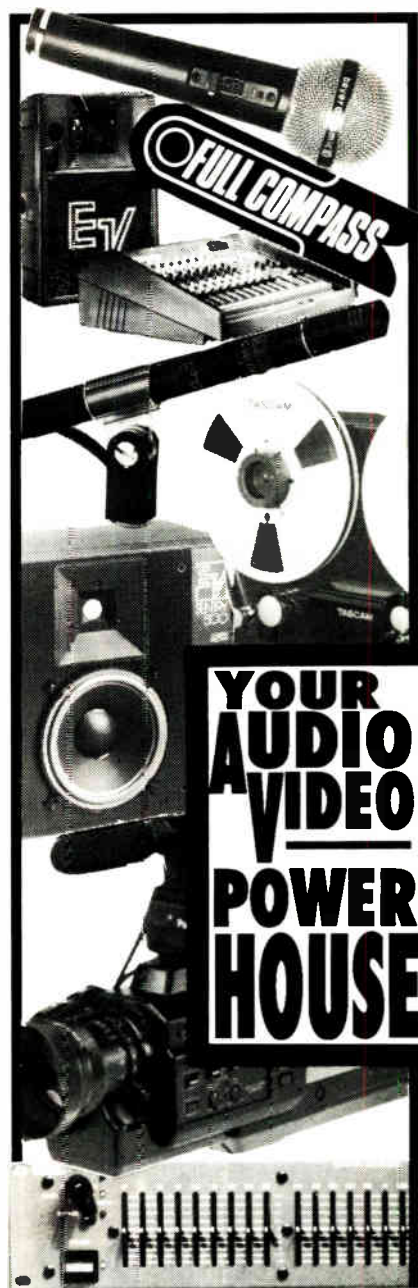
Clearly, the 4208s are the best compact JBL monitors I've heard, offering wide dispersion and non-fatiguing monitoring that translates nicely to other systems, large and small. The 4208's innovative design sets a precedent in new ways of looking at monitors for near-field listening. At a decidedly affordable \$525/pair, these are worthy of consideration by anyone seeking a solid, mid-priced system.

JBL Professional, 8500 Balboa Blvd., Northridge, CA 91329; (818) 893-8411.

Brainstorm TB-4 Communicator

No, this isn't a remaining artifact from the old *Star Trek* TV series. The TB-4 Communicator is a wireless infrared switching system that can be installed into almost any console's talkback circuit. The system consists of a receiver and hand-held transmitter, the latter powered by a rechargeable 9V nicad battery; both battery and charger are included with the system.

Installation is straightforward and takes about an hour. If the console has single-pole talkback switches (Neve V Series, SSL, Amek Mozart, Trident Vector and others), the procedure is simple: merely attach a few wires that



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best-suited atop a console meter bridge. The back panel has binding posts for the balanced line-level inputs, allowing the user to attach preferred connectors, whether they be XLR, TRS or TT. I had best results with a couple of TT cords, connecting the SPM-1 directly into my console patch bay.

Listening to a variety of favorite CDs, I was surprised that many exhibited stereo separation in the 5dB-to-15dB range; somehow, I expected more. Perhaps as engineers and producers, we fall back on the same time-tested, "safe" approaches to stereo that we all learned back in the vinyl LP days, when LF elements (such as kick drum and bass) were always placed dead center, lest we cause problems with the disc-cutting lathe.

Some binaural discs I checked out exhibited separation in the 45dB range, but others were less successful.

Clearly, the notion of stereo separation goes far beyond simple microphone technique, and the recording environment has much to do with the degree of separation—unless we all record in anechoic chambers or outdoors in the free-field.

On a recent pop session, I recorded with two pairs of drum overheads in a live room: one pair used an X-Y technique with closely spaced capsules (my usual approach to drum overheads). The others were a spaced pair, with mic capsules placed six feet apart, above the ride and crash cymbals. Two divergent approaches, but the spaced pair gained only about 3 dB to 4 dB in separation.

The SPM-1 can be invaluable when mixing, offering an instant indication of stereo content when different techniques are used, including panning, level control and selection of outboard gear. Reverbs, for example, vary widely in their effect on stereo content, and dynamics controllers—especially heavy-handed stereo limiting—have a major impact on program separation. At \$1,250, FM Systems' SPM-1 is not inexpensive, but it is a useful tool for the creative recordist.

FM Systems, 3877 S. Main St., Santa Ana, CA 92707; (714) 979-3355 or (800) 235-6960. ■

George Petersen lives with his wife and two musical dogs in a century-old Victorian house on an island in San Francisco Bay.

Demeter Tube Preamp

by Guy DeFazio

Before the introduction of solid-state components, tubes were considered to be amazingly sensitive and accurate devices capable of extremely high efficiency and bandwidth. Then, with the birth of the transistor, designers shifted from vacuum tubes toward the use of new, more efficient, silicon-based components. Despite their technical superiority, transistors could not upstage the devotion that much of the audio industry had developed for their trusted friend, the vacuum tube. Consequently, this enduring affection for tube devices allows modern manufacturers to develop affordable new products based around what is now considered to be "vintage" technology.

The VTMP-2 vacuum tube mi-

impressed me immediately. First, in addition to the three-position 30-50dB gain switch and a rotary output level attenuator, there are individual phantom power switches for each channel. I prefer switching phantom power individually, and having the switch on the front panel provides an "at a glance" evaluation of each channel's setup during fast-paced situations. Second, the input peak indicator on each channel delivers a visual confirmation of that magical threshold when the VTMP-2's front-end tubes are overdriven. After all, the sonic properties of tube compression can be very useful in some applications, and the peak LED is a nice reminder. The front panel also contains 1/4-inch instrument input jacks, with associated mic/inst. switches for selecting these transformer-bypassed, line-level inputs.

My bench tests confirmed Demeter's noise specs (-124.70 EIN @ 50dB gain w/Rs=150 ohms) as reality.

Off the bench, the VTMP-2 delivered the goods reliably. Working on a country track with artist Eddy Cunningham and writer/producer Roger Wojahn, I put Demeter's mic pre to work on a good ol', down-home country ballad. Using the VTMP-2 with a pair of B&K 4007s as drum overheads, I warmed up the slightly bright characteristics of my drum room and still got the transient response I wanted. Then, once in overdub mode, I couldn't resist trying it on fiddle. This particular song had much of the fiddle part written in the instrument's lower register. So the VTMP-2 had a chance to show off its low/mid response. The result was a sound rich in lower harmonics. Finally, when it came time for group background vocals, a tube



crophone preamp from Demeter Amplification represents a perfect example of an affordable new product making use of vacuum tube design. This simple, two-rackspace package incorporates two channels of variable 30-50dB gain, 48-volt phantom power and a fully regulated internal power supply. While the entire schematic might be too involved to fit on a cocktail napkin, the design is very basic, including a Jensen JT13K6C input transformer, two 12AX7 tubes as the input gain stage, a 12AT7 tube acting as a high-current/low-impedance driver following the input stage, and a 12BH7 tube as the output driver. The tube circuits incorporate polypropylene capacitors and metal film resistors throughout.

Two very simple operational features of the VTMP-2's front panel

The back panel has XLR, 1/4-inch and TT output connectors, as well as standard XLR mic inputs. No matter which connection you choose, the absence of a third pin on its AC power cord requires that the output connector contain a ground-carrying conductor (i.e., a shield carried through). This requirement may be eliminated if the VTMP-2 is securely fastened to a properly grounded equipment rack.

James Demeter describes the VTMP-2 as "the simplest practical design with the fewest possible parts." The combination of full regulation of the tube filament voltage (12.6 V), with the B+ voltage (250 V), allows the VTMP-2 to deliver all of the warmth of a tube device without all of the unwanted noise typically associated with tube gear.

U47 routed through the VTMP-2 (directly to tape) provided a remarkably clean combination of old and new tube technology.

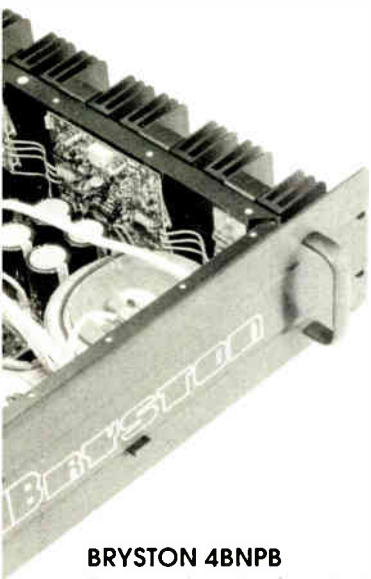
At \$1,549, the VTMP-2 is an excellent example of how vintage vacuum tube technology, complemented by common-sense modern circuitry, obtains the best of both worlds at a reasonable cost.

[At press time, Demeter had replaced the VTMP-2 with the VTMP-2A, which, other than some cosmetic changes, is identical to the model tested.]

Demeter Amplification/Innovative Audio Systems, 1907 Parnell Ave., Los Angeles, CA 90025; (310) 470-6426. ■

Guy DeFazio is an independent engineer/producer in the Los Angeles area.

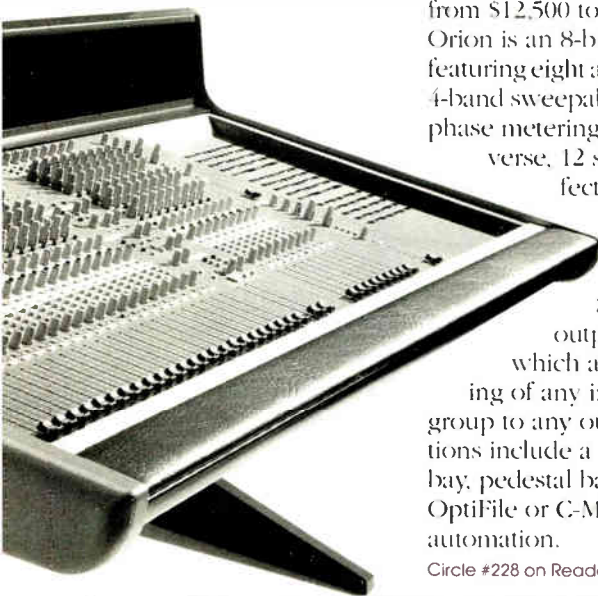
NEW PRODUCTS



BRYSTON 4BNPB

Bryston (Montpelier, VT) kicks off its 30th anniversary with the fifth generation of its popular 4B amplifier. Completely redesigned, the new 4BNPB is a 250W/channel stereo amp employing multiple, smaller-filter capacitors (rather than a single pair of large-filter cans), said to improve HF response. A proprietary input buffer circuit reduces distortion by maintaining a linear input impedance, and a soft-start feature eliminates the need for high-current start-up relay banks in multi-amplifier installations.

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D&R ORION CONSOLES

Available in frame sizes from 30 to 51 modules is Orion, an in-line recording console from D&R (Montgomery, TX). Priced from \$12,500 to \$28,000, Orion is an 8-bus design, featuring eight aux sends, 4-band sweepable EQ, phase metering, fader reverse, 12 stereo effects returns and a "Floating Subgroup" output matrix, which allows routing of any input or group to any output. Options include a TT patch bay, pedestal base and OptiFile or C-Mix automation.

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STUDIOMASTER DIAMOND PRO

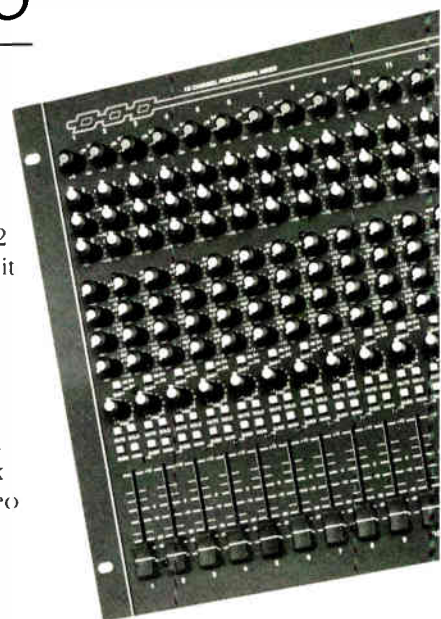
Studiomaster (U.S. offices in Anaheim, CA) expanded its line of Diamond consoles with the addition of the Diamond Pro, a 16x4x2x1 console priced at \$1,495. The Diamond Pro provides XLR mic and balanced 1/4-inch line inputs on each channel, 3-band EQ, channel insert patching, balanced XLR main outputs, phantom power and four aux sends (two pre- and two post-fader).

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DOD 1642 MIXERS

From DOD (Salt Lake City) comes the 1642 rack-mount package, configurable as a 16x2x2 or 16x4 console. The unit offers balanced XLR mic inputs (channels 1-8), 1/4-inch line inputs (channels 1-16), insert jacks on all input and output channels, 3-band EQ, phantom power, six aux sends and four stereo effects returns. The rear panel jack bay can be rotated for table-top or rack-mount use.

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YAMAHA EMP700 STEREO

The EMP700 Stereo from Yamaha (Buena Park, CA) is a new multi-effects processor providing true stereo (2-in./2-out) operation and 80 presets based on 28 fundamental effects (reverb, delay, EQ, distortion, enhancer, compression/limiting, panning, pitch, phase and more). Programs can be combined in serial, reverse serial and parallel configurations, modified and stored in 50 user memories, with more storage available on optional RAM cards. The unit also includes MIDI control, switchable -20/+4 operation, and backlit, two-line display.

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DS-4P POCKET SAMPLER

Available from Current Innovations (Winnipeg, Manitoba, Canada) is the Rapid Sound Effects DS-4P, a tiny sampling device in a 1x2x4-inch package. Priced at \$365 (U.S.), the DS-4P has a 10-bit, 64x oversampled output and a maximum sampling time of 80 seconds (split into three samples). Connections are via phono jacks, and controls are provided for sample record/play/pause, continuous sample play, output volume and sample 1/2/3 select.

Circle #231 on Reader Service Card





WADIA A/D CONVERTER

Wadia (River Falls, WI) debuts the WA 4000, a high-performance analog-to-digital converter with 20-bit resolution (via an UltraAnalog chip set) and a dynamic range said to be 108 dB. The WA 4000 includes balanced and unbalanced XLR analog inputs; AES/EBU, S/DIF-2 and S/PDIF digital outputs; switchable word clock input; selectable digital inversion; and DC-coupled audio inputs without op amps, transistors or capacitors.

Circle #232 on Reader Service Card

TRIDENT VECTOR UPDATE

New features and options for the Vector console from Trident USA (Torrance, CA) include LCRS panning modules and surround sound monitoring facilities for post-production applications. Also new are stereo mic/line modules (with stereo 4-band parametric EQ) and three-way effects return modules. Optional are four-way dynamics modules, VCA subgrouping faders, VCA automated faders, and moving faders with channel switching and machine control.

Circle #233 on Reader Service Card

JBL M-SERIES

JBL Professional (Northridge, CA) offers the M-Series signal processors, with balanced inputs and servo-balanced outputs. The M644 has four independent noise gates, each with user control of attenuation, attack, release and a wide -60 to +20dBu threshold range. The M712 is a stereo-linkable/dual mono gating compressor/limiter with threshold, attack, release and ratio controls, along with a variable threshold gate on each channel and 8-segment LEDs for gain reduction.

Circle #234 on Reader Service Card



MARANTZ PMD 700 DAT

Distributed by Dynascan (Aurora, IL) is the Marantz PMD 700, a 2.5x4x8.5-inch pro DAT recorder weighing less than three pounds. Priced under \$2,500, the unit features balanced mic inputs, AES/EBU and S/PDIF digital I/O, 1-bit A/D converters, internal limiter and no SCMS.

Circle #235 on Reader Service Card

HOT OFF THE SHELF

Version 3.0 software for the Lexicon Opus digital audio production system adds automated mixing in the digital domain, and integrates machine control of external video transports into the Opus environment. Call (617) 736-0300...DeWolfe Music Library has been appointed the licensing agent for 170 hours of "copyright cleared" classical and operatic music. Call (212) 382-0220...Now available: Add-on MIDI-controlled fader/mute automation for the Mackie CR-1604 mixer that installs in ten minutes. Price: \$700. Call (206) 487-4333...Music in Video Production (\$39.95), by Roseanne Soifer, is a guide to using music for video, including discussion of production music, copyrights and permissions, selecting composers, clearing existing music and sample contracts. Available through Knowledge Industry (800) 800-

5474 or Mix Bookshelf (800) 233-9604...dBm Technical Services offers Emulator III modifications: adding a 234MB hard drive, 50-pin SCSI connector, quieter cooling fans, 8MB memory upgrade and more. Call (212) 645-2626...More than 5,000 parts for current and older Nakanichi products are now available through Ruppman Parts of Peoria, IL. Call (800) 662-0504...Remember TUBES? Audio-Glassic provides vacuum tubes for preamp, power and rectifier applications, with more than 1,000 types in stock, including vintage varieties. Call (205) 880-3660 or (800) 45-6166...Manhattan Production Music's Audiophile Sound Effects Series has 495 sounds on five CDs, all digitally recorded. Call (800) 227-1954 or (212) 333-5766...Acoustical Engineering (\$49.95), by Harry F. Olson, has 736 pages on acoustics, vibrations, measurement tech-

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pairs of reference speakers, including automatic EQ switching, speaker fuses, LF protection, level trims and remote control capability. Call (212) 925-1365...The Ensoniq SD-1 Music Production Workstation is now available in a 32-note polyphonic version (\$2,745) with 75,000-note sequencer capacity. Upgrades are also available for owners of earlier SD-1s and VFX^{SD} keyboards. Call (800) 553-5151...River City Sound Productions offers two CDs of buy-out production music for broadcast, industrial or corporate use, priced at \$239 (or \$129 per disc). A CD of seasonal holiday music is due soon. Call (901) 274-7277...E-mu's Proteus/3 World is a rack-mount MIDI module with 4 MB of wind, string and percussion instruments from all over the world, with 16-bit, CD-quality, 32-voice polyphony. At your dealer or call (408) 438-1921. ■

by David (Rudy) Trubitt

OPCODE STUDIO 5

Imagine, if you will, a second engineer for your MIDI system. One who remembers which instrument is hooked to what MIDI port and which channel it receives on. A humble servant who recalls your latest studio setup, updates all of your sequencer and editor librarian program configurations while you sleep and doesn't make snide remarks about your arrangements! Opcode has combined the organizational benefits of Opcode MIDI System software with a new Mac MIDI interface, the Studio 5. The two meet the above job description quite nicely, although they can't empty the ashtrays or make coffee. Yet.

Opcode's Studio 5 combines a 15 x 15 MIDI patch bay, extensive MIDI processing, a SMPTE reader/generator

the unit's in or out ports. A three-digit numerical LED and a set of up/down buttons are the only user controls present on the front panel. These buttons let you step through patches (more on these later). When both are held on power-up, the unit is reset. Holding both during normal operation sends 128 note-off commands on each channel simultaneously over each MIDI port. Finally, the unit's power-on LED doubles as a SMPTE sync lock indicator by flashing when time code is present.

Clearly, the best reason for the Studio 5's existence is all those MIDI ins and outs—the unit has a whopping 240 independent MIDI channels! Of course, actually using all of those channels requires plenty of band-



and Macintosh MIDI interface. First, let's get the laundry list out of the way: The device is a two-rackspace unit with an internal power supply. The rear panel has two Mac serial connections (with bypass switches on the front), 13 pairs of MIDI I/O connections, LTC SMPTE in and out, two assignable footswitch jacks, one foot controller input and a trigger input for locking to an analog click track.

The front panel has two additional pairs of MIDI connectors, a big convenience. Two rows of 15 LEDs light when MIDI activity is present on any of

width between your Mac and the Studio 5. To achieve this, the user has the option of connecting two Mac serial cables to a single Studio 5. The unit's software automatically distributes the load between the two cables. Also, these serial connections can be set to run at the maximum speed that your computer's processing power will support, further increasing throughput. This two-cable connection is optional—a single serial cable will run the Studio 5.

Configuring the Studio 5 requires use of the Opcode MIDI System. For

those not familiar with OMS, an explanation is in order. OMS is designed to provide a central description of your entire MIDI system, including all MIDI connections, channel assignments of sound generators, and sync sources. By accessing this storehouse of information, any OMS-savvy application

function between the two is that MIDI Manager supports Inter-Application Communications (IACs), while OMS does not. In cases where two MIDI programs must run synchronously on the same Mac, MM is required. One area where OMS can supplant MM is by driving plug-in Mac cards such as SampleCell or MacProteus. Using MM for this task can cause problems—some Macs are too slow to run digital audio applications like Studio Vision and MM at once. As OMS demands much less processor attention, it solves this potential problem.

OMS requires you to describe your entire MIDI system in exacting detail, as shown in Fig. 1. This, and many other aspects of OMS's operation, are controlled graphically. Although there are cases where the way you must "draw" things is restrictive, in general it's a quick way to get the job done. Not all OMS information is shown graphically: Each instrument in your setup gets a dialog box that allows you to set its receive channels, to decide whether or not it generates sync, etc. Once you get started, this process goes pretty quickly. You'll be well-rewarded for your efforts—with a single command, Vision can automatically

all the functionality described above, adding extra screens to control the Studio 5's many features.

Let's dive in to the unit's routing and processing abilities.

The Studio 5 holds up to 128 patches, each a complete set of routing and processing options. Each patch can also contain a start and end sequence, allowing the automatic sending of program (by number, not name) and control changes when switching patches. To use the Studio 5 with Vision, an empty default patch will suffice—you simply direct the flow of MIDI data from within Vision using your device names. Because the Studio 5 combines a patch bay and MIDI interface, you can make MIDI connections between devices that bypass

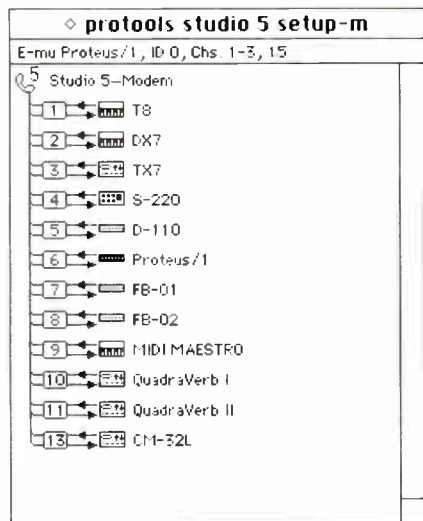


Figure 1

can automatically retrieve details about each device in the setup, eliminating all redundant data entry by the user. This also ends the need to remember channel or MIDI output port assignments for each instrument in your setup. Rather, you get to focus your attention on device names (of your own choosing) while OMS keeps track

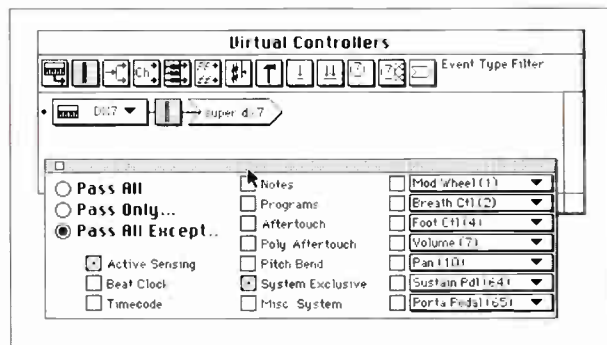


Figure 3

your Mac completely, if desired.

In addition to being able to split and merge ins and outs to your heart's delight, the Studio 5 has a number of MIDI processing tools that can be inserted in any MIDI data path, shown in Fig. 2. Again, the editing takes place graphically. Each part of a patch starts with one MIDI source and ends with one or more MIDI destinations, and many such paths can exist within a single patch. The Studio 5 takes this processing concept one step further, allowing modifications to the MIDI source (controller) and destination (instrument). Using virtual instruments and controllers, you can combine and customize the functionality of different pieces of MIDI gear.

For example, a virtual controller can take the output of a keyboard and apply the same processing options applicable to the routing screen shown in Fig. 3. Virtual controllers can be named and used by other Studio 5 patches and by Vision or other OMS

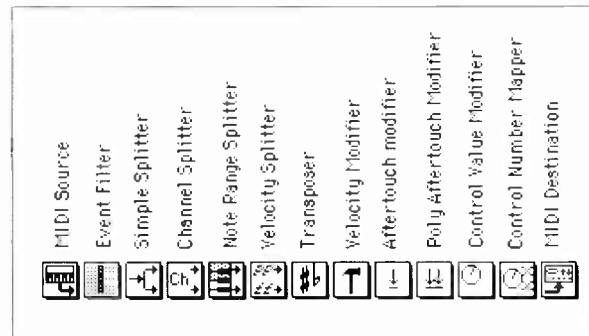


Figure 2—MIDI Processing Tools

of the messy details.

OMS is not designed to replace MIDI Manager, although there is at least a possibility that it could be included in a future Mac system release. Today, the two coexist peacefully, albeit in a sometimes cumbersome combination. The most important dis-

Editing the Studio 5's extensive MIDI processing and routing capabilities is not possible from the unit's front panel—it's all done onscreen via the Mac. Rather than supply a stand-alone application for the task, the Studio 5 comes with a special version of OMS (currently at Version 1.1). This includes

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applications. Similarly, a virtual instrument allows you to create a pre-defined stack of multiple sound generators. (Again, the same processing modules are available.) These multi-instrument stacks are also available to other patches or OMS programs. This is powerful stuff, and the Studio 5's 68000 microprocessor has plenty of horsepower for keeping up with complex patches. Since the Studio 5 can run with or without a Mac, its extensive processing options could be very useful in a live situation.

It's worth noting that a few restrictions exist in the order in which processing modules can be used. For instance, the channel splitter module insists on being first in line, which made it difficult for me to split and then rechannelize the output of a mono-mode guitar controller. I was able to get the job done using a six-part virtual controller, but it was more work. According to Opcode, this restriction allows patches to run faster and use less memory.

Another small disappointment was that the unit's foot controller input doesn't allow the inversion of controller data—values always increase as the pedal is depressed. Evidently, other users have also requested this feature, which will be added in the OMS/Studio 5 software, Version 1.2, slated for the second quarter of this year. Version 1.2 will also add the ability to network up to six Studio 5s, using both Mac serial ports.

Use of the Studio 5 is not limited to OMS applications alone. The unit includes two compatibility modes—one for a MOTU Time Piece and another for a generic 2-in, 2-out Mac MIDI interface. However, there is a problem with using the Studio 5 as a generic interface—it works on the modem port but not the printer port, reducing it in practice to a 1-in, 1-out interface. This causes additional problems using non-OMS applications and peripherals that demand the use of the modem port (specifically, Pro Tools and the J.L. Cooper CS-10M). The problem will be remedied in the above-mentioned Version 1.2 software release. Also, Digidesign has announced its support for OMS, which, when implemented, will avoid the need to use compatibility mode with Digidesign products.

Synchronization is another impor-

tant feature of the device. The unit can read or write LTC SMPTE at 24, 25, 29.97 drop and non-drop and 30 non-drop frames per second. If the incoming time code is completely cut off from the Studio 5, it will flywheel for one frame. However, if the SMPTE is bad but transitions are still recognizable, flywheeling will bridge a 2.5-frame gap. The unit also jam syncs to reshape marginal time code. A "stripe SMPTE" window is provided to control time code settings. The unit provides sync info to the Mac in the form of MTC, Direct Time Lock or DTL. When the Studio 5 was first released, some commented on its lack of a video sync input, but since then, Opcode's release of the Studio AV has defined the company's approach to syncing to picture.

So how does it all add up? On the down side, some users have noted hum in their systems if audio cables run within a couple of inches of the device. Opcode is studying the problem and may modify the unit's power supply. Also, the unit's inability to use the printer port in compatibility mode is a problem, but it should be fixed in the next release, so it won't be an issue for long. On a positive note, the large number of independent MIDI ports and OMS's superb system organization capabilities are the unit's strongest features. These are a real boon to Vision, Studio Vision or Galaxy users, as well as other applications if and when they become OMS-compatible.

Another big plus comes from the 5's extensive real-time MIDI processing abilities, which have potential in live as well as studio applications. Live users will appreciate the ability to use the unit's footswitch inputs to step through patches when that feature is added in Version 1.2. Finally, the combination of patch bay and interface means you won't have to boot your Mac just to get MIDI echoing through to your sound generators. At a retail of \$1,295, the unit doesn't come cheap, but the Studio 5's unique power and flexibility will doubtless land it at the center of many sophisticated MIDI systems.

Opcode Systems, 3641 Haven Drive, Suite A, Menlo Park, CA 94025; (415) 369-8131. ■

Sound reinforcement editor David (Rudy) Trubitt also writes the "Computer Musician" column for Electronic Musician, where he covered OMS last March.



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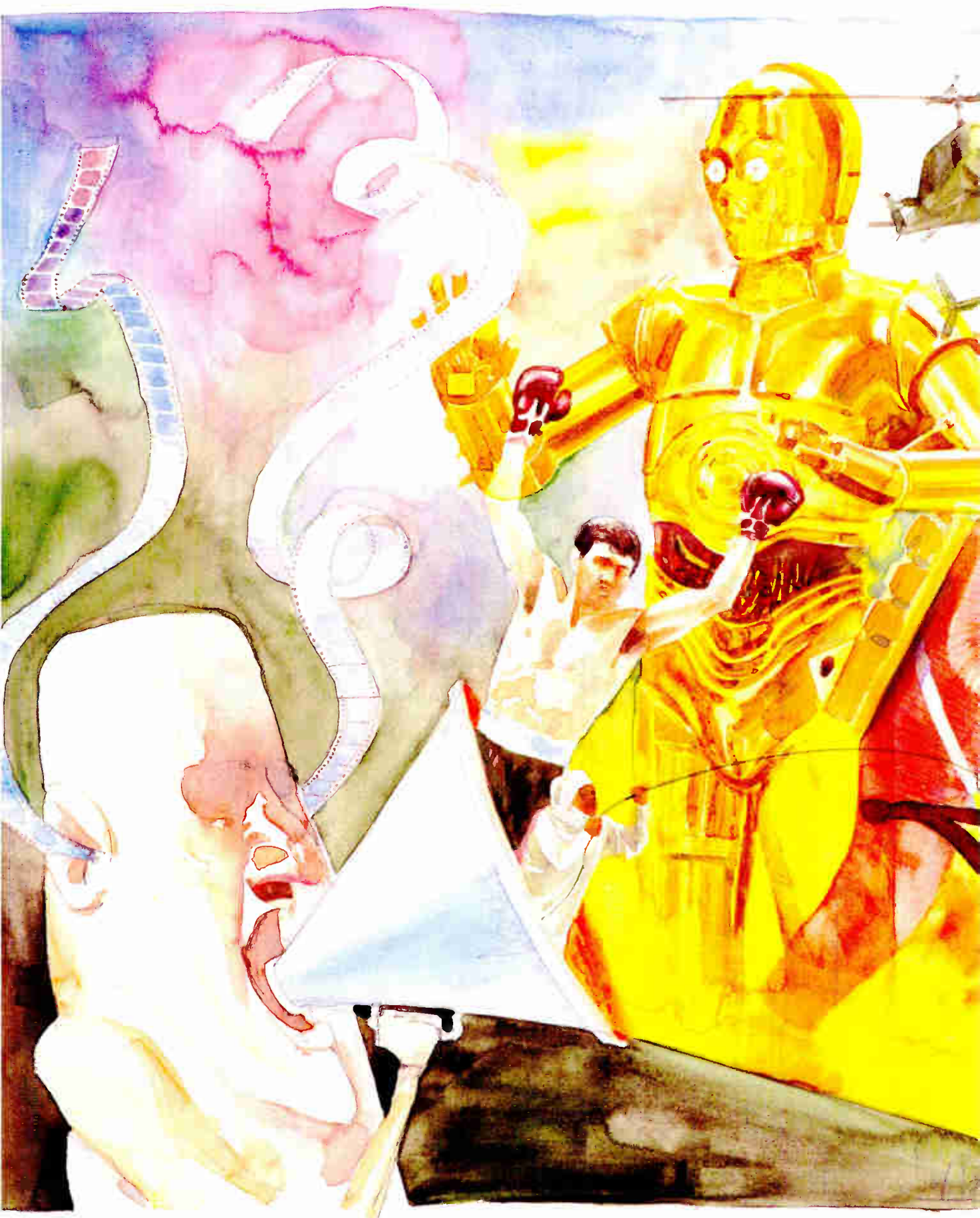
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When Walter Murch and Ben Burt brought the title “sound designer” into feature films in the late 1970s, they couldn’t have foreseen the size of the hornet’s nest they were kicking. In a business well-known for wacky, ambiguous, arcane and grandiose job descriptions, this particular credit has generated more than its share of blank stares and shouting matches, and quite a few chuckles. Most of the dozen or so of us who have received the credit on feature films feel at least a little uneasy about it ourselves.

In this article I’d like to do three things: speculate about the reasons for this uneasiness; attempt to

clarify the meaning of the term; and place the controversy over its use in the context of the larger and more important issue of the neglected potential of sound in movies.

It’s hard to explain, even to myself, why the words “sound designer” seem pretentious. But they somehow do. Clearly, the word “designer” is the provocative one. A designer is someone who imagines, plans, organizes, etc. No problem so far. Some of the queasiness about the use of the word “design” in connection with “sound” must stem from the notion that we who request that credit place ourselves in some sense above all the others—that we believe we are doing something new or more sophisticated than what has been done before. Or maybe it just seems pretentious to imply that any one person

would have the expertise to understand every aspect of the planning, fabricating, collecting and processing of sound in a film.

As to whether a sound designer is doing anything new, the answer is emphatically, “No and Yes.” The Yes part (which is not as important as the No part) has a lot to do with technology.

By the early ’70s, pop music recording technology began to creep into film sound. And as new gadgets began appearing in movie post-production sound (most notably, the multitrack tape recorder), so did a new style of working. Individuals who had experience with music studio gear—and who could get some help linking the picture and audio via SMPTE time

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The fact that the audience isn't usually aware of the power of sound is both a blessing and a curse to those who feed the machinery aimed at the ear.

code—could then record, edit, process and mix much of the sound by themselves. Each of those jobs previously had been done by a specialist. But this new, completely unspecialized approach to the work had a difficult time taking hold in Los Angeles because of the precise and strictly enforced classification of jobs by the unions. Enter San Francisco, wild and woolly as usual.

Francis Coppola and George Lucas moved to the Bay Area in the late 1960s. They were young renegades, inclined toward experimenting with new ways to make movies. Very little might have come of all of this experimenting if they hadn't made some outstanding films, which happened to have truly extraordinary soundtracks. *The Conversation*, *American Graffiti*, *Star Wars*, *Apocalypse Now*, *The Black Stallion* and *Raiders of the Lost Ark* all broke new ground in terms of sound and captured the attention of the Industry down south. (*Star Wars*, *Raiders* and *The Black Stallion* were mixed, and the first two were partially edited, in Los Angeles, but Ben Burt and Alan Splet did most of their sound design work in Northern California.)

The high quality and innovation apparent in these film soundtracks is sometimes attributed to the fact that most of them had post-production schedules significantly longer than those typical in Hollywood. I don't find this argument very compelling, since we can all think of films with very long periods of post-production that did not result in groundbreaking soundtracks. I also am not convinced that the unspecialized style or the new gadgets used on these Northern California films are what made sound such a powerful part of their dramatic impact.

Does using a digital audio workstation make you a sound designer? There are plenty of films these days for which an individual has recorded, edited, processed and premixed a few of the sounds that wind up being used. If

creating a spaceship sound by using digital processing constitutes sound design, then creating a spaceship sound by altering speed and equalization in the analog domain (as was done many times in the 1950s) was surely sound design as well. Should you get the credit "sound designer" if you only create three or four sound effects in a two-hour film? Probably not.

Apocalypse Now is often cited as an example of great film sound design, and it was the first time that most of us saw the title sound designer. Walter Murch, who was in charge of the sound for that film, was also one of its principal picture editors, just as he had been on *The Conversation*.

After Murch received the sound design credit, the genie was out of the bottle. Ben Burt got his first sound design credit soon after for *More American Graffiti*. Alan Splet, creating powerful sound montages for films by David Lynch and Carroll Ballard, would soon adopt the title as well. By the mid-'80s, so many people were calling themselves sound designers that the term began to have the faint smell of desperate self-aggrandizement, on the order of garbage collectors turned sanitation engineers.

When Murch fabricated, processed, edited and mixed much of the sound on the early Zoetrope projects, the new generation of equipment he used came to be associated with the title he chose for himself on *Apocalypse*. Today the list of exotic, computer-based tools is expanding so fast nobody can keep up with it. And the term sound designer continues to be linked with the use of weird and wonderful devices. On the rare occasion that sound designers are mentioned in the popular press, they are often referred to as "wizards," evoking the image of strange hermits who tinker in isolated laboratories with potions and obscure, complex machines. This image is unfortunate to the degree that it stresses isolation. The power of the sound artists, and of their work, grows out of collaboration, not isolation. And the usefulness of sound to a film, and to the film community, is proportional to its comprehensibility to collaborators in other crafts. Directors who don't understand sound, at least on an intuitive level, are in no position to use it.

What is *not* new about designing sound is that part of the job that depends on the brain and the heart. And it is much more important than the technology. Anyone who devises a

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particular sound aesthetic for a movie, and who supervises the implementation of that approach, has designed the sound. Using this definition, sound design has been done for generations. What difference does it make whether the tools are a Nagra and an upright MoViola, or a DAT and a Synclavier?

As with many other film crafts, sometimes the most brilliant work doesn't call attention to itself. The audience assumes that the dialog in films like *Ordinary People* (Kay Rose) or *Amadeus* (Vivian Gilliam and John Nutt) went straight from the shooting set to the release print unaltered. Of

course, nothing could be further from the truth. In some films the dialog needs just as much craft and design as the sound effects, music, decor or photography in other films.

It's strange that film composers haven't been more vocal about the proliferation of the sound designer title. They are obviously in the business of designing sound and might be justified in feeling their turf invaded. But the class structure of the movie business is set up so that composers are the one group in the craft of sound whose work is occasionally given the same kind of respect as that of the

major crafts: acting, directing, photography, writing. Movie composers don't need to bother themselves much about this new credit called "sound design," because they're paid enough and given enough respect to be safely above what must seem to them an amusing bantamweight sideshow.

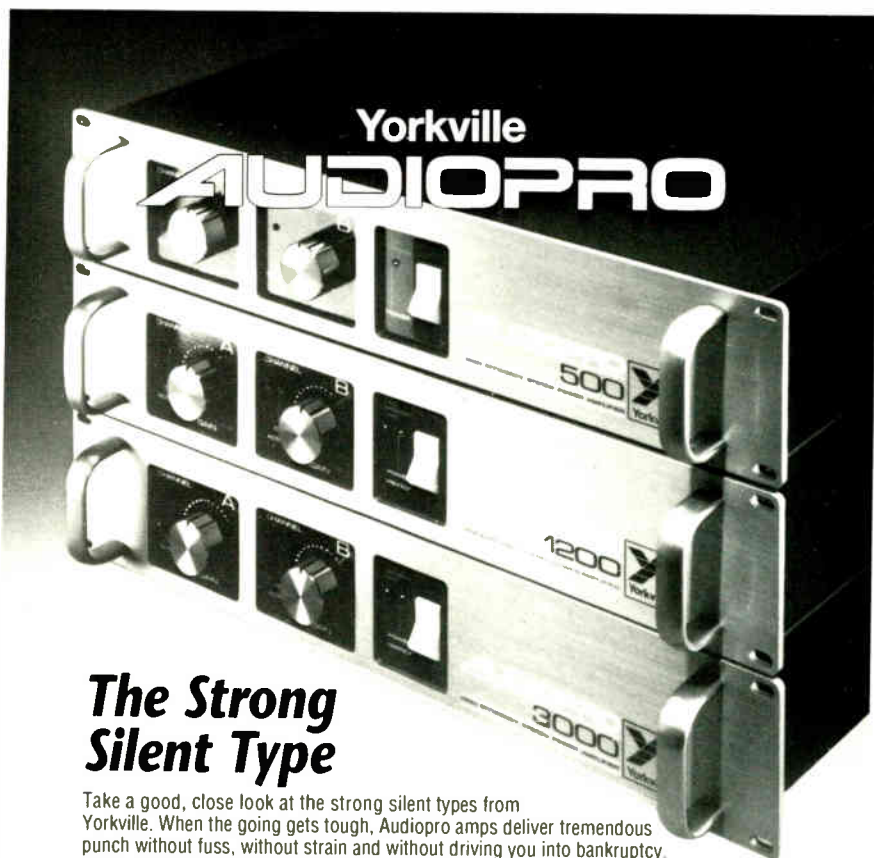
So it's the production mixers, re-recording mixers and supervising sound editors who usually lead the opposition to those who call themselves sound designers. As usual, the most vicious fights are over the scraps, not the entree, which leads me finally to the underlying and much more important issue.

Quite simply, sound is not taken seriously by most filmmakers. This unfortunate notion stole its way not only into the consciousness of filmmakers but also, more incredibly, into the film sound community itself. We in sound have been told for so long that our labor is of secondary importance in the grand scheme of filmmaking that we have actually come to believe it. So even if we know that our creative work on a particular project has been crucial to the dramatic impact of the movie, we don't dare ask for credit at the beginning of the film, or be brazen enough to claim we "designed" anything. We are, according to the official code, only technicians.

Instead of collaborating with directors, writers and editors to explore the enormous potential of sound in film, we spend most of our time coaxing sound into its most obvious, banal and remedial functions. We buy into the notion that sound is an afterthought in the filmmaking process, with the side effect of resentment of our peers who seem brash and assertive.

What does it mean to "take sound seriously"? Most importantly, it means being interested in exploring the storytelling capacity of sound, from the writing of the script through production and post-production. It means more than simply recording sound effects on location; it means considering the ways those sounds can be used to make the characters and locations in the film more compelling. It means searching for connections that sound can make between places, characters and moments within the film, and between the film and the culture at large. It means not being so quick to put sound effects and music into separate and unequal pigeonholes.

Taking sound seriously means not being reluctant to let the visual images



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follow and complement the sound. It means finding ways to shoot and structure the film that will open the door to the collaboration of sound. It means encouraging sound to influence creative decisions in the other crafts.

The most powerful moments in film are those where some degree of ambiguity in the visual presentation causes the audience to unconsciously look for other clues to complete the story. The sequences in movies that use sound best are often the ones which have been shot using slow motion, odd p-o-v's, dim light, unusual visual superimpositions, black-and-white images, or transitions into and out of dreams or hallucinations. A recent example is *Backdraft*, for which Gary Rydstrom helped make the fire a living character by weaving creature sounds behind the strange, slow motion images of flame. Another is *Barton Fink*, where idiosyncratic, dreamlike visuals open the door to Skip Lievinsay's evocative sounds.

Likewise, the hyper-real, super-amplified vision of action-adventure films takes us into a different set of worlds, providing another set of ambiguities for our senses to reconcile and other opportunities for sound to provide clues. In this sound genre nobody has done better than Ben Burt, whose sound ideas, every bit as much as John Williams' music, made the *Star Wars* and *Indiana Jones* films sing with excitement.

Another element common to films that use sound effectively is the presence in the story of a listener—a perceiver of events, a strong, well-defined point of view through which we, the audience, vicariously experience the action. In *Apocalypse Now* it is Captain Willard; in *The Black Stallion* it is the boy, Alec. In *Raging Bull*, Jake Lamotta suffers Sugar Ray's slow-motion steamroller punches for us. The visual images and the dialog, or lack of it, usually must establish and support a strong p-o-v in order for sound to be an effective contributor. Ironically, it is often the calculated use of ambiguity or distortion in the visual and "verbal" presentation that best sets up such a p-o-v. Too often the only role sound is allowed to play is its most obvious one, that of supporting reality. "See a dog, hear a dog" is the way it is usually described. Disguising the contrivance of the filmmaking process is certainly one of sound's jobs, but to ignore all of its other

talents is a tragedy.

I endorse the "holistic" approach to filmmaking, in which the movie is seen not as a collection of isolated crafts but as a complex collaboration among them. I realize that I'm not exactly breaking new aesthetic ground here, and none of this is really news to a lot of people in the Industry. When things are going well in moviemaking, the various crafts tend to disappear into each other, and their individual contributions to the finished film are difficult, even for professionals, to identify and analyze.

Earlier I mentioned that Walter

Murch received two credits on *Apocalypse Now*: picture editor and sound designer. The reason the movie employed sound so powerfully is not simply that Murch was a wizard at finding neat sounds to accompany a predetermined sequence of visual images and words. When Captain Willard lies in his Saigon hotel room, staring at the spinning blades of the ceiling fan, and imagines the sound of a helicopter, it is, of course, actually Walter Murch and Francis Coppola who are doing the imagining. If this metaphor involving sound hadn't occurred to them early in the filmmaking process it



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is unlikely it would have made it into the film at all. If Murch hadn't been investigating the dramatic potential of picture and sound with equal acuity and energy, the film and the audience would have been cheated.

The first reel of *Apocalypse Now* was edited by Murch and directed by Francis Coppola, using music, sound effects and visual images as equal components. They employed the same approach on *The Conversation*. Sometimes the music determined what shot would be chosen, sometimes the sound effects; sometimes the visuals led, sometimes dialog. The elements were mutually dependent, and there was a willingness to experiment in order to find what worked best. For once, the picture editing and sound editing departments were not cast in the role of mutual antagonists. Rather, they were free to give each other ideas.

The fact that the audience isn't usually aware of the power of sound is both a blessing and a curse to those who feed the machinery aimed at the ear. The sound is, after all, invisible, which allows it to sneak through the side door to the brain. But that which is invisible rarely gets the credit (or the blame) it deserves.

Not every film needs precisely manicured, innovative or highly stylized sound in order to be successful. But many do require something special, and countless others could benefit from it enormously. It is hard for me to imagine *Raging Bull* without Frank Warner's wonderfully stylized effects, *Eraserhead* without the work of Alan Splet, *Rumblefish* without Richard Beggs' contribution, *The Conversation* without Walter Murch's sound imagination, or *Star Wars* without Ben Burt. What sets the best soundtracks apart from the others is not budget, schedule, the latest gadgets, or even genius itself. It is simply that someone was thinking seriously about the collaborative ways that sound and image could be used from the earliest stages of the filmmaking process. This sort of approach certainly is not a guarantee of great sound, but it is a necessary condition for great sound, and it is what sound design is all about. ■

Randy Thom is an independent sound designer/mixer working mainly out of Skywalker Sound North, a division of Lucas Arts Entertainment. He won an Oscar for The Right Stuff and was nominated this year for his part in Backdraft.



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by David (Rudy) Trubitt

SOUND CHECK



UK artists James made their U.S. debut before a crowd of around 6,000 in San Francisco's Union Square. Sound was provided by Third Ear Sound of Richmond, CA (the company's M1800 cabinets are pictured). The free show, which was interrupted by rain, was sponsored by local radio station Live 105 and coincided with the Gavin convention. (Extra credit for spotting the twins.)

Live Sound Automation

A live television awards show presents a unique problem: How do you reset the console for each succeeding act? Until recently, the easiest solution was to simply throw multiple consoles at the problem. However, automation is making its way into live sound applications. An alternative approach is being used by Audio Tech, which recently provided sound for the *Billboard* and American Music Awards using a Saje Memory Console.

"Instead of having one console or a portion of one console reserved for each band, we can do the whole show with one console," says Audio Tech's Jim Showker. "Before, some of these big shows would require seven or nine consoles at the FOH. This allows us to drop down to two boards, and it works." (The second console covers the podium mics, which need no automation.)

"We'll start putting in the equipment a week before show day," Showker says. "Once it's installed, we start three or four days of rehearsal. A band will come in, and we'll get them set up and miked the way they want—that might take three hours. At that point, we'll save all our settings." The Saje stores all console settings and can recall presets from out-board MIDI gear. Although the console does not currently include dynamics processing, it does have programmable insert points. Audio Tech loads those up with compressor limiters and sets the inserts to switch in and out as required.

"On show day," Showker continues, "we plan for a dress rehearsal, which lets us see if the band will do exactly what they did before. Often they don't. We'll make some changes and resave, then tell the band that they need to come back exactly the way they are for the show."

Showker is very happy with the results. "We play second fiddle to the recording truck outside, because they're playing to an audience of millions, while we're just thousands. But we had it easier in both shows than they did. They're scrambling to get ready for the next band, and we're just pushing a button and watching the computer go for five seconds. It's an amazing thing to see it work when you've done it the other way for ten years."

The flexibility of the board is reflected in its price, around \$300,000 to \$400,000, depending on configuration. While Audio Tech does not own the board yet, Showker anticipates a purchase. "I feel that programmable consoles are the future. Even the mixers touring with the bands on these awards shows see this thing and want it for going from song to song, because they're making so many changes during their shows. The Saje is a wonderful thing, and I'm sure there'll be more. I also-

—CONTINUED ON PAGE 98

Live Sounds

Dire Straits' "On Every Street" Tour

Dire Straits' "On Every Street" tour began in Europe, swung through Australia and New Zealand and then took on the U.S. and Canada. The U.S. leg happened to start on my street—the Oakland show was their fourth domestic date. Much has changed since the group's last outing. "Everything was new—new band, new P.A., new boards and amplifiers," says house mixer Rob Collins.

One change is the tour's use of the Turbosound Flashlight loud-speaker system, a choice that required working with two UK sound companies. "Adrian Fitzpatrick [monitors], Pablo [Paul Boothroyd, assistant house] and I have been doing Straits for a while with Concert Sound," Collins explains. "The band thought the Flashlight would be a good system to try, but Concert Sound didn't have the Flashlight and Britannia Row did. So, a joint venture made everyone happy.

"You have a bottom-end cab with a 21-inch speaker," Collins



Top & center: FOH team Rob Collins and Pablo Boothroyd. Bottom: Monitor engineer Adrian Fitzpatrick. Right: Mark Knopfler, Dire Straits.

Performer: Dire Straits
Venue: Oakland Coliseum,
February 2, 1992
Rental Company: Concert Sound/
Britannia Row
FOH: Robert Collins, Paul "Pablo"
Boothroyd
Monitor Mixer: Adrian Fitzpatrick

says of the Flashlight system. "The top box has a 12-inch, a 6.5-inch and 1-inch on the top end. The 6.5-inch takes over where a 2-inch normally would. We've got a 96-pair rig that reacts very differently from a TMS-3. It's not a very forgiving system. On a lot of systems, small fader changes are masked, and you have to really push to get something out. With this system, you have to be light-fingered—it'll leap out at you.

"I love the way this system projects the vocal and the saxophone and the way you can layer instruments with it—it's got a great depth of field," Collins continues. The Flashlight was used on the first European leg, but TMS-3s were used in Australia and New Zealand. "[Switching back to a conventional system] shocked the life out of us," Collins adds. "In some ways we thought it was great, because we could relax a little bit. But halfway through the show we'd think, 'Oh, God, where's the texture gone?'"





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"The system delivers the sound more positively," Boothroyd adds. "You can send sound where you want and keep it away from walls that are going to cause reflections. It's a powerful, clean system. We feel there's still work to be done on it, but it's hard to judge a new system on one tour with one act. I'd like to hear it under different circumstances. We haven't used it in any small venues, which would be a different kettle of fish."

"One thing we've tried is flying bottom-end here and there," Collins says. "We have eight or nine bottom cabinets flown here in columns. I've never liked the sub-low on the floor and all the other information up in the air, especially for side seating, because you're so much closer to the speakers. You get the attack of the bass drum, and the rest is coming from somewhere else."

While Britannia Row pro-

vides the loudspeakers and amplifiers, Concert Sound supplies the consoles—including two Midas XL-3s, plus a 14-channel Extender—that are the centerpiece of the house position. "It's a nine-piece band," Collins says. "We're using about 74 inputs from the stage. I have the 14-channel stretch for effects returns and different things. I tried the XL-3 on one-offs in England, but this is the first tour I've had it on. I've always been a bit of a Midas boy anyway, and I love the sound of their desks. I was using the Pro 40 board with Eric Clapton last year. A lot of people think it's an old board, but it's still great-sounding. With only eight auxes, its facilities are minimal. The XL-3 has 16 auxes, so it's basically a FOH or monitor board designed for the service company, as they won't need so many different boards."

Adrian Fitzpatrick covers monitor duties for the band. "I'm using about 60 input channels with 19 mixes to the stage and four effects sends," he says, pointing to two

Midas desks, one that looked unfamiliar. "It's a custom-built Midas board made for Concert Sound," he explains. "It differs from other Midas boards in that it has the Pro 40 EQ, but it's full parametric. We also have ten channels of selectable VCAs and a VCA master. It has 40 inputs and 20 outputs and 3-band parametrics on the outputs, which are also patchable into any input channel. I basically keep the parametric handy for any individual channel and use the graphic on the outputs."

One particularly difficult input is Knopfler's National Resonator guitar. "It's probably the worst instrument I've had to deal with in my life," Fitzpatrick says. "It's difficult just getting enough level out of it. He plays it very lightly, and it's hard to get any warmth. I have to turn his front wedges down when he uses it because the Resonator picks up everything. The guitar tech can talk to us through the guitar, and we can hear him fine in the wedges. But people tend to recognize that guitar be-

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cause it was on the cover of *Brothers in Arms*." Any tips for someone in a similar situation? "Keep it in the box!" he exclaims.

"Everybody except the sax player and the pedal steel has a stereo monitor mix," Fitzpatrick continues. "If we have two nasty-sounding, dirty guitars at once, it's much cleaner if they go on either side. It increases the work and the number of amplifiers that you have to use, but the band wanted to go stereo because they'd been in the studio for months and months and were used to it. The stage level creeps up, and every few weeks we bring it back a bit. But I don't have any battles with Rob. It helps that we come from the same town and live about a quarter-mile from each other!"

One area that remains relatively unchanged is mic selection. "We played around a lot with microphones," Collins says. "We came up with a mixture of AKG and Shure, with 58s and Beta 58s on vocals. I didn't think the ones

that sounded that much better would work with our tight schedule and few soundchecks. I also find some of the newer, more sensitive mics go downhill rapidly—the capsules don't seem to hold up as well."

Second house man Pablo Boothroyd describes his role: "I watch Rob's back and assist and look after all the outboard gear. Once the show's underway, I can walk the room and make adjustments. We've got a couple of Lexicon 300s, a 480, a 224 and a PCM70."

An Eventide H3000 is used to round out backing vocals, but the overall approach is restrained. "We use a little ambience reverb to fill the holes—it doesn't sound like a heavily produced band," Boothroyd adds. The tour has used Drawmer and BSS gates and has also experimented with BSS graphics. "Although I'm a great believer in Klark-Teknik EQs, the BSS graphics seem to be very positive and responsive," he continues, "and their variable Q is nice to have. All the microphones and

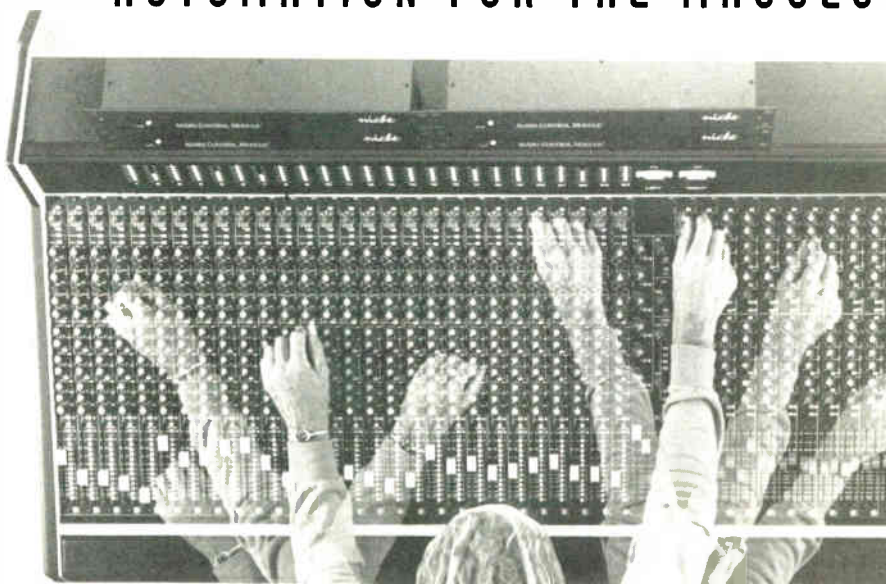
effects are owned by the band. It's a sensible move for them, especially on a tour of this length, because it can all go into Mark's studio after the tour."

And how did it all sound? The most obvious difference was a big reduction in room reflection, which was further enhanced by moderate SPLs. Room coverage was good. Even in the nosebleed seats, the room reflections seemed minimal. For me, the highlight was surely the midrange, which projected the guitar and sax warmly without any hint of harshness. The low end was less distinct, though it fared better when the bass player used a pick. The depth of field Collins described was certainly present. His mix and the band's playing made for a very dynamic and enjoyable show. And it was the smallest-sounding (read: most realistic) snare I've heard in the venue, which I mean as a great compliment. 🎧

David (Rudy) Trubitt has no annoying bio to share this month.

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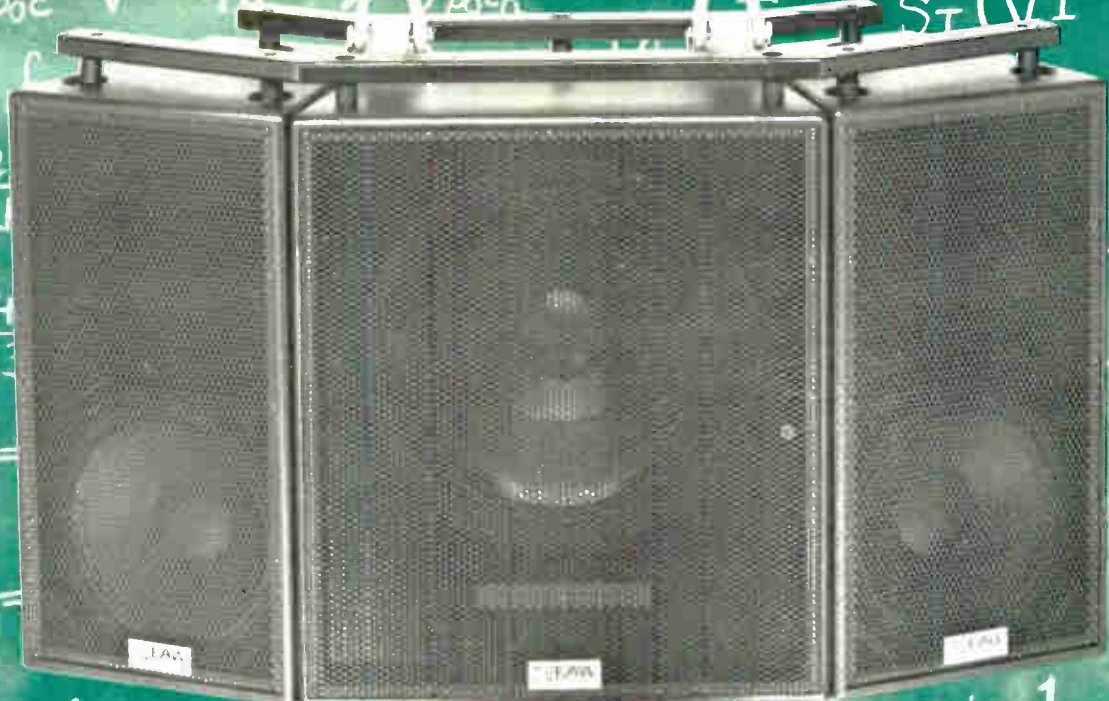
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—FROM PAGE 92, *SOULCHECK*

lutely believe that in five or ten years automated consoles will be the only thing acceptable for a big show."

Monitoring the House

Roberta Flack was out doing one-offs as the warm-up leg of a long tour. House sound was done by See Factor's David Wilts, with Robert Stewart covering monitor engineer duties. The show has been updated to

match the character of her new album, which means more effects, samplers and up to 37 inputs at the house and monitor position. The show carried a minimum of equipment, but "we are extremely specific on monitors," Wilts says. "Roberta is used to the setup she has now, which is 13 mixes of Meyer UM-1s, with a pair of MSLS for sidefills. The monitors have a lot of effects to re-create the album sound onstage. She only uses a wedge for herself when she's playing piano. She mostly

goes off the stage sound, and her own voice is off the house—in essence, I'm her monitor engineer, too.

"I have a standard setup with two SPX900s and two PCM70s," Wilts says of his house rack. "I'm also using two SDE-3000 delays and my favorite—even though it's noisy—a REV5 or REV7. They are the only units where you can increase reverb time without glitching, so you can get a big reverb tail at the end of the song. I have 40 cue cards, and I need to make changes very quickly and be ready for anything. I work my butt off to re-create the album's effect-laden sound, because that's what she's looking for."

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NEWS FLASHES

Bose loudspeakers and acoustical design software played a key role in the Albertville Olympic Games. More than 1,000 of the company's 802, 302 and 402 enclosures were used in a total of 35 different sound systems. Bose S.A.R.L. (Bose France) was selected by the Olympic Committee to install and maintain sound equipment in all venues...Klay Anderson Audio (Salt Lake City) installed Apogee equipment into the Cathedral Church of St. Mark...Dallas Stage and Lighting was out with Capitol recording artists Mazz, with Ray Silva as house and Tim Nesbitt as monitor engineers...A new school aimed at mobile DJs will open in March '92 in South Orange, NJ. Supreme Productions selected QSC amplifiers to outfit its new facility...Adamson Acoustics recently provided its concert system to SIR Hollywood...Recent clients at Soundstage Six include Roberta Flack and ELP...On an international note, Audio Dynamics S.A. de C.V. (Mexico City), Top Audio (France) and SPL Productions (Tullinge, Sweden) have taken delivery of Adamson products, while Lilliehook Electronic AB (Stockholm, Sweden) supplied Nexo loudspeakers for two passenger ships of the Silja line. The speakers were installed for orchestral reinforcement and disco applications. ♪

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SOUND REINFORCEMENT NEW PRODUCTS

**ECLIPSE OMNI-DIRECTIONAL SPEAKERS**

Eclipse Research (Incline Village, NV) has unveiled the Eclipse OS-2000™, an omnidirectional loudspeaker featuring a 12- or 15-inch coaxial driver in a hemispherical enclosure of tough ABS plastic over a high-density foam core. The OS line has models for outdoor ground burial, ceiling grid mount, suspended flying array and marine use (water-resistant). Applications include theme parks, nightclubs, arenas, meeting rooms, sports facilities and cinema-surround installations. Optional are Durastone shells, custom finishes, anti-theft mounts, high-output 500-700-watt coaxials, and dual, 2-inch HF compression drivers.

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SABINE FBX-900 FEEDBACK EXTERMINATOR

Using DSP technology to detect and automatically eliminate feedback in a half-second is the FBX-900 from Sabine Musical Manufacturing (Gainesville, FL). The one-rackspace FBX-900 updates the original FBX-M with improved <85dB signal-to-noise ratio, nine 1/10-octave filters and a wider operating range of 80-15k Hz. The FBX-900 is priced at \$599.95; applications include main and monitor systems in touring and permanent systems and contractor installations.

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COMMUNITY "FATBOY" SPEAKERS

Designed for applications requiring strong bass response from a compact (26.5-inch tall) cabinet is the N-Series FB ("Fatboy") from Community Light & Sound (Chester, PA). Housed in a 75-pound, carpeted, trapezoidal enclosure, Fatboy is a three-way system with 12-inch woofer, dual 6.5-inch, horn-loaded mids and a 1-inch, titanium-diaphragm HF driver. The speakers have a stated frequency response of 45-18k Hz. Electronically controlled and protected by the FB system controller, Fatboy can be bi-amped or used as a passive three-way. Integral rigging points and stand adapter are standard.

Circle #214 on Reader Service Card

**SBS BOXOPT SOFTWARE**

From Scientific Design Software (Chatsworth, CA) comes Enclosure Simulation and Optimization (BoxOpt), an IBM PC-based program for designing complex loudspeaker/enclosure systems: sealed, vented, passive radiator, multichamber and combinations such as series ports between chambers. Priced at \$349, BoxOpt features active filter simulation for determining the interaction of various crossovers with enclosure models, and a database of more than 1,000 speakers and drivers.

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RENKUS-HEINZ EASE JR.

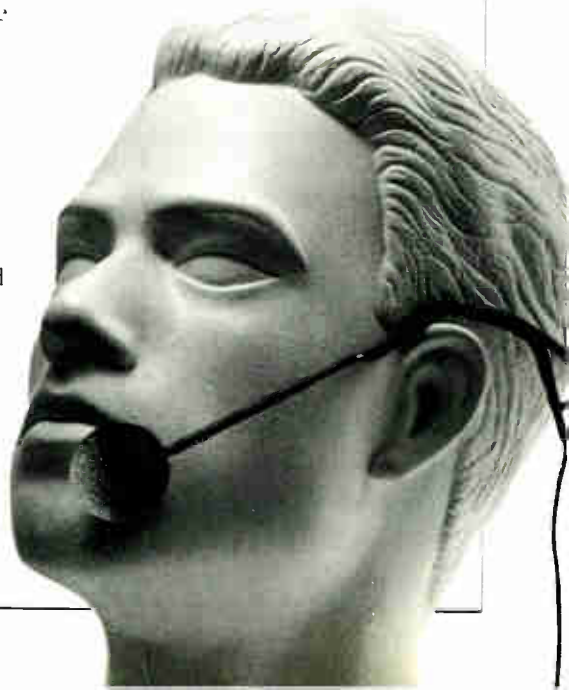
New from Renkus-Heinz (Irvine, CA), Ease Jr. is a low-cost (\$595) system-design program for users who do not require the advanced analysis features of the original Ease program. The IBM PC-compatible-based Ease Jr. makes use of the same algorithms as Ease, with an extensive database of loudspeakers and wall materials, as well as room modeling and isoline projection of intelligibility predictions.

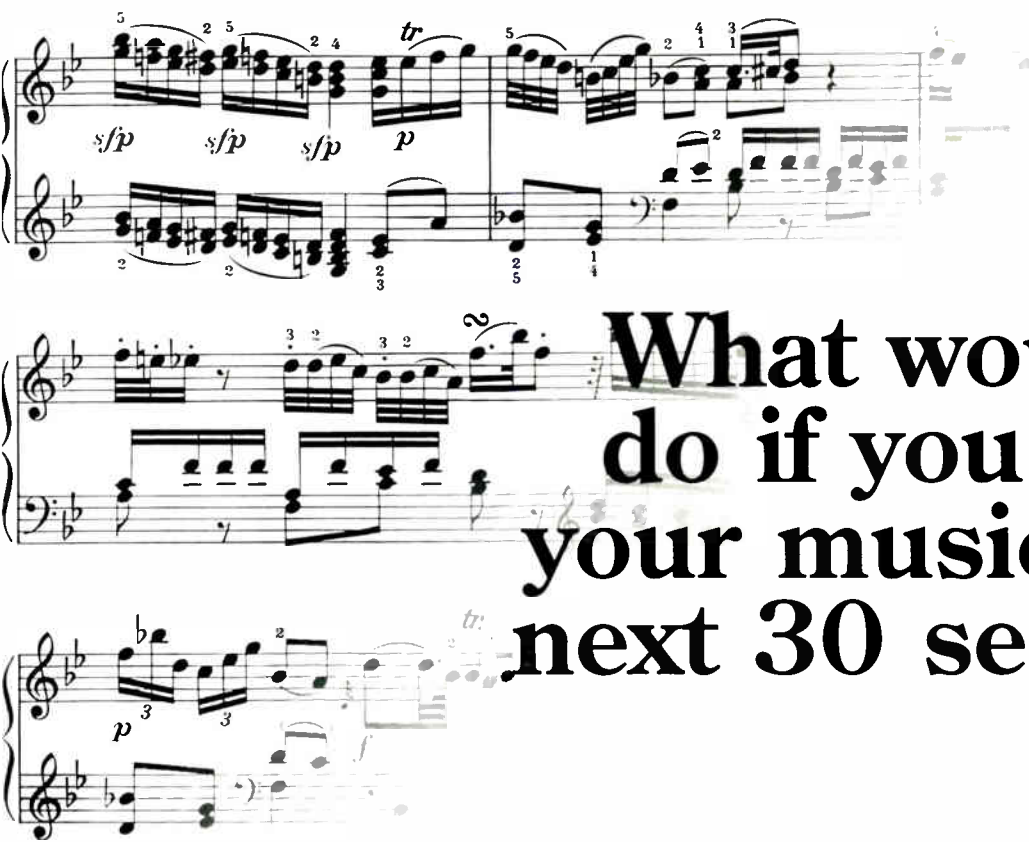
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SHURE WIRELESS HEADSET MIC

The WCM16 from Shure Brothers (Evanston, IL) is a hypercardioid condenser mic capsule mounted on a rugged, lightweight, adjustable headband that can be concealed under a performer's hair. Available separately (\$315) or as part of a Shure L-Series wireless system, the WCM16 features an effective pop filter, 150dB SPL capability and a Switchcraft TA4F connector for input into a body-pack transmitter.

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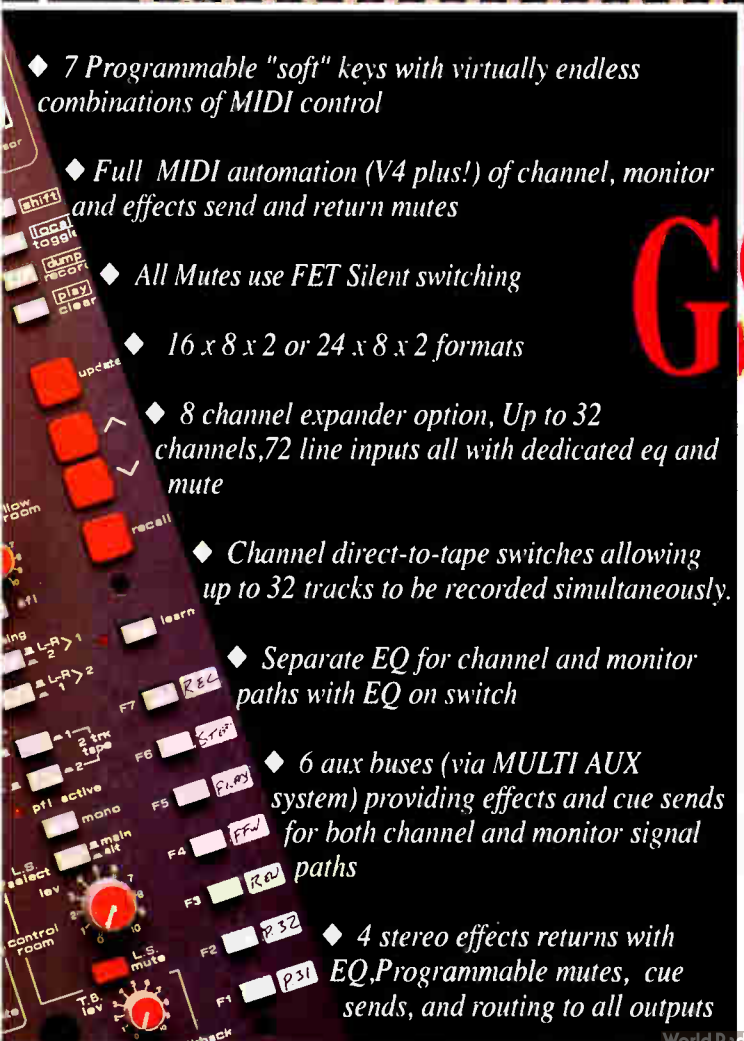
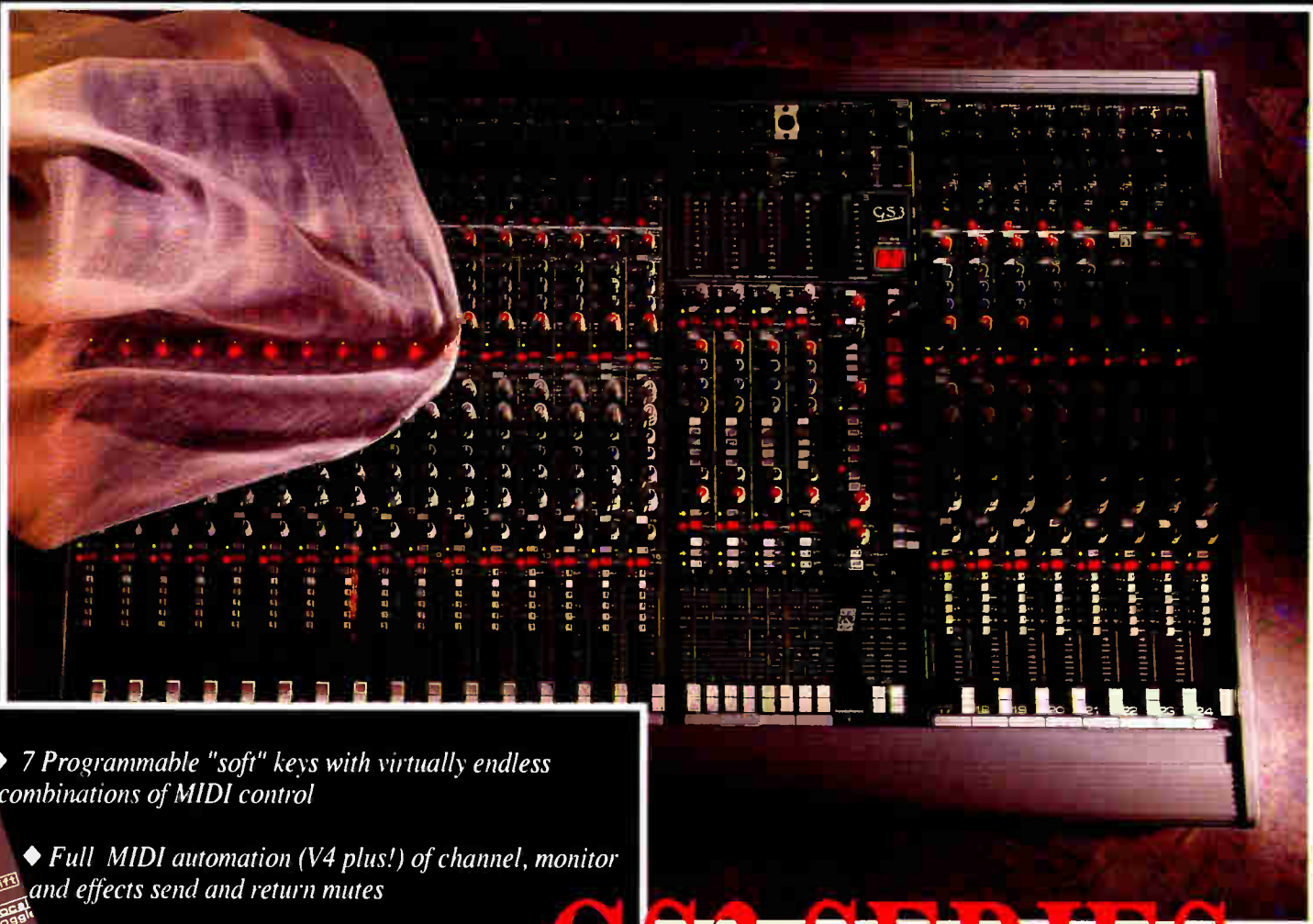


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ROCK 'N' ROLLER CART

Designed for audio and music pros, the Rock 'N' Roller from Freed International (Ft. Worth, TX) transforms from a four-wheel dolly to a two-wheel handtruck, yet folds compactly for storage. Its 54-inch length in four-wheel mode fits easily in most elevators, and the 33-inch sides allow for the stacking of high loads, doubling as a hanger for stage clothes. Also featured are 10-inch pneumatic tires, caster brakes and a non-skid frame bed surface to stabilize slippery cases. Priced at \$239, the unit has a 500-pound load capacity and is said to meet airport baggage requirements.

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YAMAHA MC-II SERIES CONSOLES

Yamaha Pro Audio (Buena Park, CA) has replaced its MC04 Series with the new MC120-II, MC160-II, MC240-II and MC320-II models. As the name implies, these are four subgroup models, available in 12- to 32-input versions. Also featured are 4-band EQ with sweep mids, four aux sends, two stereo aux returns, stereo tape/CD inputs, two mix matrices, 48V phantom power, and XLR and 1/4-inch inputs on all channels.

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MACPHERSON 1,200-WATT MONITOR

MacPherson Loudspeakers (Lansing, MI) announces the LPX floor monitor, which combines a 1,000-watt EVX woofer, CDX2 UltraFidelity™ 2-inch compression driver and rotatable 90°x50° horn in a compact 17.5x19x22-inch, 12-ply, molded wood cabinet. Designed for bi-amped operation, the LPX has a 50-17k Hz (± 4 dB) frequency response, a max SPL of 129 dB and can be fitted with EP-4 or NL-4 connectors.

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MOTION LABS HOIST CONTROLLERS

Motion Laboratories (Irvington, NY) now offers its hoist motor control and power systems to the installation and touring industries. Four- to 32-channel configurations with low-voltage hand controllers are available. Rack-mounted power distribution panels accommodate most chain hoist connectors used in the entertainment industry.

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by Phil De Lancie

MAXIMUM DUPLICATING LEVEL

PROPOSED STANDARD AWAITS RIAA REVIEW



One of the most contentious topics at the 1991 ITA "How & Why" prerecorded cassette seminar related to the signal levels found on the production masters provided to duplicators by their clients. It wasn't that the levels themselves were in dispute. Nearly everyone agreed that they are too high, leaving a large gap between the signal on the master and the signal-handling capabilities of cassette tape stock (see "Tape & Disc," September 1991 for a more detailed description of the problem). The controversy arose over what to do to bridge that gap, and who should do it.

Should duplicators, intimately familiar with the particular capabilities and limitations of their equipment and tape stock, take whatever they are given and make it work in their plant? Or should mastering houses take responsibility for providing production masters that realistically reflect the cassette's abilities? Some at the seminar even suggested that separate mixes should be made for CD and cassette, complaining that most engineers and producers think only of CD and ignore cassette.

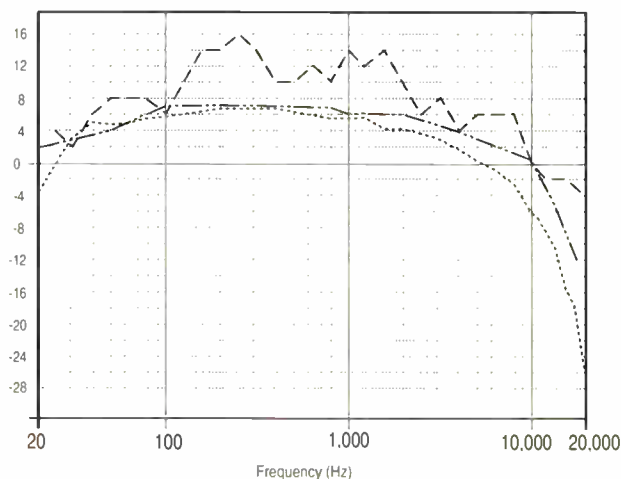
Whoever ultimately assumes responsibility for dealing with the problem, it is clear that the industry lacks a uniform standard with which to measure levels for prerecorded cassettes. Such a standard would facilitate discussion of the problem and make it easier to find out if the level on any particular project is likely to be a problem. With that in mind, Sony Music Technology has been working on a set of recommendations to the RIAA engineering subcommittee for adoption as a maximum duplicating level (MDL) standard.

Sony is proposing the use of an MDL meter to measure signals in relation to

the standard. The meter is actually made up of two parts, which, according to Tom Rucktenwald, Sony Music Technology's associate director, need not necessarily be housed in the same box. The first section is a pre-emphasis network, switchable between the pre-emphasis curves applied to Type I and Type II cassette tape. The second section is a peak-reading meter.

--- CD peaks
 - - - - BASF TP-18 CR-D with Dolby HX-Pro
 Agfa PE 649
 Level (dB)
 (0 dB=200nWb/m.)

Master Levels and Tape Capacities



Signal is fed through the network to the meter. Overloads indicated on the meter alert the user that the signal is too hot to be duplicated without distortion. The meter has a 10ms attack time to weed out overloads that are too brief to affect sound quality.

The MDL meter was introduced publicly to duplicators at last May's "How & Why" seminar. But not much has been heard about it since. As this year's seminar drew near, I spoke with Rucktenwald to see if any recent developments in tape formulations or

Fig. 1: Composite peak energies of ten contemporary CDs compared with MOL/SOL curves (1% distortion) of chrome (BASF) and ferric (Agfa) duplication tapes.

—CONTINUED ON PAGE 107—

Tape & Disc News

Major Labels Set CD Packaging Size

The six major label groups, through their trade association, the RIAA, have settled on a new voluntary standard package size for CDs. The 5-inch x 5-1/2-inch standard seals the fate of the throwaway CD longbox, and paves the way for selling CDs in shrinkwrapped jewel boxes, which is how it's done everywhere else on the globe. By not actually mentioning the jewel box, however, the standard leaves open the possibility of alternative packages of the same size. The new size is to be implemented on all new releases by April 1993.

Unless retailers choose to put CDs in "plastic keepers," which would increase their labor costs, the new package size won't work with the old LP bins for which longboxes were designed. That fact has long been a main concern of record retailers, who until 1991 opposed any move away from the longbox. The store owners don't want to have to pay to refixture for new packaging. In announcing the standard on behalf of the major labels, who together account for 95% of U.S. prerecorded music sales, RIAA president Jason Berman said, "We have assured retailers that our member companies will work with them to explore ways to offset refixturing costs."

Despite the pledge, initial retailer reaction to the new standard might be characterized as resigned resentment. The National Association of Recording Merchandisers released a statement referring to the "high level of frustration in all sectors of the industry" because the labels took nearly a year to explore alternatives before arriving at the jewel box size. The statement noted that some NARM members will be relieved that a decision has been made, "even though they are unhappy with the choice and with the fact that they were not part of the decision-making process."

Regarding the label offer of assistance, NARM pointed out that "retail concerns have never been solely about refixturing." Retailers have maintained that oversized packaging helps to deter shoplifting and gives needed space

for eye-catching graphics that encourage sales. Arguing that a smaller package will bring with it some ongoing costs, NARM called on suppliers "to address transition costs in a way that is substantial in size and duration."

It's too early to say whether the retailers will eventually be mollified by label assistance. According to WEA Corp. president Henry Droz, the pledges of aid are not accompanied by any industry-wide plan. "All the member companies bear a responsibility to help with costs involved with the transition," Droz says. "But that will be up to each individual company, and I think there are many issues we need to learn about before we can come up with a plan."

As for the Eco-Pak, which Droz presented to retailers last year as WEA's last word on CD packaging, it is not entirely out of the picture. The package may be used in its folded, jewel box-size configuration by WEA labels on selected projects where increased area for graphics is deemed to be particularly important. But Droz says the shrinkwrapped jewel box will become WEA's standard CD package.

More Pieces in Place for DCC Rollout

British mastering house Chop 'Em Out is to become the first independent mastering facility in Europe to offer master preparation services for Philips' Digital Compact Cassette. The company is acquiring a range of "purpose designed" equipment for producing DCC format masters from master material on any incoming format. The masters combine PASC-encoded audio with text in Philips' Interactive Text Transmission System format. Philips will conduct staff training on the mastering process at Chop 'Em Out (see "Tape & Disc," March 1992, for more on Philips' DCC mastering system).

Because DCC master preparation involves not only audio mastering but also text editing, Chop 'Em Out director Avi Landenberg says the new format will prompt the "birth of a new breed of engineer, able to combine creative publishing skills with mastering expertise." By gearing up well in

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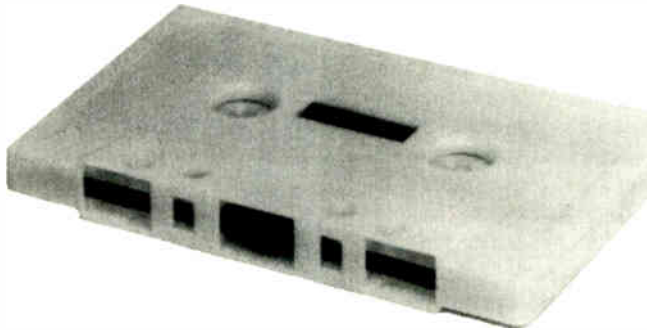
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advance of the format's autumn rollout, the company hopes to help labels avoid any software bottlenecks at the time of the launch.

Another area of the DCC production chain now ready to roll is on-shell printing. Apex Machine Company has developed the RS-100 rotary silkscreen machine for DCC and VHS cassette applications. The machine, which operates at speeds in excess of 80 parts per minute, was set for debut at the AES in Vienna.

MasterMaker Used for Production CDs

February's "Tape & Disc" feature concerned the use of Sonic Solutions' MasterMaker system to make glass CD masters directly from recordable CDs. Bonneville Broadcasting System now reports that it is the first client for whom production discs have been made by this method. The premaster for the CD, Bonneville #3102, was recorded on a Start Lab CD Maker run by a Sonic System. Glass mastering and replication were done at Digital Audio Disc Corporation in Terre Haute, Ind.

CEDAR Reduces Distortion and Prices

CEDAR Audio has introduced a new real-time, "de-crackle" software module for loading on any existing CEDAR System. The module is designed not only to remove surface noise and other crackle, but also to reduce certain types of distortion. According to CEDAR, these include microphone breakup, FM interference, line spikes, digital errors, embedded crackle and distortion from groove wall damage. The company has also announced price reductions of 33-50% on various hardware and software products.

CD Manufacturers Expand

American Helix has announced plans to double output at its Lancaster, Pa., plant to one million CDs monthly by September. President David Dering says the new molding lines will use the latest-generation technology "optimized for faster cycle times and the highest yields in the industry." The company has recently expanded its warehousing and drop shipment programs with the addition of 40,000 square feet of space.

Also adding to CD capacity is the Nimbus Records plant in Charlottes-

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ville, Va. According to *Billboard*, a \$3 million expansion is underway that should boost output to 100,000 daily by August.

SPLICES

AMP Services of West Palm Beach, FL, announced that it will be handling sales and service for a ferrite slave head specifically designed and manufactured by Philips for Electro Sound 8000 and 4800 analog duplication systems ... Electro Sound (Sun Valley, CA) recently sold more than 60 model 1850 cassette tape loaders to 12 domestic and foreign companies, including EMI, Audiomat, Distribodoras and independent producers. The units feature automatic performance and control monitoring and built-in diagnostics. ... Eagle-TDT (Fort Wayne, IN) delivered a five-slave audio duplication system to Canatron in Canada and fifteen slaves to Sound Impressions of Nashville, TN. The remanufactured gear uses 8MHz bias, dupe ratios of 6:1 or 80:1 and TDT's Equitense dual-reel servo system. ... Versadyne (Campbell, CA) delivered complete turnkey duplication systems to Cabrera Studios and Cuernavaca Sound, both in Mexico. Each package is based around the company's 1500 Series high-speed duplication systems and includes Otari mastering decks, Concept Design loaders, Roldex imprinters and other associated gear. ... 52nd Street, a Los Angeles audio post-production facility, now offers video duplication services from virtually all master formats. Copies are available in quantities of ten to 20,000 with a 24- to 48-hour turnaround time. ... Maxell announced that it was chosen by CBS as the exclusive provider of D-2 composite videotape for the 1992 Olympic Winter Games. The network ordered a minimum of 3,000 of the tapes, which use Maxell's "ceramic armor metal particle" technology. ... Professional Tape & Communication Supply, distributor of broadcast, professional/industrial and consumer audio and video tape, has opened an office in San Antonio, TX. ... Disc Mastering Inc. in Nashville, TN, reports mastering for producer Clarence Carter on a project by singer Pat Cooley. Cassette and CD masters were prepared by Hoyt Dooley III, while lacquers were cut by owner Randy Kling. ... This year Burlington Audio/Video Tapes Inc. (Oceanside, NY) is celebrating their 22nd year in business as a master distributor of audio and videotape plus accessories. ■

—FROM PAGE 104, MAXIMUM DUPLICATING LEVEL industry practice had influenced Sony's proposals, and to check on the current status of the MDL project.

The MDL idea is a response to the problems that can arise when masters with levels optimized for CD are sent to duplicators for use in cassette production. Describe the aural consequences of trying to put CD levels on cassette. It could be heard as distortion, or it could be a change in the apparent spectral content of the program. For instance, we've found that an instrument like a tambourine, which might be very bright and pronounced on the master, might seem to just disappear in duplicating. Or there could be sibilance or other types of distortion.

What assumptions about how much distortion is acceptable have been used to develop the standards?

For frequencies between 30 Hz and 5 kHz, the maximum output level is defined as the input level that causes 3% total harmonic distortion on the cassette tape output. For frequencies between 5 kHz and 17 kHz, MOL is defined as the input level that provides the maximum output level at the input frequency.

Using 200 nW/m as a zero reference, what pre-emphasis curves and peak levels are you proposing as standards for the various tape types?

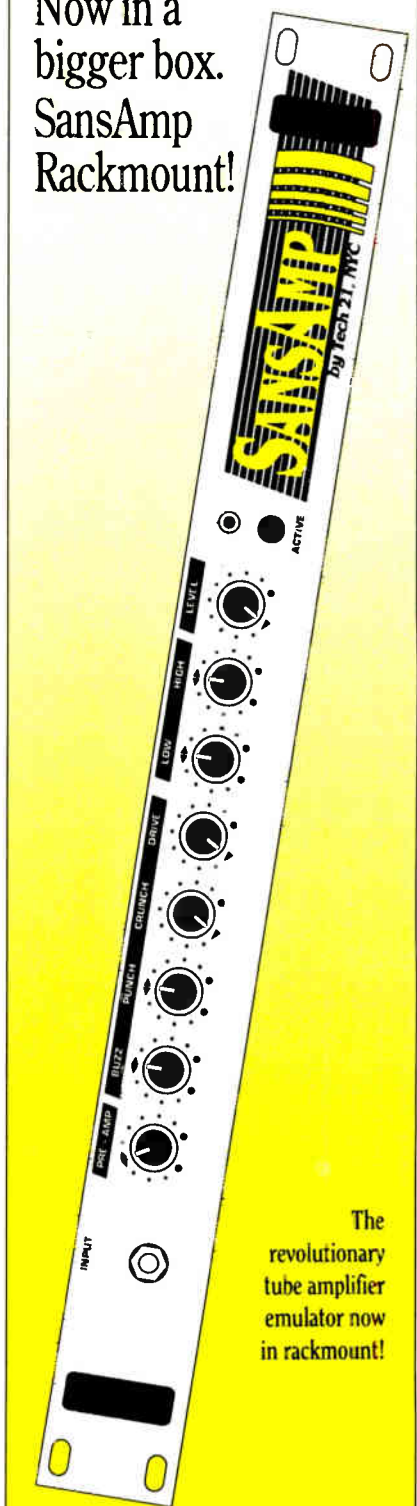
We are pretty well set as to what we will present to the RIAA engineering subcommittee, though I can't say what the standard will be until it is finalized. The numbers are a little deceiving, because they are frequency-dependent. But the proposed MDL for both ferric and chrome is a little bit higher than +4 dB over 200 nW/m.

The level for chrome is actually slightly lower than for ferric, but the curve is flatter. The skirts are not as steep because chrome is able to take a little more high-frequency energy than ferric oxide. Remember, too, that the manufacturers use 120-microsecond equalization for duplicating chrome rather than 70-microsecond.

You've only mentioned two curves. Does that mean that the chrome setting is intended for use with the new generation of cobalt ferric formulations that are coming into the market? No. There will be a third curve for cobalt.

I've heard from some in the tape manufacturing community that the standard, as originally proposed, is too

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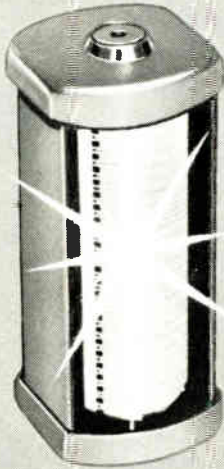
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conservative. That is, it underestimates the capabilities of the tape stocks, especially the new formulations they have come up with, and would therefore result in tapes that are unnecessarily low in level. Is the cobalt standard expected to be less conservative than the other two?

I don't know that I agree that the standards are conservative. There are differences among manufacturers of tape. And, as one would expect, the curves are designed such that most manufacturers' products will be able to conform to the standards. There may be some who feel that their tape will deliver more than standard performance. And if that's the case, that's terrific.

Most prerecorded cassettes are Dolby B-encoded. What provisions have been made in the meter design for the effects of noise reduction encoding on the signal going to the cassette? In order to get a useful reading, wouldn't you have to encode the signal before feeding it to the meter?

That's correct. The MDL specification is based on the ability of the tape to handle the actual signal that's sent to it. The tape doesn't know whether that signal has been processed by a noise reduction unit or not. So if you are providing a non-encoded master, but the final product is going to be encoded, that would determine where the meter would be implemented in the production chain.

Dolby B encoders for cassette decks are fairly cheap and plentiful. Would it work to simply incorporate one of those into the MDL package?

You could take such a chip and surround it with a minimal amount of circuitry, and for the purpose of the meter, it would be more than adequate.

There was some intense discussion at last year's ITA about whether the MDL meter should be used in mixing, pre-mastering or only at the duplication plant. Who do you envision as the end user of the device, and in what situations do you hope it will be used?

I can't blame anyone for being concerned about who is going to be responsible for it. I think that the meter could fit in all three of the circumstances you mentioned. It's up to individual labels to decide where they think it should be used.

The meter might be used in the production line at the plant. If it is, and it is deemed by the manufacturer that

the levels on a given program are unsuitable, someone would have to decide whether or not to do something to make the levels lower, or go with what's there and accept whatever sonic consequences might arise.

Another possibility is that a label could go to a place that is doing their mastering, or even their mixing, and say, "We want you to use this device. We require it from you."

So someone at a label might inform those mastering houses that supply them with production masters that those tapes with levels in excess of the RIAA standard, as measured on the MDL meter, will no longer be accepted for duplication?

That's a possible scenario. I don't know that any label would necessarily do that. But the idea of the meter is to get everyone in the industry to start producing cassette masters that are actually reproducible for cassette duplication, so that the cassette sounds very, very close to the production master.

Presumably, mastering houses won't be able to use the meter effectively unless they know in advance what type of duplicating stock will be used for a

given project.

That's certainly something that the cassette duplicator needs to provide as a specification. If you know that a particular artist is on a certain label, and they provide a specification, based on MDL, as to what level they want, then you have the information.

What kind of response is MDL getting within your own company? Do you have any assurances from the appropriate people within Sony Music that they will begin making cassette production masters in conformance with the MDL standard?

I don't know that such a decision has been made at this point. But I do know that I will be participating in meetings about our master tapes. And the discussions will include our quality control people and the people who are responsible for the content of the tapes. But you have to understand that part of the decision-making process is an artistic one, and there are certain constraints, including the desires of the artists. That is something that we as label professionals are very concerned about, because our artists are very important to us.

What provisions have been made in the design to allow for the screening of program in the background, and for displaying how far above the MDL a program is peaking so that it is easy to know what amount of level adjustment to make?

The companies that want to make MDL meters will take the information contained in the RIAA standard and then implement and house the device however they feel is most advantageous for their own product presentation. So there are going to be differing ways of presenting information to the user.

There is the possibility of comparing the equalized (post-curve) signal to an overload threshold, and lighting LEDs any time the signal goes over. It would also be possible, using an MDL curve and a spectrum analyzer, to determine what frequencies in a given program might cause overload problems. It depends on the manufacturer as to how complex they would like to make the meter. And, of course, the more complex you make it, the more the price goes up. As always, the industry

—CONTINUED ON PAGE 142

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by Phil De Lancie

MINI DISC LAUNCH

SONY READIES SOFTWARE CAPACITY

Sony's plans for a late-1992 launch of Mini Disc appear to be proceeding on schedule, with three Sony-owned CD plants preparing to have replication capacity for prerecorded MDs online by fall. Sony projects a global capacity of 1.5 million discs monthly at company facilities in Japan, Austria and the U.S.

At Sony's Digital Audio Disc Corp. plant in Terre Haute, Ind., ground-breaking began late in December on a new building that will house MD production lines. The company's CD-ROM replication capacity will also be moved to the new building, which is across the street from the existing plant. The new plant will have 60,000 square feet of manufacturing area on its main floor, plus office and warehouse space.

Installation of equipment is scheduled to start in June, with CD-ROM production to begin in August. The MD lines are expected to be operational sometime in the fall, at an initial capacity of 500,000 discs per month. Master preparation and cutting for MD will be handled by DADC's existing mastering facilities.

The ease with which prerecorded software may be produced for a new configuration like Mini Disc is a crucial factor in building the record label support needed to get the format off the ground. DAT was thought to be hard to duplicate at high speed, and that perception was probably at least as important in its lack of acceptance as any concerns about home taping. DCC was developed with high-speed duplication in mind, but the ease of adding large-scale DCC capacity to an existing real-world duplication facility has yet to be fully proven.

So what about replication for Mini Disc? Is it, as advertised, essentially the same as making CDs? Or are there additional considerations that might influence productivity or price, and thereby affect label enthusiasm for the format? To find out, I contacted DADC

executive vice president Mike Moran, who brought me up to date on the company's MD replication plans.

In addition to manufacturing prerecorded Mini Discs, will DADC make blank recordable MDs?

That has yet to be determined.

How much difference will there be between the new production lines for Mini Disc and your existing CD lines?

Not much. The new building is more modular in concept, but the equipment used will be essentially the same type as the latest used in our present facility.

That means an integrated in-line approach?

Yes. In fact, it will be a straight flow-through concept as opposed to a batch process.

And the clean areas will be built around the line rather than including the whole building?

That's correct.

How about the ways in which the line will differ from the CD lines?

After the Mini Disc is made, it gets sealed into a cartridge. Obviously, we don't do that for CDs, so there is some additional equipment needed.

Will you be molding the cartridges on-site?

That's not presently in the plans, though there's certainly a possibility that will change downstream sometime.

As far as the molding machines for the discs themselves, are they essentially the same as for CD?

Yes. It just means a smaller cavity for the smaller discs. And that's a very minor part of the mold, really.



James Frische, DADC chairman and CEO, at the Terre Haute, Indiana, construction site where DADC is expanding its manufacturing capacity.

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At December's Magnetic & Optical Media Seminar, Barry Potter of Netstal Machinery suggested that Mini Disc manufacturing would lend itself well to the use of multiple-cavity molds. Is that being considered as a way to increase capacity?

Any time you are dealing with something that small, the obvious answer for increased capacity is to mold it "two-up," "four-up" or whatever. But we are going to start out with single-cavity molds.

But could you switch to multiple cavities without a major investment in new machinery?

Yes. The tonnage of the machine is what limits how many cavities you can run. But there is an upside and a downside to doing that. It works well if you have large orders of the same title. But if you work with small orders, there is the possibility of mixed discs and other complications that can make it a pain.

How rapidly can output be increased if demand takes off?

The building is being built with everything already in place to outfit the facility completely. So for quick expansion, all we have to do is move in the additional equipment and hook it up. We won't have to expand the utilities or anything like that. We just put in a production line to the north of the one that will already be in place, hook it into the existing utilities, and we will have double the capacity.

That built-in expansion capacity isn't an investment in Mini Disc specifically. It can be used for whatever type of line you need to put in.

Right.

What might labels expect to pay for the finished discs compared with current pricing for CDs?

Probably around the same price. I would imagine. Maybe initially a little higher, because of the economies of scale.

Your price for raw (without packaging) CD-Audios in large quantities is a little less than one dollar?

Around there. And I would expect Mini Disc to be somewhere in that neighborhood. But without really seeing what our volume requirements are, it is a little difficult to tell.

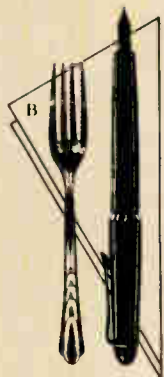
How long would you anticipate that the global capacity of 1.5 million will meet demand?

It's premature to say. But if Mini Disc takes off the way CDs did, 1.5 million won't be enough for long. ■

by Mr. Bonzai

WILL ACKERMAN

WINDHAM HILL BUILDER



Will Ackerman is a builder by trade, a former Stanford University English major, and the lucky guy who in 1976 virtually created the baby booming “new age” in music, as it later became known. From the humble beginning of a \$300 solo guitar record to a robust \$30 million operation, Windham Hill is a striking example of the American Dream.

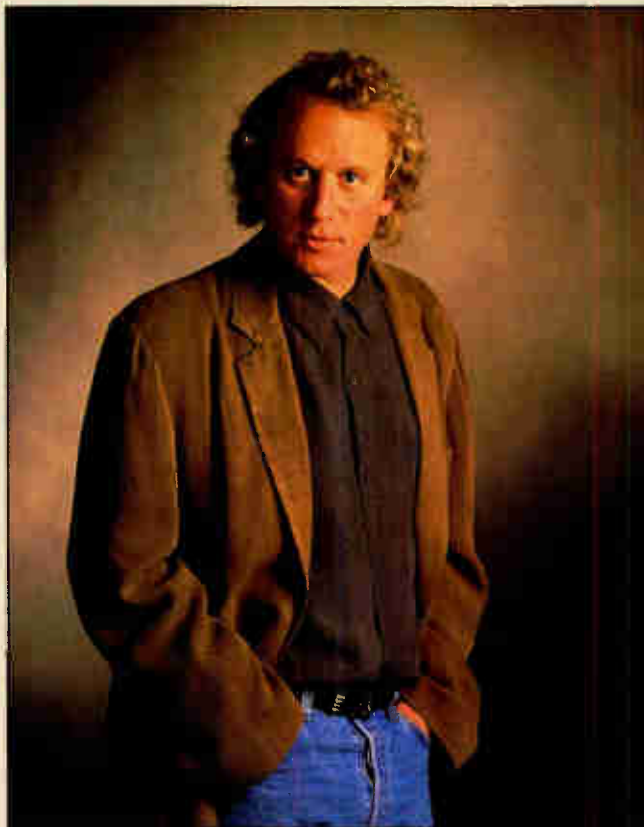
In the new age of corporate conglomerates, Windham Hill is the leader among the indie labels, the defiant David amidst the Goliath superstructure of the modern record industry. My hunch is that the company has a spirit not unlike that of Apple Computer in its birthing days. They both started in the Silicon Valley, and both companies continue to inspire an enduring loyalty. Ackerman’s company is one of the few labels that people ask for by name, regardless of the artists.

It’s nice to meet a guy like William Ackerman, chairman of the board, someone who doesn’t have to prove anything. He’s got a great record deal for his own guitar music (I wonder if he signs a contract with himself?); he’s got the opportunity to nourish the talent he discovers; he’s got homes and pleasure domes around the world. Anne Robinson, co-founder and president/CEO of the label, cracks the whip on the daily operations while Will cooks up the new entrepreneurial recipes.

Under the company roof you find the original label, as well as subsidiaries focusing on jazz, vocal and children’s material. This year Ackerman independently launched the new Gang of Seven label—a “narrative monologue” venture featuring thoughtful speakers like Spaulding Gray (*Swimming to Cambodia*), Peter Matthiessen (*At Play in the Fields of the Lord*), Wallace Shawn (*My Dinner With André*) and cartoonist/playwright Lynda Barry (*The Good Times are Killing Me*).

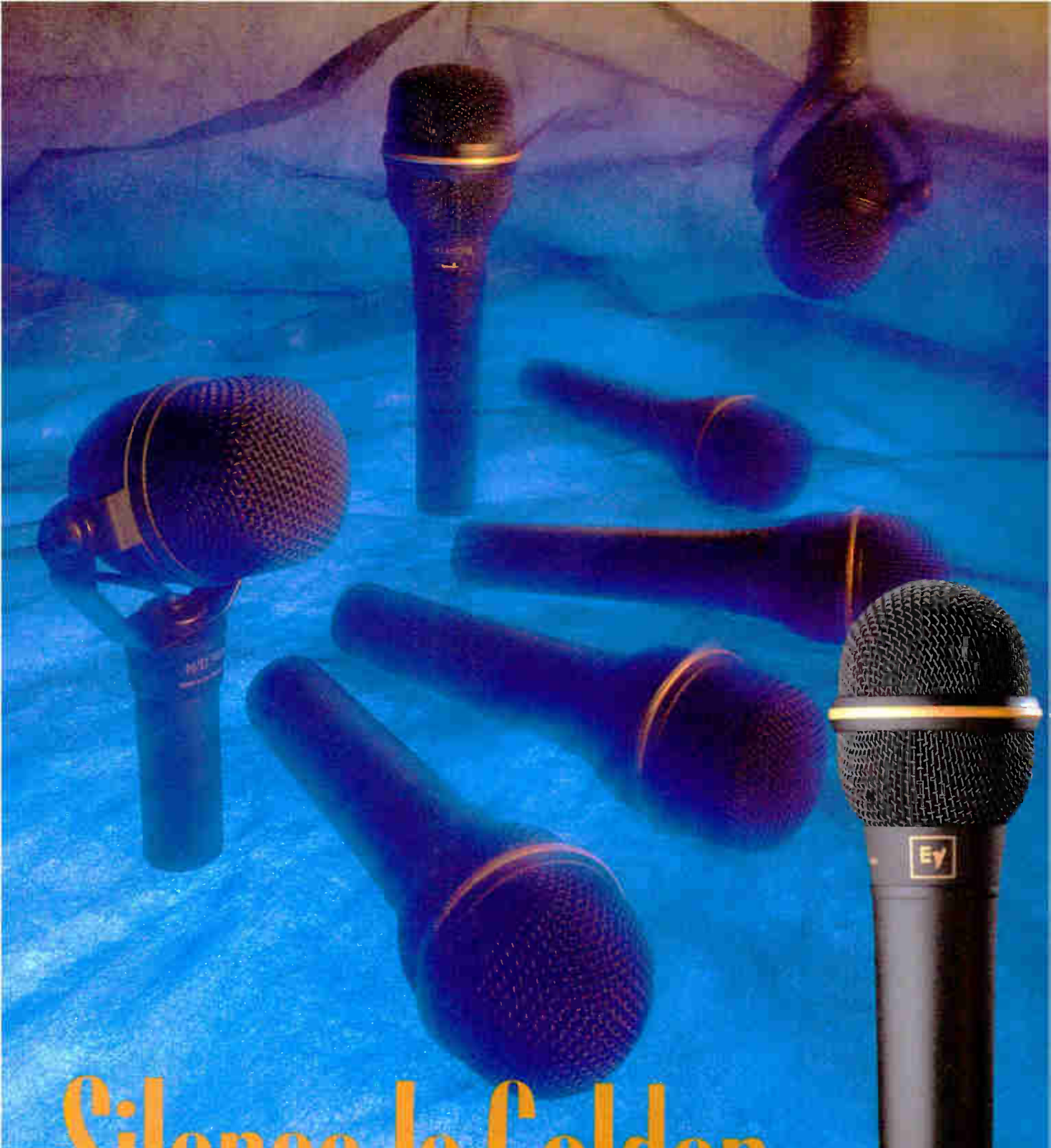
Ackerman himself has a rather surprising new record out, entitled *The Opening of Doors*, which features the electric guitar of a 22-year-old *wunderkind* known only as “Buckethead.”

We had lunch in a penthouse office with a sweeping view of the Burbank media district as the biggest storm in 100 years thrashed the entire state of



California. Ackerman, who had just returned from an expedition to Nepal, has glacial blue eyes, sun-bleached blond hair and a mellow cocksurety, like a surfer still looking for the perfect wave.

Bonzai: How did you end up in Nepal?
Ackerman: My girlfriend described it with such reverence and joy that she persuaded me to come over and visit her. We did some trekking in an area



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of Nepal that has just opened up near Mount Kangchenjunga, the third highest peak in the world. I had only two weeks to fit in between various business responsibilities, so we rented a helicopter from the Nepalese army and flew up to 13,000 feet, and then trekked up to the base camp of the mountain. Afterward we descended into the villages where I met an amazingly sane people, some of whom had never seen an automobile. I also found a lot of my tapes in Kathmandu, which amazed me, along with tapes of Kitaro, George Winston and Andreas Vollenweider.

We chanced on an orphanage called "Happy Home" outside of Kathmandu, and I've started doing some fund raising and will go back to do some benefit concerts. What we consider a small amount here can work wonders over there.

Bonzai: You were an orphan, yourself, weren't you?

Ackerman: Yes, and it's interesting that I was adopted at the same age as the man who now runs the orphanage in Nepal.

Bonzai: How did being an orphan affect your life?

Ackerman: I suppose it caused a certain degree of self-reliance. I didn't have a sense of a guaranteed future, so I always figured I would do it on my own. My adopted father was a professor at Stanford and expected me to become an academician, but with the funds he'd intended for graduate school, I ended up buying a four-wheel-drive truck and a bunch of carpenter's tools. My first company was Windham Hill Builders, a general contracting company. There have been many twists and turns, but my life has been a matter of whim as much as anything else. I just always had the confidence that whichever way I went, it would be as successful as another.

Bonzai: Didn't the record company begin with a simple request for your music—you took up a collection from friends to make a recording?

Ackerman: That's it. I just asked for five bucks from everyone I knew. I opened the Yellow Pages and saw "Mantra Studios," which seemed appropriate. I walked in, played my guitar and within 15 minutes the engineer told me that I would be recording for free and that he wanted to produce the record.

After that, it became a community event. I had a number of friends who took care of printing and graphic design, all the elements of putting a first record out. We sold it originally at the Plowshare Bookstore in Palo Alto, where my partner Anne Robinson was working at the time. We eventually sold three thousand copies, which to me was a staggering amount.

Then I ran into Michael Killmartin, an old friend who had first introduced me to guitar. Michael was working in promotion for Fantasy Records at the time. He took ten copies to the radio stations and things started happening. **Bonzai:** Phenomenal evolution of a whimsical dream—did you ever think you'd be where you are now?

Ackerman: No, of course not. When I heard that the record presser needed a minimum order of 300, I thought of blowing off the whole idea. In 1976, the wildest dream I had was to sell all 300 copies.

Bonzai: And now you've got a healthy company, a strong jazz label, a vocal label—High Street—and Gang of Seven, the series of narrative monologues. How do you handle all these offshoots of the original dream?

Ackerman: In all honesty, my favorite part of the business is conceptual and entrepreneurial. As soon as it becomes corporate, I am not good for it, and it is not good for me. It's just a reality of business that once things get to a certain size a corporate aspect creeps in. And I think it's probably essential. For me, the fun part is a new idea. It's interesting, because the whole Windham Hill thing, the parent label, has come full circle. Having devoted so much attention to Windham Hill Jazz and High Street, we found that we had neglected the bread and butter, the original label. That became a new opportunity, but Gang of Seven is also a major focus for me. It's my baby. It's really just two people, Janet Rienstra and myself, working together to create a new label, which I have the greatest hope and faith in.

Bonzai: How do you deal with all the people who come up to you with their demo tapes?

Ackerman: That's one of the areas where we have become more corporate. We have to send out letters that state if it isn't a solicited demo we can't accept it—but some people are creative enough to get around it with a pitch that is too irresistible to ignore. But certainly everywhere I go, friends

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are constantly apologizing, "Will, I know you get a lot of these tapes, but my grandmother plays a great kazoo..."

I've been teaching courses at the Omega Institute about creating your own label, independent distribution, music law, publishing. But when it started out, I found that most of the students were there to hand me a demo tape. Yes, I get a lot of demos, and the company is burdened with an unbelievable number of tapes. Usually, those sending them in don't have a clear idea of where we are going. They may see the success of George Winston and assume we want 4,000 George Winston clones. But we are looking for new things. Sadly, we get a lot of imitators.

Bonzai: Where is new age these days?

Ackerman: If I find the person who coined the term new age, I would like to nail his forehead to the wall.

Bonzai: Not a very new age sentiment...

Ackerman: [Laughs] No, I guess it isn't. But, number one, we predate the term by many years. Two, I don't see any reason why I should be comfortable being subsumed into what I perceive as a rather cynical marketing ploy. Three, new age indicates a lifestyle orientation that Windham Hill never meant to embrace. Not to say it's good or it's bad—I'm not making a value judgment about the lifestyle itself. We are selling music, and we like this music, and it doesn't send any subliminal message. There is no "wisdom of the ages" implied, it's just music that I happen to like.

As far as the cynicism of the marketing, I think that some of the major labels looked at our success and assumed that they could do it better. In reality, Windham Hill was ideally suited to do what it did. It was the perfect size; it had grown organically without spending enormous sums of money; it had music that the marketplace responded to. We grew in accordance with our audience. It was the perfect size because it responded to that audience. It wasn't an invention.

It was a shock when some of our artists jumped ship and went for greener pastures. Some companies tried to buy our artists to seed their own development and later discovered that we were the right size, had the right idea. I'm really proud of that, and now

Alex de Grassi is back with us, Liz Story is with us, Mark Isham is doing more recordings, Shadowfax...

Bonzai: Let's talk about the evolution of the technology as it parallels Windham Hill. I guess you started out with direct 2-track recordings?

Ackerman: Yes, but we did something different, largely due to Harn Soper at Music Annex. It was Harn who moved those microphones into scary proximity of the instrument. A bit of fortuitous chance: That very intimacy became a trademark of our sound. Harn took a couple of AKG 451s, did an X-Y, and jammed them right in there so you heard finger squeaks. It was fairly radical. But you heard an intimacy that was unprecedented. I don't know why Harn did it, it certainly wasn't my concept, but the moment I heard it, I knew it was what we wanted.

Bonzai: How did things progress?

"I think that some of the major labels looked at our success and assumed they could do it better."

Ackerman: We did nothing but solo recordings for the first few years, so 2-track technology was fine with us. Very early on, I met Roger Pryor, who was with Sony, and he turned me on to digital. I bought one of the first Sony PCM-1600 digital processors. And I believe we did the very first digital FM simulcast in the U.S., a Windham Hill/KQED broadcast in San Francisco produced by Charlie Moran.

So many lucky things happened. When my second record was finished, the engineer at Mantra Studios, Scott Saxon, was in Los Angeles at a convention and met Stan Ricker, who was arguably the preeminent half-speed mastering technician at the time. Stan did a little moonlighting, charging us only \$100 to master. Then he set us up with an account at Record Technology Inc., a Bill Bauer company, for the pressing. I called and explained, "Mr. Bauer, we're very grateful to have an account, but we probably can't afford it." Bill asked me what I was paying at

the time, and he came back with a quote that was a penny less. He just said that he really liked what we were doing, which is the story I always heard.

And suddenly, here we were, a fledgling label with almost no money—involved with Stan Ricker and half-speed mastering, pressing at RTI. Quickly we became involved in developing our own vinyl compounds. We were the first people in the United States to use a polylined inner bag. We had a real quality product.

There was nothing cynical about it. This was a hobby, and we were having fun. We poured the money back in because we loved it. We developed a very high-quality operation and decided to maintain that technological edge all the way. If it meant going digital, we did it. If it meant doing some quality control work on azimuth, the effect of different cassette shells, melting down lacquers to determine their micron density, finding out where the best lacquers were—whatever it took, we did it. And I think people sensed a quality and pride in our work.

You asked about technology, but I am answering with an attitude of always earning the trust of the record buyer. It's interesting, because the compact disc has pretty much eliminated much of the situation. One of our great distinctions was the quality of our record pressings.

Bonzai: What is state-of-the-art for you today?

Ackerman: I feel that state-of-the-art has gone retro. We got into digital, but we needed those Apogee filters. Now I am finding that I'm not happy without blending in some analog technology. I'm buying German radio mics from the '40s and '50s. If I can find an old pair of Neumann U67s, I'll buy them in a second. I'm not taking a shot at B&K or any of the extremely high-quality microphone manufacturers who are doing wonderful, critical work, but so much of the modern technology can be cold without a little augmentation. I'm also finding that there are certain instruments that I just don't want to record digitally.

Bonzai: What about your own music? How do you kick yourself in the butt?

Ackerman: I've been complacent for a while, although I think I've come up with some good themes in the last few records. I don't think I had done anything compellingly new, but I am very happy with this new record. I co-wrote

some tracks with keyboardist Tim Story, who showed me some possibilities I had never seen before. Tim would take a theme of mine and arrange around it, giving me more voices to perform. And there's some fairly radical stuff, might blow some people away—I've got a guy named Buckethead, an electric guitarist playing Steve Vai-kind-of-stuff. He's 22 and plays with a Kentucky Fried Chicken bucket on his head, and he wears a hockey mask. Even in the recording studio, he was never out of character.

It's incredible to me that this combination, which seems so implausible, actually works. The new age guitarist meets the screaming guitarist from The Deli Creeps. When I called him, I said, "Mr. Buckethead, I'm impressed with your playing and would like you to play on my record." I expected him to call me an old fart, but he was entirely gracious and said, "It would be an honor. I've admired what you've done in establishing a sound for the guitar. You documented so many great players." He was on a plane the next day. The thing about Buckethead that kills me is that he is capable of absolute

thrash metal stuff, and in the middle of some incredibly violent riff he'll pull out a lick at the top that is just heart-breakingly beautiful. He's got a great melodic sense and is as fast as a god. His contribution is like a signpost: We can get out there, and it can work. Now I am hearing percussion ideas, electric guitar. I want Buckethead to give me lessons.

Bonzai: What is the essence of your character?

Ackerman: I think it's the juxtaposition of many elements. I like music and precision, but I also like football games and chainsaws. I love the tangible, physical realm every bit as much as I love the ephemeral. I can't stand to be in one or the other permanently. I need the balance of the two, and it's a major theme of my life.

Bonzai: How would you like to be remembered?

Ackerman: I think I did a lot for acoustic guitar in the '80s, with Alex de Grassi and Michael Hedges, and all of us who were trying to take the steel string guitar from its humble origins as a folk instrument and trying to create a more classical discipline for it.

Bonzai: Could you share some business tips?

Ackerman: Makes me think of a question asked by a reporter from *Newsweek*: "Will, you've gotten pretty big—when are you going to have to compromise?" At first setback, I told him, "Where is it indicated that compromise would be advantageous? I got here by not compromising." The public can actually discern the difference between a cynical marketing plan and something that is heartfelt—they really can. Windham Hill has been rewarded enormously for this. If there is a business tip, it is to ignore business tips and go with what your grandfather would have told you: Have a good thing and do it honestly and sincerely. It sounds corny, but it's always worked for me. So I actually believe in it.

Bonzai: Who is the most amazing artist you've worked with?

Ackerman: God, what a challenge to come up with just one... When I first heard George Winston's music, it was as striking as anything I had ever heard. I am not someone who is very social—I don't typically go visit people's homes—and the last invitation I would ever take is to go jam with someone. But one night I met George, who was unknown to me at the time. We had traded a couple of letters, and I had no

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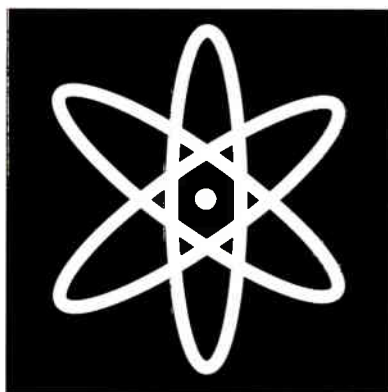
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idea that he was a musician when we met. He invited me to his home to jam, and I actually did it. That's unique. We played guitar that night, and he plays great slide guitar. I decided to sign him as a slide guitarist, and he thought that sounded good. As the evening was winding down, he asked if I would mind if he played some piano. I didn't even know that he played piano. As long as I live, I will never forget the impact the music had on me.

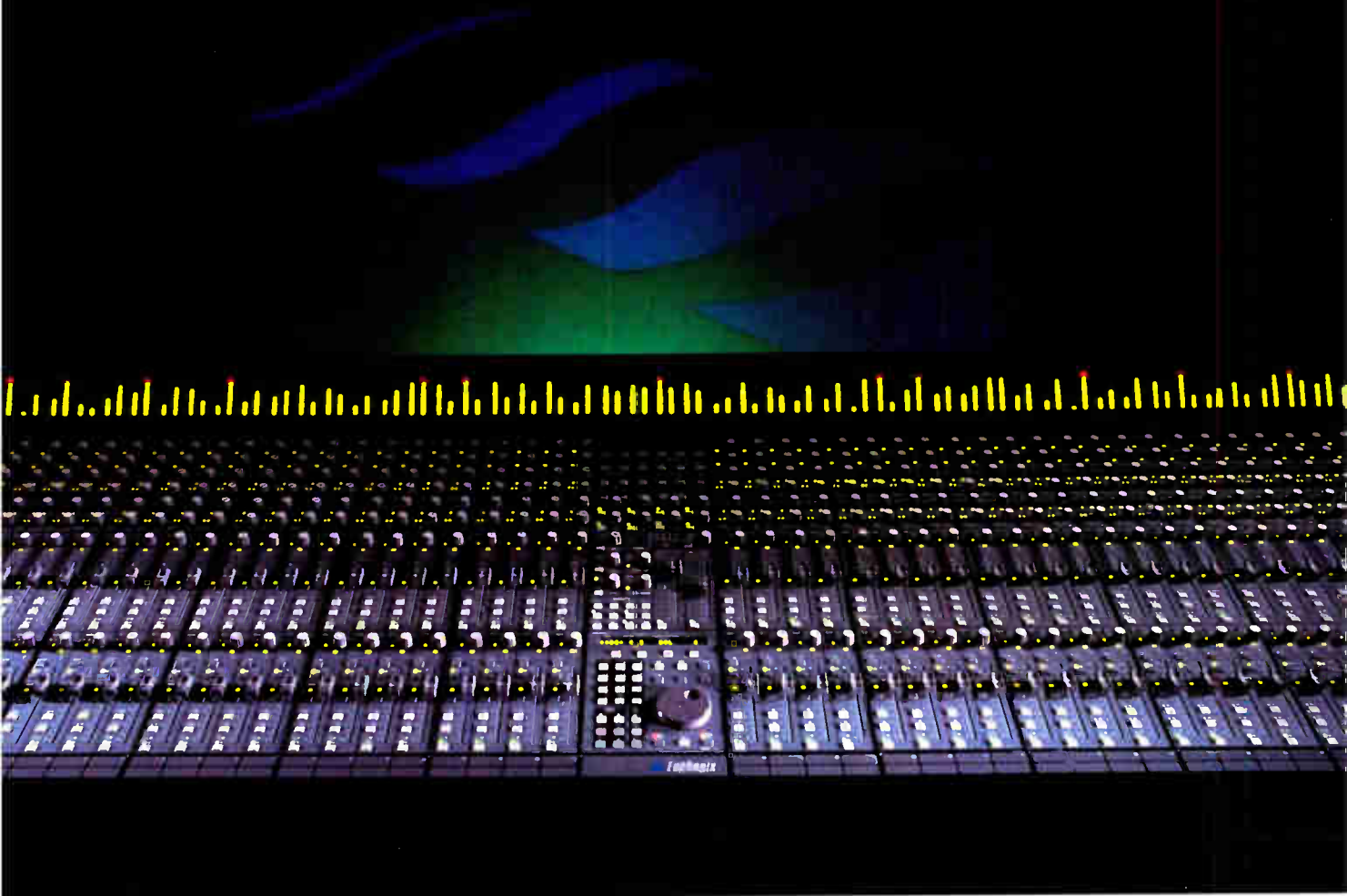
I've always been a huge fan of Erik Satie, you see, and George comes from a real American, Western-folk background. I think John Fahey said that George was the first documented example of folk piano he had ever heard. George had developed in semi-isolation, with not much gigging, and arrived at a form that was absolutely unique and pure. He took a lot of criticism for seeming naive, but George can play a lot of other styles. Any time you have that kind of success, people are going to take shots. George has always been utterly true to his vision, and I think he is very brave.

Bonzai: What's in the future for you and this company?

Ackerman: I will be with Windham Hill as long as I can do something effective, as long as my input still registers on the meters of the corporate environment. Gang of Seven is a project that has been driving me for two years. For a guy like me, who has the attention span of a three-year-old and the patience of someone younger, to develop a label for two years without product is incredible—researching, signing the artists, developing, getting ready for release in May. I believe in this so much, and it is exactly what I want.

I never have seen myself as a professional guitarist. I regard that as an avocation. The one thing that I have is the innate ability to be Everyman to a generation. If I like something, I believe that a lot of other people will like it, too. That's something I have proven to myself. I know that I have an audience for whatever I want to do—I believe that. It's not a piece of genius; it's not analytical; it's just something that I've learned. That is a great tool. ■

Mr. Bonzai never quite understood the difference between crystals and pet rocks.



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World Radio History

by Hank Bordowitz

NILE RODGERS' EAR CANDY

IT'S A RECORD COMPANY AND AN ARTIST'S STUDIO COMPLEX

Thirty years ago, Motown was a model of creativity and efficiency. It was an all-in-one package, with a quality recording studio, record label and publishing under the same roof. Each fed off the others, and each pulled its own

thought it was a great concept. We thought that was a really good way to do a record company—to actually have the recording going on right near where your office is. Especially if the president of the company is a pro-



PHOTO: ROBERT LEWIS

weight. Now artist/producer/record company CEO Nile Rodgers is taking the Motown notion and adding his own twist.

"We were not necessarily trying to simulate or re-create the Motown environment," Rodgers says, "but we

ducer."

Rodgers is the president of Ear Candy, a complex occupying the 14th floor above Broadway and Fifth Avenue. Only a bit less than half of the space is used for offices, where ten or so employees operate the record

company. The rest is set aside for three recording studios. Two smaller rooms, which Rodgers refers to as "labs," are places to work up material. As an artist, Rodgers recognizes the importance of running tape from the very beginnings of pre-production.

"They're like a beta testing environment for songs," Rodgers says of the labs. "We wanted to have equipment that's good enough and user-friendly enough so that if artists are working and they have something that's happening, it will sound good. It will work. It could be the essence of the album, it could be the beginning of the album, it could be any portion of the album that they desire to keep. After doing this all my life, I know that sometimes when you do a demo, that's the best performance you're ever going to get."

With that in mind, Rodgers set out to make these two rooms technically adequate for masters, despite their small dimensions—one is 22 feet x 10 feet, while the other is 18 x 10, with a 10 x 10 iso booth. The discovery of 56-channel CAD Maxcon boards made the job easier.

"A couple of years ago," Rodgers relates, "Richard Hilton, my key-

boardist and programmer, just happened to go to a music store and he heard one of their rack-mount consoles. He said, 'Nile, I've just got to tell you, this is the best-sounding thing I have ever heard under 200 grand, except for a vintage Neve or API or something like that. This is fantastic. It sounds ten times as good as what we're working on now, paying \$200 an hour for.' I trust Richard's opinion emphatically."

The board is remarkable on several levels. Although other 56-channel boards might dominate a good-sized, high-line room, the Maxcon fits quite nicely in the 200-square-foot Ear Candy lab control rooms. The Maxcon has its own automation, the MegaMix system, and it has lines dedicated to MIDI.

"You know how we compare sound on our console?" Rodgers asks. "We say, 'When you work on a Focusrite, you can keep your lunch warm, because the sound is so hot.' Same thing. Go in the CAD room and work, and you lose about 15 pounds in a week. It sounds incredible."

Yet even CAD concedes that the

Maxcon is not a "big room" board, but rather more of a project board. Currently, Hilton and the people at Ear Candy are working in conjunction with engineers at Conneaut Audio Devices on the development of the Icon console, shown in prototype form at last October's AES convention. Hilton says that they are looking forward to testing the board, with an eye toward possibly placing it in the large room when the space is ready.

In addition to the Maxcons, each lab has access to Rodgers' two Sony DASH multitracks, a Synclavier, seeds of computer equipment and racks of outboard gear, including a Tascam DA 30 DAT machine, two Lexicon LXP-1s, two LXP-5s, two PCM70s, a Yamaha SPX1000, an SPX90II, two Eventide H3000SE Ultra-Harmonizers, two Drawmer DS-201 dual gates, two UREI 1176LNs, two UREI LA-4s and two dbx 160XT compressor/limiters. Each lab has a set of Yamaha NS-10s, UREI 809s and Auratones. Artists and producers also have access to Rodgers' extensive guitar collection and a couple of ART Power Plant guitar preamps, whose killer sound is described enthusiastically by Rodgers as the "guitar preamp

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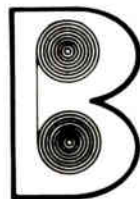
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ARTIST'S STUDIO

of doom." Ear Candy is certainly equipped for any type of production—that is, if Rodgers lets people use the equipment.

"I get all protective," he admits. "You walk in there and you see a DASH machine. That was the first piece of equipment that I bought. I bought that when I did Madonna's album *Like A Virgin*. I don't know if I like other people recording on it. I rented out my Synclavier a couple of weeks ago, and the next thing I know it was scratched up."

The rooms are compact and du-

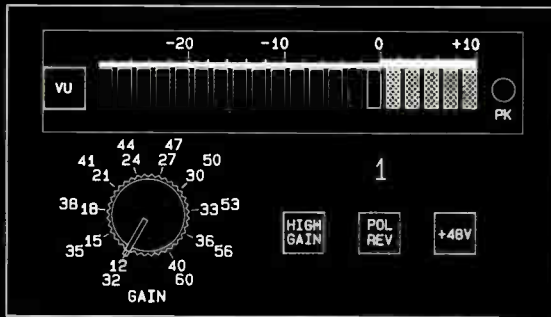


orable, and the setup illustrates how Rodgers likes to work. The two spaces

One of Ear Candy's two MIDI labs, featuring the 56-channel CAD Maxcon console. This room differs from the other in that it has an attached iso booth.

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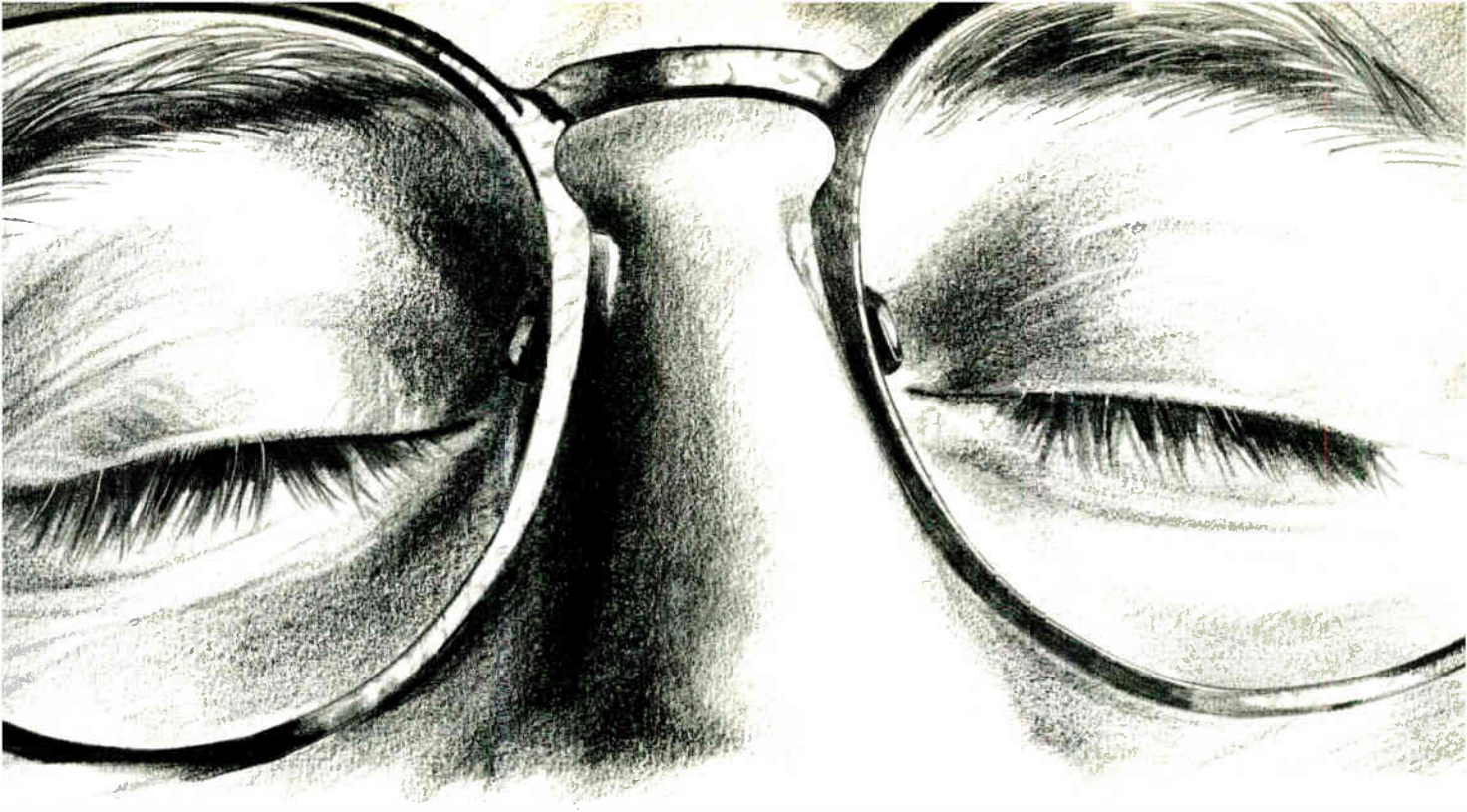
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are essentially mirror images of each other, though one offers a small iso booth.

"It's big enough for a drum kit," Rodgers points out. "I recorded a band last year down at [the now defunct] Tommy Boy Studio. It was a rock band, so we came in with Marshalls and drums, and all the other people in all the other studios were saying, 'Look at that! They're bringing drums in!' Amplifiers they could understand, but a drum kit in a studio was quite another thing. They couldn't believe it! They were blown away. Fact is, I've never made a hit record without live drums. I've never been able to embrace the technology to the point that I've been able to make a hit record on it, from start to finish. The only hit records I have ever had, to this day, at the very least incorporate a fair amount of live performance."

Ultimately, what Ear Candy Studios gets used for will largely be reflected by acts Ear Candy Records signs and releases and by those Nile Rodgers produces. After all, Rodgers spends enormous amounts of time in the studio, and he's excited by the opportunity to actually own the means of production. He once maintained office space at Skyline, and the perception was that he owned the place (just as the perception once was that he owned stock in Power Station because of all the work he did there).

"I rent Skyline, just like every other client," he insists. "As a matter of fact, they've been kicking me around from room to room. That's the way it's always been. I rent Skyline just like I used to rent Power Station, just like I'd



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rent any place. People always think that it's mine, though. You know why? It's because I work like a dog. I'm in there every single day. Because we're in there so much, we set up offices there. My office should be where I am. The same concept as here."

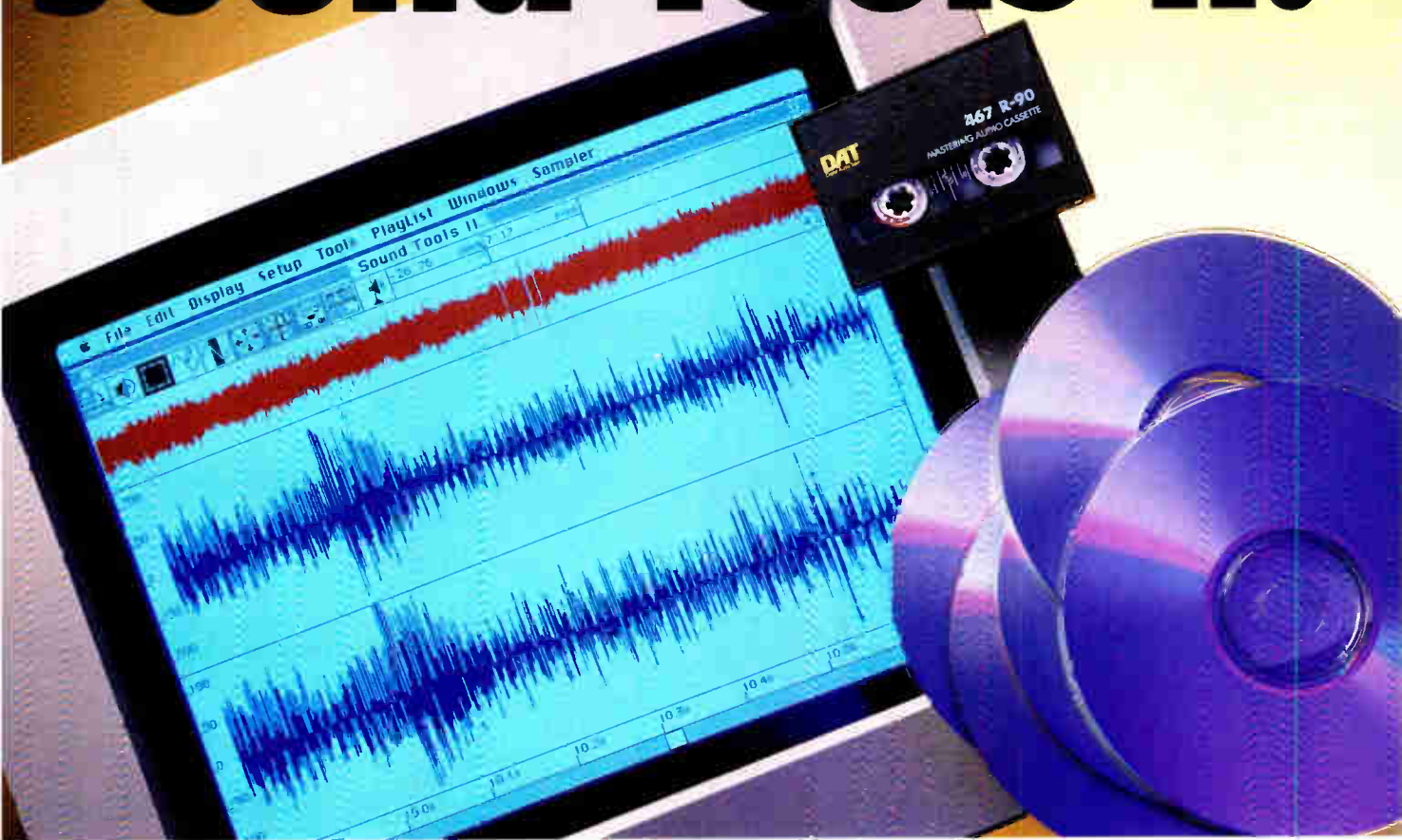
At Ear Candy, Rodgers has the luxury of adding his own twist to the concept behind most commercial studios. Certainly, the labs would seem more appropriate in the homes of songwriters than in a professional recording facility. But as more studios add pre-production rooms, the idea of providing a service to artists makes financial and creative sense. And when the big room opens, it will also be in the service of Ear Candy and Nile Rodgers Productions. Although both of these entities are geared for the world of commerce as well as for the world of art, the studios lean more heavily (in theory) on the latter.

"We're doing this basically as a research and development center," Rodgers maintains. "When we were putting our business plan together, it made sense to spend the hundreds of thousands of dollars making it usable, in case someone wants to go in there with an idea. They know they can have a high-quality environment, they can put the tapes up, record, do any kind of overdubs they want, and that's part of the record. That helps us keep the studio cost down. We want to make it an environment that really does feel separate from [the record company], but still feels attached. In other words, we want our artists to want to record here. The only way to do that is to pull back and say, 'Okay, this is your space. Let's see what you do. Do what you will.'"

"It's not our concept to waste a lot of money," Rodgers adds, "so this investment in these MIDI rooms, our writer rooms and the studio is actually an investment in the development of our product. It's not like we did this so that I can go in and produce every record, or any of that stuff. We're here to provide a forum for other artists. I know I'm certainly not the only producer in the world, and the last thing I want to do is throw in my two cents on every record. I'm flattered if they come to me."

Hank Bordowitz is a frequent contributor to Mix. He lives in New York's Hudson River Valley.

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by Terri Stone

FOCUS ON THE UK

UK Studio Accord

The UK Studio Accord's inaugural meeting took place less than two months ago, but the organization (whose goals have been called no less than revolutionary) has a complex history. According to group representative Christine Raven-Hill, the Association of Professional Recording Studios created the Studio Policy Group in late 1989. The original purpose of SPG was to discuss and report on problems that UK studios were experiencing and recommend ways in which the APRS could help. While the APRS was studying the SPG's report, some group members and others associated with non-APRS studios regularly met on their own and hosted a meeting attended by major record companies like EMI, Polydor, Virgin, Warners and A&M.

Accusations of elitism and exclusivity led the APRS to hold a public meeting in March 1991, to which all UK studios were invited. Attendees agreed that forming a studio group with high entry requirements and standards would help all involved in the UK recording industry. It was eventually decided that the group, named the UK Studio Accord, would remain associated with the APRS. 1992 is the first year that the APRS has given funds to the Accord; a staff member has also been appointed to handle PR and any other necessary communication and coordination.

In order for a studio to be a member of the Accord, it must fulfill certain criteria. These include having current and comprehensive public liability insurance; a full-time maintenance

—CONTINUED ON PAGE 130



Studio Spotlight: Livingston Studios

Livingston Studios of London recently upgraded its "Livingston 4" room, pictured here, by installing what studio manager Jerry Boys believes is the "biggest Solid State Logic G Series console in London, and the first with Ulimation in England."

Other equipment available includes monitors designed in-house and based on a Tom Hidley TM3 design with JBL and TAD drivers, and a Motion Worker multitrack machine control system. Boys says the room is also "very big on out-board gear," and lists names like Massenburg, Medici and EAR.

When asked what clientele the refurbished room will target, Boys replies, "We aren't looking for any particular style of music—this room can cater to anyone."

Chris Stone's World Studio Group

Founder of the Record Plant Recording Studios, former SPARS president and consultant to pro audio manufacturers and facilities, Chris Stone has long been a major figure in the U.S. recording industry. Stone now plans to parlay his experience and love for the industry into an international venture called the World Studio Group. "The World Studio Group will act as a brokerage for studios, a little like a travel agent or the Michelin Guide to preferred hotels," Stone explains. "It will be an elite group made up of the world's best studios, which will have to adhere to very stringent criteria in order to belong.

"I see the group as being maybe 50 worldwide and very tight-knit. Say an artist is at a WSG studio in Italy and says, 'I want to record in Paris. What do you recommend?' The WSG-member studio looks at the book and says, 'In Paris we recommend X Studio, but don't worry because we'll take care of it.' So that studio calls me, I book the studio in Paris on their behalf, and they get a commission. The idea is that we will be a central brokerage, but everyone will feed off of everyone else, and everyone, the studios and the artists, will benefit."

The exact criteria are still being formulated, but Stone is gathering input from many sources: "I'm talking to the APRS; their spin-off, the UK Studio Accord; SPARS; JAPRS; record labels; artists. I'm also talking to this new niche, the recording engineer/producer/manager." Stone knows that the criteria will reach beyond the purely technical. "It won't be just room size and equipment," he explains, "but also the ambience, the facilities available close by (hotels, restaurants, etc.), the attitude of the studio, the kind of tech maintenance they have—all the different things artists need to deal with when they're away from home.

"The standards and the WSG must be unassailable," he continues. "In order for a studio to join, it

—CONTINUED ON PAGE 131

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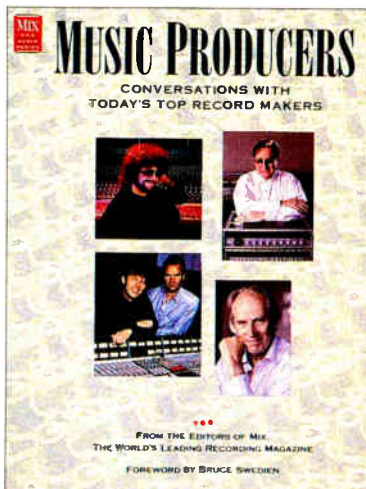
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—FROM PAGE 128, STUDIO ACCORD

technician; secure, organized and documented tape storage facilities; and meeting air-conditioning and noise-isolation standards. Prospective members are also asked to submit lists of equipment, alignment procedures and other facilities and services.

The Accord hopes that membership in the group will become synonymous with high standards. The organization will encourage clients to make proper economic and creative use of studios, and it will actively organize discussion with record companies and producers so that studio services can be tailored to clients' requirements. It intends to promote the studios to UK, European and international clients.

The Accord's objectives are admittedly ambitious, especially considering the current dismal climate of the recording industry. But with the enthusiasm and commitment of its members, the group intends to improve that climate.

For further information on the UK Studio Accord, please call Christine Raven-Hill at (81) 392-1760; or write to 47 First Ave., Mortlake, London SW14 8SP.

WOMAD Gains New Support

California's E-mu Systems agreed to donate a percentage of revenues from the sale of each Proteus/3 World sound module to the World of Music Arts and Dance Foundation. Exact financial terms of the agreement were not disclosed.

The WOMAD Foundation is an educational charity headquartered in Wiltshire, England. It was founded in 1981 with the help and inspiration of Peter Gabriel, and it tries to raise awareness of many forms of artistic expression around the world. It accomplishes this goal through educational projects, music festivals that encourage the audience to be active participants, and music recordings released by Real World Records, which is a partnership between WOMAD and Gabriel.

UK Bits and Pieces

Penny & Giles Studio Equipment Ltd. celebrates its 25th year in the business in 1992, a rare accomplishment in this industry... Pending the decision of the House of Lords to uphold the awarding of the ITV franchise for South West England to Westcountry TV, a new


studio complex is being planned in Sutton Harbor Plymouth, Westcountry chose the Neve 55 Series analog console for its main production studios... Basingstoke, Hampshire-based Sony Broadcast & Communications welcomed Karen Spriggs as the new public relations officer... London's Saturn Research will be going to the Olympics in Barcelona this summer. The company will supply 12 24-track machines to the European Broadcast Union... Stirling Audio (London) was appointed the new UK distributor for Aphex Systems... Amazon Studios moved to 33-15 Parr St., Liverpool L1 4JN. Their phone number is (051) 707-1050; fax is (051) 707-1813... University College Salford, in Greater Manchester, launched a popular music and recording bachelors degree. For details, call Keith Wilson at (061) 834-6633... Film post company Twickenham Sound Station purchased a DAR SoundStation II system with WordFit. The Royal College of Art also selected a SoundStation II for the film and television department... Select Sound Studio was partially refurbished: changes in the Knebworth studio include a new DDA DCM232... Pro audio rental company Hilton Sound moved its headquarters to London's Sutherland Hall, formerly a Victorian church hall. The large complex allows the company to consolidate its extensive UK-based operations under a single roof. ■

—FROM PAGE 129, CHRIS STONE

will have to be visited and graded according to the established standards. If we lower a rating, there's nothing the studio can do about it except correct the problem. If somebody could buy their way in, it wouldn't mean anything."

If Stone's past success is any indication, the World Studio Group promises to be a valuable addition to the U.S. and international recording community. "This is something I feel can serve the industry well and make it more healthy," Stone concludes. "It won't cost the labels anything, and it won't cost the artists anything. I expect that we'll get underway sometime late this year, but I'm going to take my time putting it together, because I don't think you can rush quality."

For additional information on the WSG, call or fax Chris Stone at (213) 465-7697. ■



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by Blair Jackson

HENRY KAISER & DAVID LINDLEY IN MADAGASCAR



PHOTO: CHRIS DARROW

First the geography lesson (and don't worry, this won't be on the final): Madagascar is a large island off the east coast of southern Africa, known in the West mainly for its many species of exotic flora and fauna. It has roughly 13 million inhabitants, the great majority of whom are desperately poor—the average annual income is under \$200. For much of the past year, it's been a country virtually without a government. Months of strikes in every sector have brought the economy to a standstill. There was once a music industry in Madagascar, but that's withered away, too, despite a plethora of types of local music. So what would possess noted American guitarists/roots music aficionados David Lindley and Henry Kaiser to go there armed with their axes and one of the first Yamaha DMR8 digital

8-track recorders?

Kaiser, who has been a fan of music from Madagascar for more than two decades, was frustrated by the previous lack of

"It's living music. It's Third World music that hasn't been eviscerated by the impact of Western music."

—Henry Kaiser

quality recordings from the island. "It's *living* music," he says. "It's Third World music that hasn't been eviscerated by the impact of Western music." (Some of it sounds vaguely East African or

—CONTINUED ON PAGE 134

CAPTURING EMMYLOU AT THE RYMAN



PHOTO: CAROLINE GREYSHOCK

Although the historic Ryman Auditorium in Nashville was for many years the home of the Grand Ole Opry radio broadcasts, it had never

been used specifically to record an album until Emmylou Harris and a superb acoustic band (featuring mandolinist extraordinaire Sam Bush) went in for three nights last fall to record *Emmylou Harris & the Nash Ramblers at the Ryman*. The disc includes 13 songs spanning a stylistic range from old-timey to bluegrass to country-folk—there's even a Bruce Springsteen tune. None of the songs appeared on Emmylou's previous albums.

"We had one day for prep, a full run-through at night, and then three nights of recording," says Kooster McAllister of the Record Plant Remote, who handled the live tracking. (Mark Miller mixed it at Jack's Tracks in Nashville.) "That doesn't sound like a lot, but this band was *very* well-rehearsed, and it didn't pose any special problems. The Ryman is a great-sounding place." The Nashville Network, which owns the building and has been slowly refurbishing it, had a video truck on hand to make a long-form video of the LP.

"The only real miking challenge we had was on the bass," McAllister says. "There was some trial-and-error, and we ended up using an AKG CK-8 [shotgun mic] aimed at the fingerboard in order to get more of the click when he gets into the slap bass stuff. The other interesting thing is that Sam Bush uses a Chard box built by Richard Battaglia, which combines DIs and microphones and a special equalizer. There are a lot

of Nashville people who are using the box—it's really the most musical-sounding acoustical preamp I've ever worked with." Emmylou's vocal mic was a Beyer 500 ribbon. ☺

MORE MAGIC FROM STRUNZ & FARAH

One of the most pleasant surprises of 1991 was the success of *Primal Magic*, an album of extraordinary Latin-inflected acoustic



PHOTO: MINDAS

instrumental music by guitarists Jorge Strunz, Ardeshir Farah and a small contingent of percussionists and other musicians, known collectively as Strunz & Farah. The Mesa/Bluemoon Records release hit Number One on the world beat charts and sparked nationwide interest in the group. As is often the case, this "overnight success" was a decade in the making; in fact, *Primal Magic* was the fifth album from the Los

Angeles-based guitarists.

"I think what helped us break through was that until 'world beat' came along, we never really fit into any category," Strunz says. "We weren't quite jazz, weren't quite this or that; we were in left field. But we also modified our music a little bit to reach a greater number of people by emphasizing our more rhythmic side." Helping them, too, was the widespread popularity of France's Gipsy Kings, whose *rhumba flamenco* style, which also emphasizes Spanish acoustic guitars, established that there was a U.S. market for this kind of music. (Ottmar Liebert has also ridden the Kings' coat-tails.) But let's not carry the similarity with those other acts too far: Strunz & Farah's *rhumba latina* music is more complex and open-ended, and its roots stretch further—from jazz to Central American folk music (Strunz is from Costa Rica) to Middle Eastern (Farah is Iranian).

Strunz & Farah's just-released sixth album, *Americas*, is stylistically similar to *Primal Magic*, once again showcasing the band's deft mixture of rhythm and melody. It was recorded mainly at Studio Sound in North Hollywood, with some early tracking done at the Brunson Brothers' studio (formerly the now-defunct Baby-O). The duo produced themselves, aided by Strunz's wife, Kathryn Powell, who's also the group's live mixer. Terry Becker, whose engineering credits include albums

—CONTINUED ON PAGE 134



PHOTO: TOM COPI

MORE LIVE HENDRIX ON THE WAY

Despite the release last fall of *Stages*, a four-CD set of complete Jimi Hendrix concerts spanning 1967-70, engineers are hard at work remixing multitracks from several other Hendrix shows for unspecified future releases. Mark Linett, who worked on *Stages* with Oceanview Digital's Joe Gastwirt, says that the new tapes include the famous July 1970 Maui concert that was featured in the strange Hendrix film *Rainbow Bridge*. Hendrix's last multitracked performance, in August 1970 on the Isle of Wight, is also on the tapes. As usual, the technical challenges have been formidable.

"For years, no one knew what happened to the tapes," Linett says of the Maui show. "Somebody contacted Alan Douglas [who has supervised all of the posthumous Hendrix releases] about a year ago and said she'd come across these boxes of tape marked 'Jimi Hendrix,' so she saved

them. Apparently, they literally sat on somebody's porch for 20 years. It turns out they weren't even the original tapes, but copies made for the movie. And even though they were 8-track tapes, there was only music on four tracks—and there was no audience track at all. They were really noisy, too. So we took each track and worked on it individually, de-noising them with the Sonic [Solutions] System. Jimi's vocal track was pretty distorted on a lot of it, but Joe [Gastwirt] has discovered a way to deal with that in the Sonic System, too, and you barely notice it now."

In general, Linett says, the main problem afflicting most of the later Hendrix multitracks is bass leakage onto the drum tracks. In the case of the Maui show, the drums are only on one track, "but through judicious use of limiters and equalizers and some slight use of effects to get some ambience, we've put some life back into it." Hendrix's guitar tracks "are usually fine," he adds. "It was hard to record that guitar badly."

With the promise of still other shows currently buried in the vaults, and even another concert film (from an Atlanta show) on the horizon, one has to wonder if Douglas and company are scraping the bottom of the barrel yet. "I don't think so," Linett says. "They're all good shows, and people do want to hear them. I think someday just about everything Jimi did will come out, just like with artists such as Duke Ellington and

Charlie Parker. The interest is there." ☺



PHOTO: JEFF SEDWICK

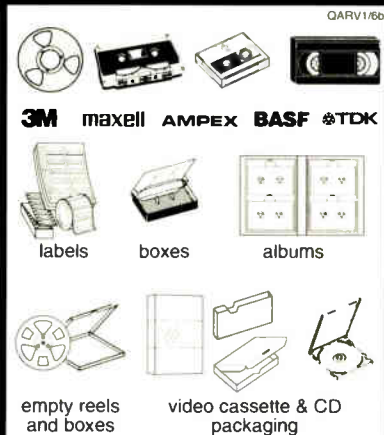
IN THE STUDIO WITH ENYA

Her music is quiet, introspective, flowing gently like a country brook. Then there's that heavenly soprano voice, rising up in shimmering, angelic harmony with itself, a one-woman choir. She sings in English and Gaelic—mainly songs of love, longing and inner dreams—but it's always the overall mood of the songs that's paramount. She's the Irish singer/songwriter/keyboardist Enya, and she's selling millions of records all over the world. In partnership with her producer/engineer Nicky Ryan (who works with Enya exclusively) and lyricist Roma Ryan, she's carved a niche for herself that is utterly unique, and which is obviously striking a chord in a lot of people. Her second album, *Shepherd Moons* (released last fall) is following in the successful footsteps of her first LP, *Watermark*.

Enya's music, which is almost entirely sung and

—CONTINUED ON PAGE 135

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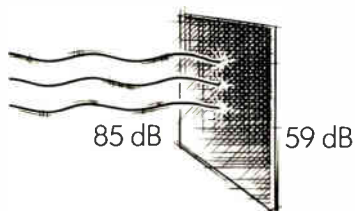
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—FROM PAGE 132. KAISER & LINDLEY

South African, some has a clear Middle Eastern influence.) And as for Lindley, Kaiser explains. "He heard that I was trying to go there, and he asked if he could come along. He told me that years ago he'd had a psychic experience at the San Francisco Zoo with a bunch of lemurs [jungle monkeys], who told him one day he would go to Madagascar."

It dawned on Kaiser that between the two of them they might have the clout to persuade a record company or equipment manufacturer to fund the venture, particularly if the project were expanded to include some songs with Kaiser and Lindley playing with the native Malagasy musicians. They knocked on record company doors for many months, drawing mainly quizzical looks no doubt, before the adventurous New Jersey-based world music label Shanachie gave the go-ahead.

Because there aren't really any usable recording studios in Madagascar, the initial plan was to follow the lead of the German team of radio producer Birger Gesthuisen and engineer Bernhard "Rammy" Ramroth, who made excellent recordings there in 1989 using DAT machines. In fact, Kaiser decided to hire Rammy as the engineer. Shortly before they were set to leave, Rammy heard about the new Yamaha DMR8 and arranged to test one. He was impressed. "I think it may be the first time that digital audio and mixing surpasses analog technology," Rammy notes. "I don't like 16-bit systems for recording. A good analog machine with Dolby SR sounds better than a 16-bit system—it has fewer problems with headroom, and it's easier to work with. But this is 20-bit linear, and that makes all the difference." Rammy worked with the DMR8 for five days, and Kaiser convinced Yamaha to loan him the machine for the duration of the project.

Rammy then assembled a studio based around the DMR8 in the shell of what had once been a top Madagascar recording studio. Lindley and Kaiser flew in, and the recording marathon began. "We'd get up at seven, head over to the studio and immediately start recording one of the groups," Kaiser says. "We'd go till midnight, usually." Power failures occurred at least once a day during

recording, although a Furman power stabilizer they brought from the U.S. helped, "and the DMR never once ate the tape," Kaiser notes with some amazement.

Some of the smaller acoustic ensembles were recorded live using stereo room mics and close-miking. On a few electric ensembles, they opted to layer the tracks, recording bass and drums on the DMR8's eight tracks, then mixing down to two, then doing the same with keyboards and guitars, finally adding vocals. Though Kaiser and Lindley played on many of the sessions ("It took about as much concentration as we had to pull it off because it's so challenging rhythmically," Kaiser says), they also added some overdubs later at Indian Hill Audio-Video in Claremont, Calif., still using the DMR8. Rammy did some premixing on the DMR8 back in Germany, then came over to the U.S. to complete the task at Kaiser's home studio on a second machine on loan from Yamaha.

In the end, Kaiser and Lindley recorded a whopping five CDs worth of material—two featuring their playing, the other three showcasing specific Malagasy musicians only—all for a modest \$62,000. "The project should recoup [its costs] on shipping," Kaiser says proudly. The first volume, *A World Out of Time—Henry Kaiser & David Lindley in Madagascar*, was just released by Shanachie, with the others to be spaced over the next couple of years. The first disc is a wonderful, eclectic blend of different Malagasy styles, both acoustic and electric. It features a hauntingly beautiful instrument: a Malagasy harp called the valiha. Fans of Kaiser and Lindley will be delighted to hear their instantly recognizable contributions to the brew.

"I can't imagine how we got so much done in two weeks," Kaiser says. "All I can think of is that the Malagasy ancestral spirits must have put a special blessing on us." And at the San Francisco Zoo, the lemurs must be smiling. ☺

—FROM PAGE 133. STRUNZ & RAITT

by Jackson Browne and Bonnie Raitt, is their engineer.

"The way we usually record," Strunz says, "is to try to get the basic rhythm section—bass, drums, congas

and a rhythm guitar—down live, with Ardeshir usually doing a dummy lead to guide us along. At that point we're concentrating on rhythms, and we don't worry too much about the melody. Later on, we add the other guitar structures and additional percussion. It's important for this kind of music to feel like a performance, so that's something we really look at when it comes time to mix. With these kinds of guitars and so much percussion, we have to keep everything balanced in a certain way."

Strunz says he employs a small amount of signal processing for ambient depth—"mainly Lexicon and AMS echoes this time. To be honest, I prefer the old EMT [250] plate we used on the guitars on the last album; it had a nice, elegant sound, but we don't have it anymore."

This album took a little longer to record than *Primal Magic*, and, not surprisingly, it cost more to make. "Once something makes it to Number One on the charts, things take on a new perspective," Strunz notes. "Musicians are more expensive, the engineer is more expensive, the studio is more expensive. We were kind of unknown when we started *Primal Magic*, so everybody was giving us a good deal." He laughs and then adds, "Not that I'm complaining about how it's worked out!" ☺

—FROM PAGE 133, ENYA

performed by her, is created at Nicky Ryan's Aigle Studios in Dublin, with the primary tools being a custom desk built by Owen Drumm, a Mitsubishi 32-track digital recorder, a Sennheiser MK40T mic (which Ryan describes as "absolutely the quietest microphone I've ever heard"), analog and digital signal processing gear, and Enya's keyboards—mainly piano and a few synths.

Ryan explains that Enya's albums are painstakingly put together over a period of many months: "On every song, we work on the instrumental part first, the main theme, throwing sounds at the wall until they stick. Sometimes it's something she's worked out on piano; other times she'll sing a 'la-la-la' melody. That's a fairly long process. We'll choose the strongest melodies, and then we'll put a chord structure under that and go from there. We also put an 'aahh'

harmony under almost everything we do. If I put Enya down about 50 times singing a couple of harmonies, just as a basic demo, she'll sing the melody line, and a basic synth line plays the chord structure or maybe a drone. And some multi-vocals sandwiched in between those two, perhaps pushed fairly far back. The other thing we do is roll a piano underneath the chords, which has a way of revealing parts or tonalities that may be otherwise hidden in the melody. It's then that we get into the multilayering of vocals."

And this is *serious* multilayering. It's not uncommon for Enya to lay down 20, 50, 100 vocals or more on a song. In fact, on "Angeles" from *Shepherd Moons*, we hear about 500 Enyas. "We never know how many passes it will require when we start out," Ryan says. "I don't have a preconceived picture. We work on it until it's right, and only your ears can tell you that. We work in small sections. Say we're doing a part that lasts 30 seconds. If there's 200 vocals in the previous part, the next part is going to get 200 as well, if not more, depending on the effect we want on the key change. If it's a crescendo, it might necessitate using more vocals. But we work very efficiently. If we start at 11 o'clock in the morning and get some momentum going, we can tear right through them. We stick the [Mitsubishi] into a shuttle sequence and go on in real time. We just try not to wear out the tape too much before we do a transfer."

Ryan says that the reverb settings he chooses are designed at the same time the music is being constructed, "and Enya always has it in her headphones, so she floats with it, and it affects how she sings." The Lexicon 224XL was the main tool on *Shepherd Moons*, though Ryan says he likes to mix and match digital and analog reverbs on different songs. "The song 'Marble Halls' is mainly the 224 chasing itself, with some Alesis MIDiverb II, because it has such tremendous depth."

The recording process is as languid as the music that comes out of it; as Ryan states, "We're in no hurry. You can't force music like this. Enya has a way of working and a sound that's particular to her, and that's a priceless thing these days." ☺

Blair Jackson is the managing editor of Mix.

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The image shows the control panel of the Summit Tube Leveling Amplifier (TLA-1000). It features a blue faceplate with several controls: a red LED indicator, a 'LINK' switch, a 'BYPASS' switch, a 'POWER' switch, a 'GAIN REDUCTION' knob (0-10), a 'VU' meter with a scale from -20 to +10, an 'ATTACK' knob (FAST, SLOW), a 'RELEASE' knob (FAST, SLOW), a 'METER' knob, and an 'OUTPUT' knob. The Summit Audio Inc. logo and name are visible on the right side of the panel.



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C O A S T

L.A. GRAPEVINE

by Amy Ziffer

At a time when many music recording studios, feeling the pinch of economic pressure, have turned their focus to post-production, Martinsound has swung in a different direction, catering to the orchestral crowd. "Scoring is the focus now," studio manager Shawn Micheal says. "We were doing a fair amount before, but now we're set up so that everything is always in scoring mode." That puts them in a very small group of rooms that are equipped for orchestral clients (other than those on movie studio lots).



The move was precipitated by trends Micheal has been observing for some time. "A lot of people are getting tired of synth scores," he says. "Even in lower budget movies, they want to hear real instrumentation, because it provides a more dramatic

—CONTINUED ON PAGE 138

BOSTON BEAT

by Dan Daley

From the professional audio perspective, Boston is a city with a significant past and a potentially expansive future—it's the present that's uncertain. In the mid-'70s, Boston was as hot as Minneapolis or Seattle would later become; indigenous acts like Aerosmith, Boston and The J. Geils Band gave it a solid rep as a hard rock town that could not only develop its own acts but record them, as well. The long chart run of The Cars evolved into an investment in the band's own studio, Syncro Sound, in the 1980s, after Tom Scholz's seminal private studio set the template for the artist's studio.

Los Angeles, and local bands were pulled by producers and labels to larger cities to record.

Post-production was limited as well, as New York lured Boston agencies. "Boston has been provincial, with a small-town mentality," says James Anderson, executive VP with Sound Techniques on Boylston Street.

However, despite the fact that the recessionary climate lingers in the area, things are changing. Soundtrack is a post facility that originated in Boston 14 years ago and has always kept itself on the technological cutting edge, according to manager Jeanne McGrail. Soundtrack not only weathered Boston's tough years, but thrived; precisely, she says, because of its willingness to invest in new technology. The SSL- and Lexicon-equipped six-room

Musical muscle at Sound Techniques (Boston): Producer Don DeVito (L) and Steven Tyler hard at work on Aerosmith's boxed set, Pandora's Box.

complex in the North End was the first digital facility in Boston and is poised to move to larger quarters downtown, closer to the agency world it primarily serves.

At the year-old Sound Techniques, a studio equipped with SSL, Neve and ScreenSound gear, company president Lance Duncan says that while the "second city" mindset has prevailed for some time, "in terms of post we're getting as good as anywhere else." Both Sound Techniques and Soundtrack report inquiries for their services from agencies outside of Boston, and both offer satellite capability, which blunts any geographical limitations.

Both studios also address the music recording market, which sets them apart from most similar facilities in New York and Chicago. "Rob[Cavichio, Soundtrack's owner] feels very strongly

—CONTINUED ON PAGE 138

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SESSIONS & STUDIO NEWS

by Jeff Forlenza
NORTHEAST

Fort Apache Studios, a Neotek Ekan/Otari-equipped studio in Cambridge, MA, specializes in alternative music—The Pixies, FIREHOSE, Treat Her Right,

(L to R) Grover Washington Jr., Jim Salomone and Grover Washington III at Salomone's studio (Philadelphia) as they worked on "Summer Chill," which was written by the younger Washington.

Goober and the Peas, and countless grunge/garage/underground/alternative acts have recorded there. Recent projects at Fort Apache included Apollo Landing recording a project for Go! Disc Records (a London affiliate of PolyGram) with Gary Smith producing and Paul Kolderie engineering; and Throwing Muses (Sire/Warner) self-produced a project with engineer Kolderie...At NYC's Electric Lady Studios: Japanese artist Toshi Kubota (Number One artist in Japan) did a hip hop record with producer Jeff Bova; and Chris Stein produced a new project for Debbie Harry with engineer Adam Yellin...The Magic Shop (NYC) reports the following sessions: Sonic Youth recorded their new album with DGC Records with Butch Vig engineering and co-producing with the band; and The Ramones were cutting tracks with producer Ed Stasium and engineer Paul Hammingson for their new

record...At NYC's Giant Recording Studios, Patti Labelle was doing vocals on a personal project with engineer Doug Epstein and assistant Ron Allaire; and Roger Daltrey was at Giant recording vocals and harmonica over-



dubs with engineer/producer Jonny "Most" Davis...Remaining in Manhattan, The B-52's were at Skyline Studios

—CONTINUED ON PAGE 139

N.Y. METRO REPORT

by Dan Daley

Power Station installed a new Neve VRP 60-input desk in February as part of an overall re-vamping of the Studio C control room and lounge. The 72-input frame console has Flying Fader automation and, with the installation of soffitted racks for out-board in the rear wall, has much more room behind it for players, reflecting the increased use of the control room as the center of action. Studio manager Barry Bongiovi says that there were no acoustical changes to the room.

—CONTINUED ON PAGE 141

At Sabella Recording Studios (Roslyn Heights, NY), R&B artists Stuff II were joined by famed drummer Bernard "Pretty" Purdie for rhythm tracks. (L to R) Stuff II's Jim Smith, Purdie, studio owner Jim Sabella, and Stuff II's Gordon Edwards.



—FROM PAGE 136, L.A. GRAPEVINE

effect. Listeners react differently to [orchestral scores]. Synths are being used more for embellishment, instead of being the base of scores.”

Owner Joe Martinson has also opted for a name change to Martech, the name held by his electronics R&D division for many years.

Martinsound opened its doors in 1974, and the studio's sound changed little from that time until last year, when Martinson decided to modernize. The remodeling, completed in December, involved a complete tear-down of Studio 1 and its control room,

reconstruction of the isolation booths and building a new machine room. The end result is a studio with greater square footage and a more live sound.

The new control room is outfitted with a Neve VRP-60 with Flying Faders, a bi-amped, LCRS TAD monitoring system driven by Bryston amps, and a pair of Mitsubishi X-880 32-track digital recorders. Plans are for a second studio to be rebuilt later this year. Martech is also Neve's new West Coast demo facility, where Neve will educate customers and personnel in a real-life studio situation.

Lighthouse Recorders in the San

Fernando Valley installed a brand-new SSL mix room, on-air as of March 16. The board is a 4072 G Series with Total Recall, and the machines are Studer. Studio manager Mickie Scott says the room was built to be large and comfortable, with a single isolation booth for recording. Humberto Gatica will be breaking it in with some vocals (artist unknown), and John Fogerty is booked for a start-to-finish album project beginning in April.

A sad note: Sound City Studios founding owner Joe Gottfried died of a heart attack at the end of February. He was 62 years old. Gottfried also ran Carmen Management. According to studio manager Siobhan O'Brien, Gottfried was instrumental in the early careers of several prominent producers and engineers. He gave Bruce Barris (MSG, Fabulous Thunderbirds, Dramarama) his first engineering job, on a demo. Producer Kevin Beamish says, “I've produced 30 or more albums at Sound City since 1978, and the reason I always came back was because of Joe and his staff and the way they made the artists and producers feel at home.”

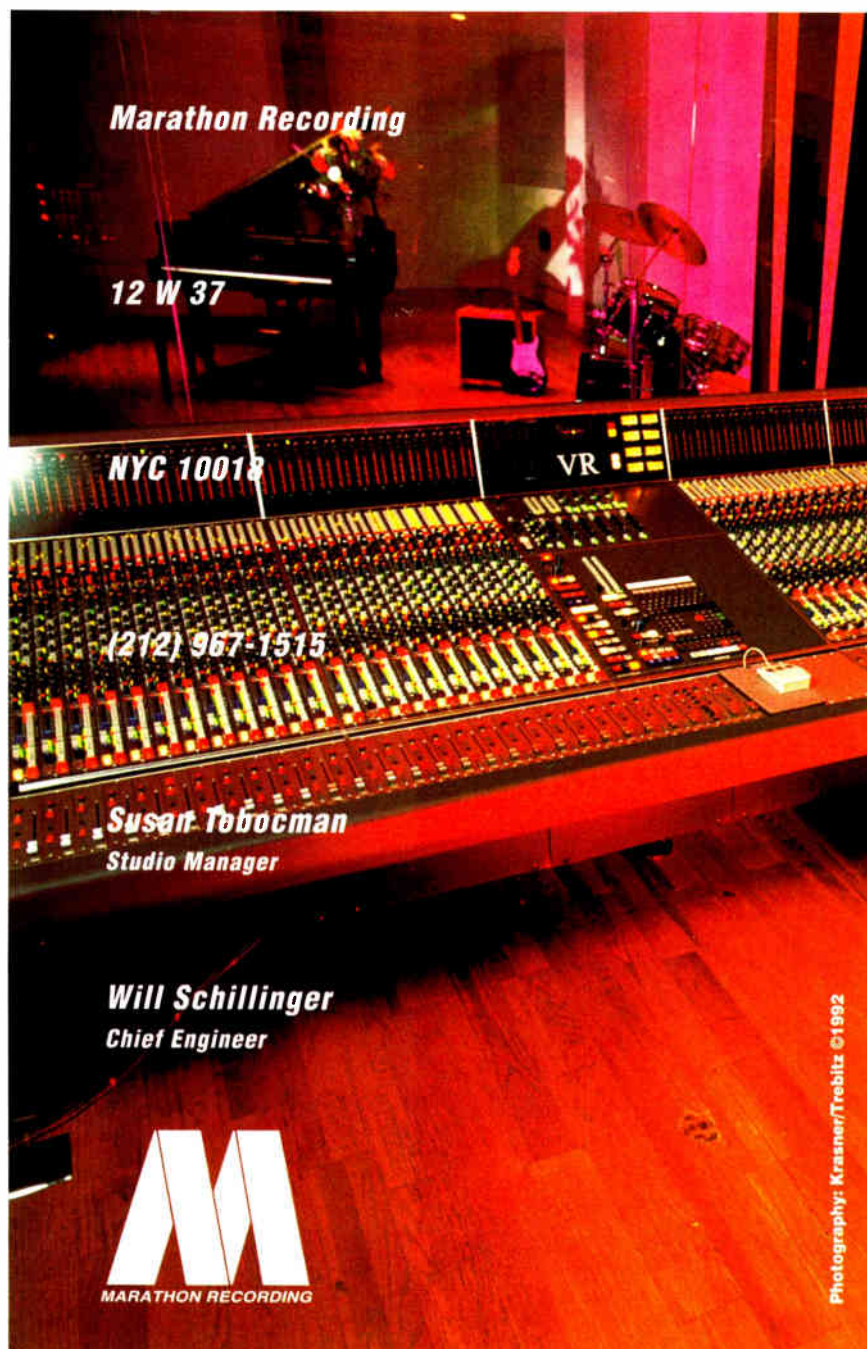
“When I first met him, I was in a band that he managed,” remembers producer/engineer Bill Drescher, who recently engineered Richard Marx, and got his first exposure to the recording studio thanks to Gottfried. “When he bought Sound City, he asked me if I wanted to become an assistant there. During the open studio time, he would let bands I was in have time to record. I ended up being on staff there for several years, and there never was a boss/employee relationship. It was like having a friend around.”

Gottfried will be missed. He was honored with a memorial service March 6 in Los Angeles. ■

—FROM PAGE 136, BOSTON BEAT

about music,” McGrail notes. “That's how this studio started.” Soundtrack has also enhanced its duplication and sound library services. (It distributes the popular Aircraft sound effects CD library.)

Synco Sound, formerly Century III and Intermedia and once owned by The Cars, is a two-room facility now co-owned by Richard and Andrew Mendelson, Bob Kempf and George Wyckoff. Like many other older rooms in Boston, its main console is an MCI, but the studio has been beta-testing the new Korg Sound Link. Richard



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Mendelson explains that in order to help keep music work in Boston, a number of local studios have signed artists themselves and are developing and marketing them. "The real vitality in Boston is in R&B now," Mendelson says. "That and dance have increased heavily over the original hard-rock core." Most of the record budgets he sees are in the low- to mid-level range.

At Downtown Recorders, located in the venerable Boston Center For The Arts in the South End, studio manager Peter Cheung reports that plenty of dance and rap signals pass through his automated Sony/MCI console.

Boston's best music success story is Maurice Starr, well known as creator of New Kids on the Block and something of a local music legend. He's long maintained a multiroom facility in the Roxbury part of town. With Amek Mozart and SSL E Series (with G computer) automated consoles and six Otari multis, Starr planned to open the previously private studio to hourly clients in April.

"It's sort of like a new Motown here," he says, referring to the management, publishing and artist development facets all under one roof. His \$3-to-\$5 million investment (he tends to pay cash) is significant, particularly in light of the fact that he wanted to reinvest in his own community. "I've always been here," he says. "The place is blessed."

To a large degree, rap, dance, alternative and college music don't have the same stringent acoustical requirements that mainstream rock and pop have. Boston, the quintessential college town, has all those styles in abundance. That augurs well for the city's continued strength as a significant music recording center, while Soundtrack and Sound Techniques provide the city with high-level post capabilities.

All this and Larry Bird. Now if only the Red Sox can quit choking in post-season play... ■

—FROM PAGE 137, SESSIONS & STUDIO NEWS
with producer Nile Rodgers and engineer Tom Durack overdubbing and mixing their new Warner Bros. release... At Philadelphia's Sigma Sound Studios, chief engineer Mike Tarsia was in Studio One with Rick Bell of Bell Biv DeVoe working on tracks for an upcoming release... At Quantum Sound Studios (Jersey City, NJ), the legendary

—CONTINUED ON PAGE 140

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Frankie Valli was doing vocal overdubs and remixing live concert footage for an upcoming video special. Quantum's Dave Ellinwood engineered the project with producer Bob Gaudio... Clique in the Third Planet were at Cliff Schwarz Music Productions (Boston) working on a dance record with engineer Cliff Schwarz and songwriter/producer Clik...

SOUTHERN CALIFORNIA

Smokey Robinson was at Westlake Audio (Los Angeles) doing remixes on his latest release for SBK Records with engineer Dan Bates and assistant Brian Kinkel. Robinson co-produced the sessions with Alan Kaufman... At Music Grinder Studios (Hollywood) producer Arnolpo Lima recorded and mixed tracks for Brazilian artist Gilberto Gil for Warner Music International with assistant Greg Grill... At Record Plant/Hollywood, Steve Vai was in Studio I producing *Big Trouble* for Interscope...

NORTHWEST

At Fantasy Studios in Berkeley, CA, blues/jazz great Charles Brown tracked his newest release in Studio A with producer Ron Levy, first engineer Steve Rosenthal and assistant Michael Semanick; also at Fantasy, Narada Michael Walden was in Studio D producing vocal overdubs for Capitol artist Tracie Spencer with first engineer Mark "Elvis" Reyburn and assistant Vince Wojno... Dr. John stopped by Music Annex Recording Studios (Menlo Park, CA) to add a piano track to the latest release from Bay Area bluesman Deacon Jones...

SOUTHWEST

Tu-tone rap group, Def Squad, recorded tracks for their next album at Sugar Hill Studios (Houston) with J.R. Griffith engineering and Mike Dean and Ivan Kuper producing... Gary P. Nunn and his band, The Sons of the Bunkhouse Band, were at Fire Station Studios (San Marcos, TX) recording an album for the new Hill Country label. Gary Hickinbotham engineered the "Texas Music" sessions with executive producers Paul Jones and Jim Hoffman...

SOUTHEAST

T Bone Burnett was doing overdubs at Music Row Audio (Nashville) with engineer Bill VornDick for his upcoming release. Featured Nashville guests on the project include Mark O'Connor and Jerry Douglas... Producer Mitch Easter wrapped up tracks and mixing

INDEPENDENT LABEL SPOTLIGHT: **Shanachie Records**

In 1975, Irish music enthusiast Dan Collins started Shanachie Records with Richard Nevins in the attic of Collins' Bronx apartment. Nevins was a musicologist; Collins was a fiddler and the publisher of O'Neill's Music of Ireland. Both saw a need for a record label devoted to Irish traditional music. The first Shanachie ("storyteller" in Gaelic) release was by Collins' sister Kathleen Collins, who'd just won the prestigious all-Ireland fiddle competition.

Seventeen years later, Shanachie Records Corp. offers music from every continent except Antarctica. In fact, Shanachie boasts a reggae catalog that rivals Island's and other majors: Bunny Wailer, Rita Marley, Linton Kwesi Johnson, Yellowman, Pablo Moses and Joe Higgs all have Shanachie releases.

Shanachie even followed reggae's migration to Africa by signing two of that continent's greatest reggae stars: Alpha Blondy of the Ivory Coast and Lucky Dube of South Africa. Other African artists on the label include King Sunny Ade, Ladysmith Black Mambazo, Tabu Ley Rochereau, Thomas Mapfumo and Fela Anikulapo-Kuti. Shanachie scored a big hit with *The Indestructible Beat of Soweto*, which featured South Africa's township musicians.

Shanachie also has a well of Delta blues in the form of its Yazoo Records division. Robert Johnson, Charley Patton, Ma Rainey, Blind Lemon Jefferson and Mississippi John Hurt all have releases in the Yazoo catalog.

Today world music makes up 60% of Shanachie's sales, Irish music 30%, and the rest is from recordings of classic American blues artists on the Yazoo label. But the music that first set Shanachie apart from other independents came from the Irish or Celtic folkies, and co-founder Collins stresses that "our first love is Irish music. Make sure everyone knows that."

From Irish folk to Jamaican reggae to African pop to American blues, Shanachie is an eclectic, adventurous label. Executive vice president Randall Grass explains Shanachie's requisites for its catalog: "Basically, it has to be from this planet."

—Jeff Forlenza

for Dublin rockers The Forget-Me-Nots at Reflection Sound Studios (Charlotte, NC). Mark Williams engineered the Sony project with assistance from Tracey Schroeder...

NORTH CENTRAL

At Chicago's Seagrape Recording Studios, Headshop recorded their first LP. Tommy White was at the controls for the power-funk sessions...Pat Ortman was at Empty Street Productions (Champaign, IL) mixing his latest project entitled *Round & Round* for Gizmo Records with producer/engineer Mr. T. Gizmo...

STUDIO NEWS

In Baltimore, GRC Studios and Tonemaster Studio have joined forces to form 1137 Recording, which is located in the newly renovated GRC address: 1137 Fillmore St. The new 550-square-foot control room was completely rewired by house engineers Tony Eichler and Leo McLaughlin to accommodate a Sony APR-24 recorder, a custom MCI J11-400 Series console (formerly owned by Roy Orbison) and a host of effects and processing...Firehouse Recording Studios (Brooklyn, NY) added a new

Peavey AMR 2400 console (offering 116 inputs for mixdown) to go along with their 24-track Ampex MM1200. Recent activity at Firehouse included Downtown percussion group Chunk recording their CD *Life of Crime*. Sam Bennet and Bob Appel produced, while Why Vee mixed the release for The Knitting Factory Works label. ■

—FROM PAGE 137, N.Y. METRO

In March, Power Station also brought a new, small pre-/post-production room equipped with an AMS Logic I console online. The room is primarily intended as a test bed for the studio's evolving forays into post-production and audio-for-video, according to Bongiovi, although it will be a fully operational suite, as well. "It's the next logical step," he says. Power Station opened Studio D, a large post room, in the summer of 1990.

SSL had several installations in town in February, with Electric Lady, Hit Factory and Effanel Music adding Ultimatum, Nutmeg Recording and Clack Studios adding additional ScreenSounds, and East Hill Productions installing a 6000 G Series with E Series EQ modules and Ultimatum.

—CONTINUED ON PAGE 175

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—FROM PAGE 109, MAXIMUM DUPLICATION LEVEL will decide who has made the best, and that will become the most popular embodiment of the meter.

Do you have any manufacturers interested in or committed to making MDL meters?

No one specific right now, but I would imagine that there are some who will do it. Some of the labels, like us, will do it for ourselves. The specification from the RIAA will come not only with the recommended curve but also the recommended circuit design. So the circuit will be there for anybody who wants to put it in a box, give it a power supply and provide the inputs and outputs. But for those who want to purchase the device rather than making it themselves, I would expect that some will be available. Sony Music Technology will have a design that we will have implemented for our own use.

What is the current status of the MDL project?

The RIAA engineering subcommittee has yet to finalize the MDL standard. A lot of that has to do with us here at Sony. We were the ones who were putting it into its final form, including the schematics. We went through a move (from Milford, Conn., to New York City), and we didn't have the opportunity to finish it. So we haven't yet presented it to the committee. But we will at the next quarterly meeting.

Assuming the standard is approved by the RIAA, what steps will remain in the process of making the MDL meter a standard part of the cassette duplication chain?

Within six months after approval, I would expect to see meters available and being used in the field. It's not that complex to make. It takes a processor and some kind of co-processor. The idea has been to make it as streamlined as possible. As for mass usage, it usually takes a year or two before something really gets into widespread use.

Might the standard be coming too late in the life cycle of the analog cassette to make any real difference?

I believe that there is plenty of life left in the cassette, and certainly we are all interested in ways to provide the best possible quality to the consumer that we can provide. ■

Tape & Disc editor Phil De Lancie is a mastering engineer at Fantasy Studios, Berkeley, Calif.

NORTHEAST STUDIOS

Information in the following directory section is based on applications mailed earlier this year and was supplied by those facilities listed. *Mix* claims no responsibility for the accuracy of this information.

Personnel, equipment, locations and rates may change, so please verify critical information with the companies directly.



Located on the Upper East Side of Manhattan is River Sound, owned by Donald Fagen and Gary Katz. The 450-sq.ft. control room has windows for natural sunlight, and it features a modified Neve 8078 (formerly of Motown's Hitsville) with Flying Faders, 3M and Mitsubishi digital multitracks, UREI 813C monitors and two EMT-140 plates. The 27'x28' live studio area also has windows and a separate isolation booth.
Photo: David Taffet.

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Upcoming Directory Deadlines:

Facility Designers & Suppliers: **May 11, 1992**
Southern California, Hawaiian & Southwest Studios: **June 10, 1992**
(AES Issue) New Products for 1993: **July 10, 1992**

Mix listings procedure: Every month, *Mix* mail listing applications to recording studios and/or other vital facilities and services for the recording, sound and video production industries. There is a nominal charge to list a *Basic* Listing (name, address, contact) and an *Extended* Listing (equipment, credits, specialization and photo or logo). If you would like to be listed in a *Mix* Directory, write or call the *Mix* Directories Department, 640C Hollis St., #12, Emeryville, CA 94606, toll free (800) 344-1151 (5478).

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Pity.

To arrange for a personal demonstration, please call (213) 726-0303. Or write TASCAM, 7733 Telegraph Road, Montebello, CA 90640.

TASCAM II™

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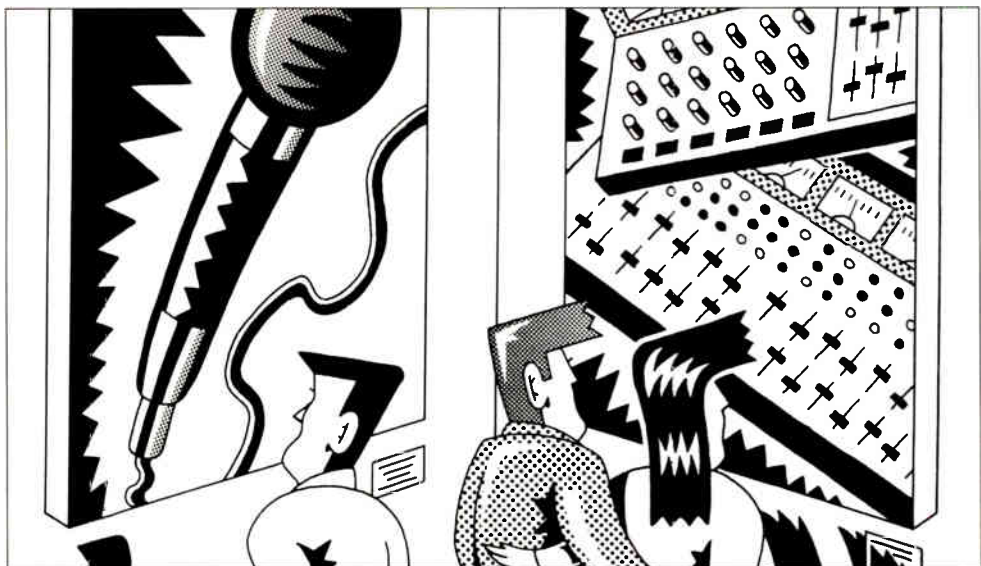
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NORTHEAST 24-track studios



ACME RECORDING
STUDIOS INC.
Mamaroneck, NY

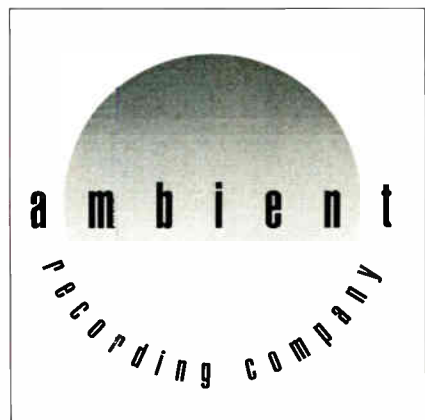
[24+] **ACME RECORDING STUDIOS INC.**; 112 W. Boston Post Rd.; Mamaroneck, NY 10543; (914) 381-4141; FAX: (914) 381-4543. **Manager:** Peter Denenberg. **Engineers:** Rory Young, Peter Denenberg, James Brown, Thom Leinbach. **Dimensions:** Room 1: studio 25'x28'. Medium size live room w/separate piano and vocal iso-booths. Control room 12'x18'. Room 2: studio 12'x12', control room 12'x20'. **Mixing Consoles:** Studio A: automated 56 input discrete console, vintage English style 4 band EQ, 8 aux sends, PPM and VU bargraph metering. Aphex style noise gate on each channel (computer controlled). **Audio Recorders:** (2) Otari MTR-90 MkII 24-track, Ampex 24-track slave machine, 1/2", 1/4" and DAT mastering formats. **Cassette Recorders/Duplicators:** Sony DAT 1000ES, (4) Yamaha. **Noise Reduction Equipment:** 24 channel Dolby SR or dbx available on request, Dolby SR/A, and various single ended systems available for 2-track formats. **Echo, Reverb & Delay Systems:** Lexicon 480L, EMT Stereo Plate, Lexicon 224, Lexicon PCM70, Lexicon LXP-5, Lexicon LXP-1, MRC controller, Eventide H3000 w/sampler, Yamaha REV7, various single delays lines. **Other Outboard Equipment:** (2) Neve 2245A, (2) 2252, (2) API, UREI 1176, (2) LA4, REI 1176, (2) UREI LA4 limiter, (4) dbx 166, (3) 903, (2) Neve 1066 mic pre/EQ, (2) Pultec EOP-15 EQ, Lang PEO-2, PEO-4, Altec 9067B passive filter sets, (3) dbx de-esser, various digital delays, (56) inboard Aphex style gates w/automation, Drawmer gate, Aphex gate, dbx 904 gate. **Microphones:** Neumann 87 FET, U67 tube, (2) KM-84 FET, AKG The Tube, C-12B tube, 412, 431, (3) 414, (3) 451, RCA 44 ribbon, (4) Sennheiser 421, 431, Beyer M88, 160, 260, M61, M130, M100, (2) Crown PZM and others, Shure, EV, Calrec, etc. **Monitor Speakers:** Sequerra MET-7 near-fields, Biamp 604e w/subwoofer, Yamaha NS-10, Tannoy, Auratone. **Musical Instruments:** 1927 Steinway B piano, Gretsch drums, vintage Marshall amp and Fender guitar amp, Ampeg B-15, Leslie cabinet, large selection of guitars on request. **Other MIDI Equipment:** Samplers: Atari S-1100 stereo 16 bit sampler, S-950, S-900, Steinberg/Jones Cu-Base software on Atari 1040ST w/hard drive and SMP-24, Yamaha DX7 IIFD, (2) TX81Z2, Roland JP-800, Lab synth, D-110, Emulator Proteus, Pro-Cussion and Performance I piano module, Oberheim X-Pander, (6 voice analog), Matrix 1000, Korg MR1, all connected to 48 input keyboard submixer. **Video Equipment:** 3 machine audio-for-video lock-up, 3/4"

video playback w/layback to 1" video, 1/2" 4-track or 3/4" w/ Dolby SR/A or dbx, Proton and Sony monitors. **Other:** Sound effects, LucasFilms, Sound Ideas, Hollywood Edge and Acme/ in house sound effect w/computerized (in control room) index. Also extensive original and CD music library. **Digital Workstations:** DD-1000 digital workstation/editor w/24 bit optical disk storage. **Rates:** \$125/hr. (w/engineer), \$90/hr. (assistant only). Lock out \$1,250/day (w/engineer). Digital editing \$150/hr. Food is billed through with no mark-up, there are no charges for phone calls. **Specialization & Credits:** Acme Recording overlooks the Mamaroneck harbor, 35 minutes from midtown Manhattan and a five-minute walk from the train past restaurants, shop and theater. Studios A and B are used for album project work, Studio B is the MIDI/overdub room with Studio A being more suited to live bands and large scale mixing. There is a comfortable lounge with cable TV/VCR etc. Quality local lodging is available, however most clients just train it from Manhattan. Recent projects include: The Spin Doctors/EPIC, Bluesiana Triangle/Windham Hill. Nice & Smooth/RCA-Columbia, Gen Allen/Toshiba/EMI, Blitzspeer/EPIC/Sony, RFK In His Own Words/HBO, Slick Rick/DefJam Trad/Warner, Willie Colon, Dirty Looks, The Roches, Devonsquare, Cornell Dupree and Who It Is, Tom Stacy, Company of Wolves, Nana Vasconcelos. Clients list: Warner Bros., Sire, Atlantic, EPIC, Sony Music, Capitol, A&M, Def Jam, RAL/Sony, Island, HBO Productions, P.B.S., Chrysalis, Rhino, MCA, Alligator, Arista, EMI, Next Plateau, Enya, Toshiba EMI, Shanachie, TommyBoy, Teldec, Mercury/PolyGram, London, Windham Hill, Schrapnel, Relativity, Justice....Complete production services available.

[24+] **A.D.R. STUDIOS INC.**; also **REMOTE RECORDING**; Skylight Run; Irvington, NY 10533; (212) 486-0856; FAX: (914) 591-5617. **Owner:** A.D.R. Studios Inc. **Manager:** Jack Walker.

[24+] **AIR CRAFT RECORDING STUDIO**; also **REMOTE RECORDING**; Dormont Square; Pittsburgh, PA 15216; (412) 343-5222; FAX: (412) 341-0889. **Owner:** Bernard Lee. **Manager:** Bernard Lee.

[24+] **JOHN ALBERTS SOUND DESIGN**; 231 E. 55th St.; New York, NY 10022; (212) 355-1600; FAX: (212) 355-2638. **Owner:** John Alberts. **Manager:** Teletronics Operations Dept. **Engineers:** Jay Vicari, Sue Pelino. **Dimensions:** Room 1: studio 10'x10', control room 30'x25'. Room 2: studio 8'x8', control room 20'x12'. **Mixing Consoles:** SSL 6032G w/Total Recall. **Audio Recorders:** Sony 3324, Studer A800 24-track, Studer A800 4/8-track, Studer A810 2-track, Panasonic SV-3700 DAT, (2) Sony 2500 DAT, (2) Sony 1630 digital processors. **Noise Reduction Equipment:** Dolby A/SR 24 channel. **Synchronization Systems:** Adams-Smith 2600 AV. **Echo, Reverb & Delay Systems:** Lexicon H3000 SE/B Ultra Harmonizer, (4) dbx 902 de-esser, (2) Neve stereo compressor (86902), Yamaha REV5, other assorted gadgets. **Microphones:** (2) Neumann U49. **Video Equipment:** (2) Sony DVR-18D2, (2) Sony BVU-950, Sony BVH-3000 1" recorder, (2) Sony Beta SP recorder/player. **Digital Workstations:** SSL Screen Sound, Macintosh/Digidesign Sound Tools. **Rates:** Call for rates. **Specialization & Credits:** Our specialization is audio-for-video editing and mixing. The ScreenSound suite is a tapeless studio designed for sound effects design, as well as mixing projects requiring less than 16 tracks. Audio One is a full-scale digital/analog multitrack mixing suite. Credits include: *Saturday Night Live* (post-production); Letterman 5th, 6th, 7th, 8th and 10th Anniversary specials; several Sting TV projects; Paul Simon's Concert in the Park; *Biography* (series); many comedy and documentary specials; *Into the Woods* (PBS); *Tommy* (The Who); *The River Runs Red* (Midnight Oil); *Steel Wheels* (Rolling Stones); and *Generation* (MTV).



AMBIENT
RECORDING CO.
Stamford, CT

[24+] **AMBIENT RECORDING CO.**; 65 High Ridge Rd., Ste. 334; Stamford, CT 06905; (203) 968-9882. **Owner:** CSS. **Manager:** Mark Conese, Phil Brown. **Dimensions:** Studio 20'x32', control room 22'x20'. **Mixing Consoles:** 30 input (totally discrete class A electronic) tracking console, SSL 6000E w/Total Recall. **Audio Recorders:** Studer A800 Mk II 24-track, Ampex MM1000 16-track, Ampex AG440C 15/30ips 2-track, Panasonic SV-3700 DAT. **Cassette Recorders/Duplicators:** (2) TEAC 3 head. **Echo, Reverb & Delay Systems:** (3) EMT 140 mono tube plate reverb unit, EMT 140 stereo tube plate reverb, Lexicon 224 digital reverb w/LARC, Lexicon PCM70, Lexicon RCM42, Lexicon RCM41, Lexicon Prime Time delay, Eventide H3000, TC 2290, Yamaha REV7, Yamaha SPX90. **Other Outboard Equipment:** Teltronix LA-2A, (4) Neve 2254e comp/limiter, (6) dbx 160 compressor, (2) UREI 1176LN, Drawmer 196i stereo tube compressor, Aphex gate, (2) Drawmer DS201 gate, Pultec tube EQ, tube microphone pre-amp. **Microphones:** Neumann U47 tube, (2) Neumann U47 FET, (2) Neumann U87, (2) Neumann KM84, (2) AKG 414, (2) AKG 451, (6) Sennheiser 421, Sennheiser 441, (8) Shure SM57, Shure Beta 57, (2) RCA 77-DX, (2) RCA DK-5A, (2) Crown PZM, Beyer M500 ribbon, Beyer M160, EV RE20, (6) Yamaha percussion mic. **Monitor Amplifiers:** (2) Yamaha PC5002 M, Yamaha B1, Yamaha B2, (4) Crown. **Haffer. Monitor Speakers:** (2) George Augsburger custom control room monitors w/ sub-woofers, (2) Yamaha NS-10M. **Musical Instruments:** Yamaha recording custom drums, Tama drums, assorted snare drums, Rhodes, Ampeg B-15, Ampeg SVT, Fender guitar amps. **Other MIDI Equipment:** Kat MIDI Vibe, Aphex Studio Clock. **Specialization & Credits:** Located on a 250-year-old New England estate and surrounded by bird and tree sanctuaries, Ambient is the perfect choice for artists who appreciate a private working atmosphere. Our commitment to quality shines thru from the amazing-sounding 24,000-cu.-ft. live room to the gold connectors and Mogami cable to the totally discrete class A recording electronics and the latest control room design with custom George Augsburger monitors, 45 minutes from downtown Manhattan. Walking trails, fresh air New England atmosphere. Catering and accommodation available upon request. The best gourmet foods, available breakfast/lunch/dinner.

N O R T H E A S T

24-track studios

[24+] ANTLAND PRODUCTIONS INC.; 420 Lexington Ave., Ste. 1934; New York, NY 10170; (212) 687-4180; FAX: (212) 697-0536. Owner: Roy B. Yokelson. Manager: Maria Miccio.



ARBELLUM STUDIOS
Albany, NY

—SEE LISTING TOP OF NEXT COLUMN

[24+] ARABELLUM STUDIOS; 654 Sand Creek Rd.; Albany, NY 12205; (518) 869-5935. Owner: Art Snay. Manager: Yvonne Bautochka.



ASL MOBILE AUDIO
Flushing, NY

[24+] ASL MOBILE AUDIO; REMOTE RECORDING only; PO Box 791; Flushing, NY 11352; (718) 886-6500; FAX: (718) 886-7214. Owner: Aura Sonic Ltd

[24+] AUDIBLE IMAGES; also REMOTE RECORDING; 22 Cambria Point; Pittsburgh, PA 15209; (412) 821-2648; FAX: (412) 821-2648. Owner: Jay Dudd. Manager: Hollis Great-house.

[24+] THE AUDIO DEPARTMENT INC.; 119 W. 57th St.; New York, NY 10019; (212) 586-3503; FAX: (212) 245-1675. Owner: Joe Danis. Manager: Kim Feit, Sue Ekareb.

[24+] AUDIOMASTER INC.; 7101 Wisconsin Ave., Ste. LL01; Bethesda, MD 20814; (301) 294-2222. Owner: Jeff Kidwell.

[24+] AUDIOMATION; 922 W. North Ave.; Pittsburgh, PA 15233; (412) 231-7767; FAX: (412) 231-3575. Owner: Gregg Vizza. Manager: Gregg Vizza.

[24+] AURA SONIC LTD.; REMOTE RECORDING only; PO Box 791; Flushing, NY 11352; (718) 886-6500; FAX: (718) 886-7214.

[24+] AVALON RECORDING STUDIOS INC.; 40-35 235th St.; Douglaston, NY 11363; (718) 224-9158. Owner: Chris Cavill/Bill Ricciardi. Manager: Bill Ricciardi. Engineers: Rob Stander—chief engineer, Devin Kelly, Mike Conrader. Dimensions: Room 1: studio 18'x30', control room 16'x16'. Room 2: studio 15'x12'. Room 3: studio 19'x12'. Mixing Consoles: API vintage 40+4 w/stereo compressors. Audio Recorders: Studer A827 24-track, Otari MTR-12i 2/4-track. Cassette Recorders/Duplicators: (2) Nakamichi MR-1, Panasonic SV-3700 DAT. Echo, Reverb & Delay Systems: Lexicon 300 digital reverb, Lexicon PCM70, (2) Yamaha SPX90, Yamaha SPX900, (2) Korg SDD-2000, Korg SDD-3000, echo plate, Lexicon Prime Time, Eventide flanger, Eventide Phaser, ART multiverb, DeltaLab Effectron II. Other Outboard Equipment: (4) dbx 160XT, dbx 161, (2) UREI 1176 LN, Summit Audio TLA 100A, Summit Audio dual program EQ, (4) Kepex II, (2) Drawmer dual gate, Valley dual Dyna-Mite, Orban 622B dual parametric EQ. Microphones: (2) Neumann U87, (2) AKG 414, (2) AKG 451, AKG 460, (2) EV RE20, (4) Shure SM57, EV 665, EV 666, Audix OM-1, Audix OM 3SB, (2) AKG D-12E, AKG D 112, (2) PZM, (2) Sennheiser 441, (4) Sennheiser 421. Monitor Amplifiers: (2) Bryston 4B, (2) Carver PM 600, Crown PS-200. Monitor Speakers: UREI 813, (2) Yamaha NS-10M, Tannoy 6.5. Musical Instruments: Hammond B-3 organ w/ Leslie 122, Yamaha grand piano, Alesis HR 16B drum machine, Ludwig 5-piece drum kit, unique collection of percussion, Marshall vintage amp, (2) Ampeg vintage amp, (2) Fender vintage amp, (2) Roland amp, Roland D-50, Ensoniq SQ-2, Roland GP 8 guitar processor.

[24+] AXIS STUDIOS INC.; 254 W. 54th St., 16th Fl.; New York, NY 10019; (212) 262-3120; FAX: (212) 262-3942. Owner: Francois Kevorkian. Manager: Robert Sperte. Dimensions: Room 1: studio 8'x10', control room 17'x22', Room 2: studio 21'x16', control room 18'x14'. Mixing Consoles: SSL 6064E 64-input w/G Series computer and Total Recall, Amek Angela 47-input w/faders & DiskMix automation. Audio Recorders: Mitsubishi X-800 32-track digital, (2) Studer A827 24-track analog, Studer A80RC 2-track 1/2" and 1/4" master, (2) Studer A80 MkIV 24-track master, Otari MTR-12 1/2". Cassette Recorders/Duplicators: (3) Panasonic SV-3500 DAT, Sony DTC 500 DAT, Sony PMC-2500 DAT, Sony DTC-300 DAT, Nakamichi DMP-100 F1 2-track digital, (6) Nakamichi MR-1, Studer Revox Synchronization Systems: (4) TimeLine Lynx modules. Echo, Reverb & Delay Systems: Lexicon 480L, (3) Lexicon PCM70, TC Electronic 2290 digital delay w/11 sec.



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sampling, AMS DMX, Yamaha SPX1000 digital effects, (2) Eventide H3000 Ultra Harmonizer, (2) Lexicon PCM42, (4) Yamaha SPX90 MkII, AMS RMX16, Quantec QRS **Other Outboard Equipment:** (10) Neve 1073 and Neve 1080 EQ, (6) API 550 EQ, (3) Pultec EQ and filter, Neve 33609 stereo compressor/limiter, (8) Kepex II noise gate, (2) Drawmer noise gate, Summit Audio limiter, K&H UE 100 EQ, Roland Dimension D **Musical Instruments:** (2) Akai S 1000 sampler w/45MB re-movable HD, Emulator III, (2) Proteus XR, (2) MIDI Minimoog, (2) Roland MKS 80, (2) Roland MKS 50, (2) Roland MKS 20, Korg Wavestation, (2) Korg M 1R, Rackmount OB 8, Roland Juno 106, (2) Yamaha DX7 II FD, Yamaha TG77 **Other:** Macintosh IIfx w/8MB RAM, color monitor and over 1 hour of digital audio storage w/Digidesign Sound Tools Editing System w/650MB hard drive and DAT I/O.

[24+] BABY MONSTER STUDIOS; also REMOTE RECORDING; 135 W. 14th St.; New York, NY 10011; (212) 627-5410; FAX: (212) 234-7099. Owner: Jamie Burgh. Manager: Evan Player. Engineers: Bryce Goggin, Garis Shipon, Steve McAllister, Steve Burgh, Evan Player, Rick Rowe. Dimensions: Studio 35'x25', control room 14'x21'. **Mixing Consoles: Neve 8036 32x8x16. **Audio Recorders:** Studer 827 24-track analog, Studer A80 IIRC 2 track 1/2" and 1/4", (2) Sony APR 5002 2-track 1/2" and 1/4", Otari MTR-12 4-track and 2 track 1/2". **Sony 2500 DAT, Panasonic 3500 DAT. Synchronization Systems:** Adams Smith Zela-3. **Echo, Reverb & Delay Systems:** Lexicon 480L, (2) Eventide H3000SE, (2) Yamaha SPX900, Yamaha SPX1000, (2) Ibanez SOR1000 **Other Outboard Equipment:** (8) Pultec tube EQ, (4) Lang EQ, (4) UREI LA 3A, (2) UREI 1176-LN, (4) United 175B tube limiter, (2) dbx 160, dbx 162, dbx 160X, (24) Langevin AM 10 discrete mic pre's, (2) Drawmer gates, (4) Symetrix gate, (4) Galax, (2) Dyna Mite gate **Microphones:** (2) AKG C 12, AKG G 24, AKG C 28, (4) AKG C 414, (4) AKG C 451, AKG D 112, (6) Sennheiser 421, (11) Neumann U47 tube, Neumann U47 NuVistor Stephen Paul capsule, Neumann U48 NuVistor, Neumann M249 B tube, (2) Neumann U67, (2) Neumann KM56 tube, (2) Neumann KM54 tube, Neumann KM86, (4) Neumann U87, (3) Beyer M 260 ribbon, (2) RCA 770X ribbon, (4) Shure SM58, (4) Shure SM57 **Monitor Amplifiers:** (2) Haller 500, OSC 3500, Crest FA 901, **Monitor Speakers:** (2) Altec 604G w/Mastering Labs cross over, (2) KRK 701, (2) Yamaha NS 10M, (2) Auratones 5C **Musical Instruments:** Steinway B, (10) collection and vintage tube amps, Korg M-1, Yamaha DX7II FD. **Other MIDI Equipment:** Vision Sequencer, **Video Equipment:** JVC 8250 3/4" video recorder, Toshiba 20" stereo monitor, Sharp 14" monitor, **Other:** Macintosh IIfx w/600MB drive, Digidesign Sound Tools, Digidesign deck, (3) isolation booths. **Rates:** \$100 per hour, \$1,000 per day lockout; video lockup \$50 per hour. **Specialization & Credits:** Baby Monster Studios is a full-service 24 track studio with all wood live room. Our clients include: Atlantic Records, BMG, Hugh Masakela, Committed Artists, SBK, Relativity Records, C.O.C., DEF American Records, Art of Origin, Enemy Records, Elliot Sharp, Zeena Parkins, David Shea, John Zorn, Epic Records, Prong, Mbongeni Ngema, John Cage, Bobby Previte, Mabou Mines, Kirk Nurock, Island Records, Elektra/Nonesuch, Wayne Horvitz, Robin Holcomb, A&M Records, John Cale, Swans, Black Rock Coalition/Ryko Disc.**

[24+] THE BARGE SOUND STUDIO INC.; 92 Lionshead Dr. W.; Wayne, NJ 07470-4014; (201) 835-2538. Owner: Jim Barge. Manager: Denise Moser.

[24+] BARKING SPIDER STUDIOS INC.; 12 Evergreen Rd., Sudbury, MA 01776; (508) 443-8318. Owner: Rob Bernstein/Steve Mallett. Manager: Steve Mallett. Engineers: Rob Bernstein, Steve Mallett. Dimensions: Studio: 11'x14', control room 13'x14'. **Mixing Consoles: Soundtracs Quartz 4800 w/40 I/O module, Fostex 812 12x8x2. **Audio Recorders:** Otari MTR-900L 24-track 2" w/autolock, Tascam 38 1/2" 8 track, Tascam 32 1/4" 2-track, Panasonic SV 3700 DAT, Sony TCD D3 DAT **Cassette Recorders/Duplicators:** (2) Tascam 112 **Noise Reduction Equipment:** Rocktron 180A 8 channel **Echo, Reverb & Delay Systems:** Lexicon PCM70 w/MRC, (2) Lexicon LXP-1, Lexicon LXP-5, Lexicon LXP-15, Eventide H3000 Ultra-Harmonizer, TC Electronic 2290, Yamaha SPX90, (2) Alessi Quadraverb, ART Multiverb, Roland DEP-5 multi-effect, Roland SDE-3000 digital reverb, (2) ART DR-2A digital delay. **Other Outboard Equipment:** Drawmer 1960 tube comp/mic pre, Drawmer DL241 comp/limiter, Drawmer D5201 dual gate, Drawmer M500 Dynamic Processor, Klark-Teknik DN360 dual 31 band EQ, Klark-Teknik DN410 dual 5 band parametric EQ, Klark-Teknik DN504 quad comp/limiter, Klark-Teknik DN514 quad gate, Ashly CL52-E, Tube Tech PE-1C tube equalizer, Summit Audio EQP-200A dual 3 band EQ, Ashly GFO 231 dual 31 band EQ, Ashly SG 35E phase gate, (2) BBE 422 Sonic Maximizer, Furman HA-6 headphone distributor, Goldline LM-27 RTA, Rane MF-15 dual 15 band EQ. **Microphones:** Neumann U87, AKG C-414, (2) AKG C-460, (2) AKG C 451, AKG D 12E, (2) Beyer M400, (4) Sennheiser MD-421, (4) Shure SM57. **Monitor Amplifiers:** Ashly Audio FET 2000M, Ashly Audio FET 1000C, SCS 2150A. **Monitor Speakers:** (2) Genelec 530 mid-field, (2) Yamaha NS-10M, (2) Tannoy AVM 6.5, (2) JBL 4406. **Musical Instruments:** Gibson Les Paul Standard, Fender Stratocaster, Akai S1000 HD sampler w/40MB hard drive, Alessis HR16, (3) E-mu Proteus/1, Roland V 220, (2) Roland D-50, Roland RB M. **Other MIDI Equipment:** MOTU MIDI Time Piece, JL Cooper MSB + JL Cooper PPS 1. **Other:** (2) Apple Macintosh IIfx 5/80, Apple Macintosh IIfx 5/105, (2) ADA MP 1 MIDI tube preamp, Roland JC 120 amplifier**

[24+] BARON & BARON PRODUCTION INC.; 1500 Broadway, Ste. 402; New York, NY 10036; (212) 768-2009; FAX: (212) 768-2765. Owner: Aaron Baron. Manager: John Limpert

[24+] BATTERY STUDIOS; 137-139 W. 25th St.; New York, NY 10001; (212) 627-8200; FAX: (212) 627-5285. Owner: Zomba Recording Corp. Manager: Christopher Rich. Engineers: Chris Trevelt, Tom Vercillo, Anthony Saunders. Dimensions: Room 1 studio 30'x30', control room 22'x18'. Room 2: control room 22'x18'. Room 3 control room 16'x18'. **Mixing Consoles: SSL 4064 G Series w 32 E series EQs + 32 G F Os Neve 8068 54 input w GML automation, 64-input, DDA BTRP 24 36-input. **Audio Recorders:** (3) Otari MTR 100, (2) Studer 827, (2) Studer A820 1/2", Studer A80 1/2", (2) Otari MTR 12, 1/2", Studer A807 2 1/4" track, Panasonic SRV 3700, (4) Panasonic SRV 3500, Sony PCM 2500, Sony PCM 1630, Sony DMR 4000, Sony DMR 2000, (3) X 880 w Apogee filters, Sony PCM 3348, (2) Sony PCM 3324A **Synchronization Systems:** (4) Lynx TimeLine. **Echo, Reverb & Delay Systems:** (2) Lexicon 480L, (9) Lexicon PCM42, (4) Lexicon LXP 1, (2) Eventide H3000 SE, (2) AMS RMX, (2) AMS DMX, (4) Lexicon PCM70, (3) PanScan, (4) UREI 1176, (4) LA 2A, (10) Drawmer gate, (3) Yamaha SPX900, (2) Lexicon Prime Time II, Klark Teknik DN36, (4) Pultec EQP 1A, (2) Yamaha REV5, GML 8200 **Monitor Amplifiers:** (2) Perreaux 9000, (3) Bryston 4B, Yamaha PC2602M, (2) Crown D 75. **Monitor Speakers:** (2) Tannoy FSMU, (2) Tannoy 6.5 & LGM, (5) Yamaha NS 10M. **Musical Instruments:** Juno 106, DX7, (2) M1, SPI200, MPC 60, Roland R8, Yamaha CY7. **Other MIDI Equipment:** SBX 80, MC500, S 100 w/hard drive, Mac SE w/Opcode Vision, Atari 1040 w/Notator, Matrix 1000, Proteus 1, M/R, MIDI moog **Video Equipment:** JVC 850. **Other:** Digidesign Sound Tools, Akai DD1000**

[24+] BAYSIDE SOUND; also REMOTE RECORDING, PO Box 503; Bayside, NY 11361; (718) 296-2403; FAX: (718) 428-1482. Owner: See Entertainment Ltd. Manager: Lil Dave



BEARVILLE STUDIOS
Bearsville, NY

[24+] BEARVILLE STUDIOS; PO Box 135; Bearsville, NY 12409; (914) 679-8900; FAX: (914) 679-4282. Owner: Estate of Albert Grossman. Manager: Ian Kimmel. Engineers: George Cowan, Chris Laidlaw, Michael Reiter. Dimensions: Room 1 studio A 60'x40', control room 20'x19'. Room 2 studio B: 30'x24'. control room 23'x18'. Room 3, barn, 30'x40'. **Mixing Consoles: Neve 8088 40x16x40, SSL 6000SE 56x32x56 w G Series computer, custom Bearsville 40x8. **Audio Recorders:** (3) Studer A800 MkIII 24 track, (2) Sony PCM 2500 professional R DAT, Studer A820 2 track 1/2", Studer A810 2 track 1/4", Studer A80VU 2 track 1/2", Studer A80RC 2-track 1/2", Studer B67 2-track 1 1/4" **Cassette Recorders/Duplicators:** (4) Tascam 122 MkII, (3) Tascam 122B, (6) Technics M85, (2) Nakamichi MR 1B. **Noise Reduction Equipment:** Dolby A 24 channel, (2) Dolby 361, dbx 206 2 channel, dbx 187 2-channel. **Synchronization Systems:** (2) TimeLine Lynx **Echo, Reverb & Delay Systems:** AMS RMX, (2) AMS DMX 15 80S, Lexicon 224XL, Lexicon PCM70, (4) Lexicon PCM42, Lexicon Prime Time II, Lexicon Prime Time, Publison Infernal Machine, Yamaha SPX90, (3) Yamaha REV7, (2) EMT 140ST, EMT 240, Live Chamber, (3) Yamaha SPX1000, Yamaha REV5, (2) Eventide H3000 **Other Outboard Equipment:** (2) Eventide H949, Eventide H910, (2) Klark-Teknik DN 34, DMP Cy closynics panner, (5) Pultec EQP, (3) Pultec MEQ, (8) Drawmer DS 201 gate, (6) Neve 32264 comp/lim, (4) UREI 1176LN, (2) UREI 1178, (3) Teletronix LA 2A, (4) UREI LA 3A, (2) Valley People rack, (4) dbx 160, (2) dbx 165, dbx 162, (4) Aengus graphic EQ, (2) dbx 902. **Microphones:** Neumann assorted, AKG assorted, EV assorted, Sennheiser assorted, RCA 77 DX, Sony ECM assorted, Shure assorted, Sanken CU 41, Beyer assorted, B&K 4011, PZM 130. **Monitor Amplifiers:** Perreaux, Crown, Yamaha, UREI. **Monitor Speakers:** UREI 813A, UREI 813B, Tannoy SRM12B, NF M8, Yamaha NS 10M, Boston Acoustics A60, R O R cubes, EV Sentry 100, Visonik David 7000. **Musical Instruments:** Bosendorfer grand piano, Yamaha grand piano, Yamaha DX7, Yamaha CP70 electric piano, Roland Jupiter 8, (2) Hammond B3, Leslie 122. **Specialization & Credits:** Bearsville Studios provides world class**

recording and rehearsal facilities in a relaxed country setting just two hours north of New York City. Spacious lodging with 32 channel cable TV on 100 acres with pool. Convenient to excellent restaurants and shopping in Woodstock. Fully equipped rehearsal barn complete with custom console, EQs, amps and speakers. Individual cue mixers in both studios.

[24+] BEARTRACKS; 278 Haverstraw Rd.; Suffern, NY 10901; (914) 362-1200; (800) 288-2335. Owner: Jay Beckenstein. Manager: Chris Bubacz. Dimensions: Studio 47'x30', control room 24'x22', 3 iso booths, 27' ceilings. **Mixing Consoles: SSL 4000 E (w/G upgrades and computer) 48x32. **Audio Recorders:** (2) Studer A820 24 track, Studer A80 2-track 1/2", Studer A80 2-track 1/4", Panasonic 3500 DAT. **Cassette Recorders/Duplicators:** (4) Nakamichi MR 1. **Noise Reduction Equipment:** (4) Dolby SR, (2) Dolby 361 A/SR. **Synchronization Systems:** TimeLine Lynx. **Echo, Reverb & Delay Systems:** AMS RMX 16, AMS DMX 15 80S, Publison DHM82, Lexicon 480L, Yamaha REV7, (2) Yamaha SPX90II, EMT 240, (2) Lexicon PCM42, Lexicon PCM70. **Other Outboard Equipment:** (12) Focusrite mic pre/EQ mod, (2) Drawmer DS 201 gate, (2) Teletronix LA-2A limiter, (2) UREI 1176 limiter, (2) Pultec EQP 1R EQ, Pultec MEO 5 EQ, (2) Fairchild Instruments tube limiter, (2) dbx 165 limiter, Drawmer 1960 stereo comp, dbx 162 stereo limiter, (2) dbx 902 de-esser. **Microphones:** (2) Neumann U87, (2) Neumann U92 (2) Neumann TLM170, (2) Neumann KM84, Neumann U47 tube, Neumann U47 FET, (4) AKG 414, (7) AKG 451, (2) AKG 460, AKG D 12, (2) Sennheiser 416, (9) Sennheiser 421, EV RE20, (5) Shure SM57, (2) Beyer 160, (2) Crown PZM, (2) B&K 4011. **Monitor Amplifiers:** McIntosh MC2500, (2) Ashly Audio 200FET, (3) Crown DC 300A. **Monitor Speakers:** (2) Tannoy SGM 10B w/Doug Sax upgrade, (2) Yamaha NS 10M studio, George Augspurger custom design, JBL, TAD components. **Musical Instruments:** E mu SP 12 drum machine, LinnDrum machine, Yamaha DX7 synth, Yamaha TX MIDI rack, Yamaha RX21L drum machine, Kurzweil 1000 PX, Korg M1. **Other MIDI Equipment:** Macintosh Plus w/Performer software. JL Cooper MSB MIDI patch bay. **Rates:** Block rates available. **Specialization & Credits:** Since its opening, Bear Tracks has gained a reputation as a state-of-the-art music production studio that offers a comfortable, relaxed and creative atmosphere to its clients. Located in the woods on the edge of Harman State Park and conveniently only 30 minutes from mid town Manhattan, this unique facility, built within the existing frame of a huge stone barn and farm complex, has a remarkable acoustic quality that has found great favor among both pop producers for the explosive drum sounds that can be obtained, and jazz and classical artists for its smooth, warm ambience. This spectacular acoustical quality combined with the commitment to provide its clients with the very best equipment current technology has to offer places Bear Tracks among the most exclusive and unique recording facilities in the world.**



BIG MO RECORDING
Kensington, MD

[24+] BIG MO RECORDING; also REMOTE RECORDING; 3301 Decatur Ave.; Kensington, MD 20895; (301) 946-7364. Owner: Ed Eastridge, John Sprung. Manager: Ed Eastridge. Engineers: Ed Eastridge, Jim Crenca, Greg Hartman, Alex Nesmith, Ron Freeland. Dimensions: Studio 26'x32', control room 24'x8'. **Mixing Consoles: Sony MXP 3036. **Audio Recorders:** (2) Sony APR-24, (2) Panasonic SV-3700 DAT I, Revov PR99 2-track (2) Panasonic 3500 DAT. **Cassette Recorders/Duplicators:** (4) Aiwa ADF800, (2) Sony DC DSM. **Noise Reduction Equipment:** Dolby A 28 channels, dbx 2 channels. **Echo, Reverb & Delay Systems:** (2) Lexicon PCM70, Lexicon PCM60, Roland DEP 5, Lexicon LXP 1, Lexicon M93 delay, (2) Yamaha SPX90, Klark-Teknik D 70. **Other Outboard Equipment:** Audioarts stereo parametric EQ, (2) UREI LA-3A, UREI stereo graphic EQ, (7) Valley People Gain Brain, dbx 900 rack w de-esser, comp/limiter, noise gate, parametric EQ, (2) TC Electronic TC 1140 parametric EQ, dbx 160 compressor, BBE 802, (6) Valley People Kepex. **Microphones:** (3) AKG 414EBS, (4) AKG C 535EB, (6) AKG C 451, (2) Crown PZM, (2) EV PL20, (2) Neumann U89, (4) Neumann U87, (2) Neumann KM84, (6) Sennheiser MD 421, (6) Shure SM57, (4) Shure**

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NORTHEAST

24-track studios

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SM58, (3) Beyer M500, (2) AKG 568. **Monitor Amplifiers:** Bryston, Crown DC-300, Crown D-150A, AMP 8000. **Monitor Speakers:** (2) UREI 811 Time Align, UREI 811C (studio), (2) Yamaha NS-10, (2) JBL 4408. **Musical Instruments:** Korg DDD-1 drum synth, Yamaha KX76 MIDI controller, Yamaha 802 synth, Roland GP-8 guitar effects, Yamaha TX81Z FM synth, Roland GM70 MIDI converter, Roland GR-300 synth guitar, Oberheim OB8 synthesizer, Kawai 9' grand piano, Akai S900 sampler, Akai S1000 sampler, Fender Vibroverb, Marshall JMP half-stack, Roland JC-120. **Video Equipment:** Panasonic WV-Z camera, RCA camera, JVC TM13V monitor, Panasonic 19" monitor, JVC CR-850U 3/4" deck.

[24+] BIOYA RECORDING STUDIOS; 32 Hoxey St.; Paterson, NJ 07501; (201) 742-7704. Owner: Len and Lou Argese. **Manager:** Len Argese.

[24+] BLANK PRODUCTIONS AND BLANK TAPES; also REMOTE RECORDING; 1597 Hope St., Stamford, CT 06907; (203) 968-2420; FAX: (203) 329-7193. Owner: Bob, Lola, Ken Blank. **Manager:** Bob Blank. **Engineers:** Laurie Russell, Bob Blank, Ken Blank. **Dimensions:** Room 1: studio 12'x12', control room 42'x23'; Room 2: studio 12'x15', control room 28'x15'; Room 3: studio 12'x12', control room 15'x18'. **Mixing Consoles:** (7) Yamaha DMP7D, Mackie CR-1604. **Audio Recorders:** (4) Akai ADAM DR-1200 24-track, (5) Panasonic SV-3500 DAT, Fostex E2 2-track w/CTR channel time code. **Cassette Recorders/Duplicators:** (6) Nakamichi MR2, (3) Tascam T-2640 high-speed duplication system, Denon HR3030. **Synchronization Systems:** (2) TimeLine Lynx w/Serial port. **Echo, Reverb & Delay Systems:** (7) Yamaha DMP7 digital mixer processor, (2) Yamaha SPX900 digital effects processor, Korg A3 digital effects processor. **Other Outboard Equipment:** (2) Summit EQF-100 tube equalizer, (4) Drawmer 201 noise gate, (4) Drawmer DL241 dual-auto compressor, (48) Audio Logic 202 noise gate, (2) Valley People Gain Brain II, Orban 245F stereo synthesizer, (2) Overquality Mandler, Roctron Hush 201 single-ended noise gate, (2) Symetrix 201 vocal processor. **Microphones:** Bruel & Kjaer 4011, AKG C-451EBU, Crown PCM 100, (3) Crown 200, Shure SM57 Beta. **Monitor Amplifiers:** Carver 2.0, (2) Hafler 2400. **Monitor Speakers:** (2) UREI 813, (4) Yamaha NS-10M. **Musical Instruments:** Kurzweil MIDI board, Korg M-1, (2) E-mu Emax SE, (3) Proteus 1XR, (3) Proteus 2XR, (2) Roland R-8 w/all cards, (3) Oberheim Matrix 1000, percussion drum kit w/Zildjan cymbals (2) E-mu Performer/1+, Roland D550, Roland JX-10, Yamaha TX802, (2) Yamaha TX81Z, Roland Juno-106, Casio CZ-101. **Video Equipment:** (2) Panasonic SV-7750 S-VHS, (2) Panasonic SV-7650 S-VHS, digital F/X random access video editor system, Kenpro patching rack, Delta Black signal generator. **Other:** Olympic swimming pool, 50" TV, steam room, weight room. **Digital Workstations:** (2) ProTools w/2 gigabyte hard drives.



BLUE JAY RECORDING STUDIO INC.
Carlisle, MA

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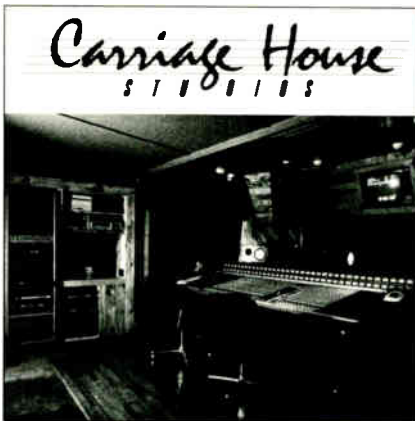
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[24+] BLUE JAY RECORDING STUDIO INC.; 669 Bedford Rd.; Carlisle, MA 01741; (508) 369-2200; (508) 369-0766. Owner: Robert and Janet Lawson. **Manager:** Bob Lawson. **Engineers:** Mark Wessel, Mark Tanzer, Tina Hansen. **Dimensions:** Studio 38'x28', (iso booths), control room 18'x19'. **Mixing Consoles:** SSL 4056E56 w/Total Recall & G Series computer (56-channel). **Audio Recorders:** (2) Studer A800 24-track, Studer A820 2-track 1/2" w/center time code, Studer A80 2-track 1/2", Studer B67 2-track 1/4", Sony JH-110B 2-track 1/4", dbx 700 digital, Sony PCM-2500 DAT, Panasonic DAT. **Cassette Recorders/Duplicators:** (7) Yamaha C300. **Noise Reduction Equipment:** Dolby SR XP-24, Dolby A 4-channel, Dolby SR 2-channel, dbx 180 stereo. **Synchronization Systems:** TimeLine Lynx. **Echo, Reverb & Delay Systems:** Lexicon 224XL, Lexicon PCM60, AMS RMX 16, EMT 140 stereo tube plate, AMS DMX 15-80, Lexicon Prime Time II, (2) Lexicon PCM42, Lexicon Prime Time, AKG ADR-68K digital effects proc., Yamaha REV7, many others. **Other Outboard Equipment:** (4) Pultec EOP, (3) UREI LA-2A, (2) Drawmer DS-201 stereo, (4) Ashly Audio SC34 stereo, (2) dbx 165A, (2) dbx 160X, (2) UREI 1176, UREI LA-4A stereo, Eventide Ultra Harmonizer H-3000, Yamaha SPX90, many others. **Microphones:** Telefunken 251 tube, AKG C-12 tube, Neumann U47 tube, (2) Bruel & Kjaer 4006, Bruel & Kjaer 4007, (2) Neumann U87, (2) Neumann KM86, Neumann KM84, (2) Neumann U64, AKG C-451E, (3) AKG 414, (2) Schoeps, and many others. **Monitor Amplifiers:** (3) Bryston 4, (3) BGW 250, McIntosh 2100. **Monitor Speakers:** UREI 813B (customized), Klipsch Cornwall studio, EV Sentry 100, Acoustic Research 18, (3) Yamaha NS-10M, Auratone. **Musical Instruments:** Fal cone 7" grand piano, Kurzweil 250 (advanced sampling model), Fender Stratocaster, Gibson Hummingbird guitar, Alecis HR-16 drum machine, percussion and snare. **Other MIDI Equipment:** Mac Plus computer w/Mark of the Unicorn Performer Series software. **Specialization & Credits:** Located 30 minutes from downtown Boston, Blue Jay offers state-of-the-art equipment and superior acoustics in comfortable, private surroundings. Constructed in 1979, the uniquely designed, earth-sheltered facility reflects a commitment to technical excellence as well as attention to the needs of creative artists. Credits include: Roy Orbison, Britny Fox, New Kids on the Block, Alice Cooper, Terrence Trent D'Arby, Amy Grant, Boston Pops & producers Neil Dorfsman, Danny Kortchmar, Tom Lord-Alge, Peter Asher, soundtrack for Dick Tracy.

[24+] BMG STUDIOS; 11336th Ave., New York, NY 10036; (212) 930-4000; FAX: (212) 930-4679. Owner: BMG. **Manager:** Hank Meyer, Susan Planer—gen mgr. **Dimensions:** Room 1: studio 10'x6', control room 40'x19'; Room 2: studio 50'x75', control room 35'x19'; Room 3: studio 50'x75', control room 35'x19'; Room 4: studio 30'x40', control room 28'x20'. **Mixing Consoles:** Neve VR Series VR60 w/Flying Faders, (2) Sony MXP-3036 36x24, (2) Sony MXP-3020 20x20, SSL G Series 56-input, Cedar de-noising. **Audio Recorders:** PCM-1630, DMR-4000, DAE-3000, Sony PCM-2500 DAT, Studer A827, Otari 24-track, MCI 24-track, numerous Ampex 2-track 1/4" and 1/2". **Echo, Reverb & Delay Systems:** Lexicon 480L. **Microphones:** Large array. **Monitor Speakers:** B&W 801, UREI 813, UREI 809. **Video Equipment:** JVC 3/4" decks. **Other:** Harmonia-Mundi BW102 equalizer, TimeLine Lynx Lockup.

[24+] CABIN FEVER RECORDING; also REMOTE RECORDING; PO Box 735; Fishers, NY 14453; (716) 924-0728. Owner: Bob Potter. **Manager:** Dillon.

[24+] CALF AUDIO; also REMOTE RECORDING; 157 Gray Rd.; Ithaca, NY 14850; (607) 272-8964. Manager: Al Grunwell.



CARRIAGE HOUSE STUDIOS
Stamford, CT

[24+] CARRIAGE HOUSE STUDIOS; 119 W. Hill Rd.; Stamford, CT 06902; (203) 358-0065. Owner: Johnny Montagness. **Manager:** Patricia Spicer. **Specialization & Credits:** Located in the grounds of an old New England estate, the Carriage House is 40 minutes from New York City, in Stamford,

Connecticut. The Carriage House is an artistic retreat offering state-of-the-art technology with grass-roots attention to service. Producers, engineers and artists have returned to the Carriage House because they have enjoyed an environment that promotes artistic focus and project manageability. The studio layout is very effective when trying to do many elements at the same time. The live room is made of hardwoods and stone, provides excellent acoustics for drums, vocals, acoustic instruments or live chamber application. The main room is half carpet/half wood with two iso-booths on either side and an air lock which doubles as a 3rd iso-booth. The control room sounds great! Looks great! and works all the time. The accommodations are very private and include 3 bedrooms, living room and kitchen. For further information please contact Johnny Montagness. (203) 358-0065.

[24+] CEDAR SOUND; also REMOTE RECORDING; 90 West St., Ste. 2210; New York, NY 10006; (212) 227-3896; FAX: (212) 227-3896. Owner: R.E. Freedman. **Manager:** Psqunari Frates.

[24+] CELEBRATION SOUNDS; 26 Summer St.; Pawtucket, RI 02860; (401) 728-0780. Owner: David Correia, Dan Moretti. **Manager:** Catherine Correia.

[24+] CHESTNUT SOUND INC.; 1824 Chestnut St.; Philadelphia, PA 19103; (215) 568-5797; FAX: (215) 568-5911. Owner: Joseph F. Alfonsi. **Manager:** Joseph F. Alfonsi. **Engineers:** Michael Harmon, Chris Gately, Jeremy Birnbaum, Doug Grigsby—programmer. **Dimensions:** Room 1: studio 36'x16', control room 17'x14'. Room 2: studio 6'x6', control room 8'x18'. **Mixing Consoles:** Sound Workshop Series 30 28x8 w/52 return in mixdown, Hill Multimax 16x4. **Audio Recorders:** Sony APR-24 24-track w/autolocator, Ampex ATR-800 2-track, Ampex ATR-700 2-track, Otari 5050 MkII 2-track, Tascam 32-2B 2-track, Panasonic SV-3500 R-DAT. **Cassette Recorders/Duplicators:** (3) Tascam 122, Otari DP-4050 CD2, Tascam 122 MkII. **Noise Reduction Equipment:** dbx 190. **Synchronization Systems:** JL Cooper PPS-100. **Echo, Reverb & Delay Systems:** AKG ADR 68K digital reverb/effects, Lexicon PCM60 w/2.0 update, Yamaha REV7, Ecoplate III, Ibanez SDR-100, Alecis MIDIdiver, Lexicon LXP-1 and LXP-5 w/MRC controller. **Other Outboard Equipment:** Eventide H910 Harmonizer, Aphex Aural Exciter, dbx 906 flanger, (2) dbx 904 gate, (2) dbx 905 EQ, dbx 902 de-esser, (2) UREI LA-4 comp, (2) UREI 545 EQ, (4) USAudio Gatebox gate, TC Electronic 2240 parametric EQ, UREI 1176 comp, Lang PEQ-2 EQ. **Microphones:** Neumann TLM170, (3) Sennheiser 421, (2) RCA BK-5, (2) Beyer M500, Altec 150A BASE tube, AKG: 414ULS, 414EB, (2) 460, D202, Shure: (2) SM81, SM61, SM57, Electro-Voice RE20 and RE11, **Monitor Amplifiers:** Hafler 250, Yamaha P2200, Yamaha P2100, Yamaha P2050, Carver PM-175, Crown DC-150. **Monitor Speakers:** Altec Big Reds w/Master Lab crossovers, JBL 4311, (2) Yamaha NS-10, Auratone 5C. **Musical Instruments:** Yamaha G3 grand piano, Sonor drum kit, Korg DDD-1 digital drum machine, Casio CZ-101 synth, Emax digital keyboard/sampler. **Other MIDI Equipment:** (2) Macintosh Plus w/Southworth MIDI interface, Performer sequencing software Version 3.42, complete disk library for Emax, control room-to-studio MIDI lines, Roland Octapad II, Roland D-110 multi-timbral sound module, Opcode editor/librarian software for D-110, Composer Music Printing software. **Video Equipment:** NEC DX-1000U VHS, Commodore monitor, additional rentals upon request. **Other:** Studio Technologies Mic PreEmmence, Monster ProLink Series I phase-aligned for Mic PreEmmence, Gallien-Krueger bass amp, Fender Twin Reverb guitar amp, Technics SL-1200 MkII turntable, Sony CDP-102 CD player, Traynor Block 100G guitar amplifier. **Rates:** Available upon request.

[24+] CLUBHOUSE STUDIOS; Box 373; Germantown, NY 12526; (518) 537-6305; FAX: (518) 537-5829. Owner: Paul Antonelli. **Manager:** Joe Vaccarno. **Engineers:** Paul Antonelli, Greg Gruntler, Joe Vaccarno. **Dimensions:** Room 1: studio 25'x45', control room 25'x27'. **Mixing Consoles:** APSI 26 mic/52 line inputs modified. **Audio Recorders:** Sony/MCI JH-24 16/24-track, Sony PCM-2500 DAT, Otari 5050B 1/2-track. **Cassette Recorders/Duplicators:** (5) Tascam 122. **Synchronization Systems:** Adams-Smith Zeta-3. **Echo, Reverb & Delay Systems:** AKG ADR 68K MIDI digital effects processor, Eventide H3000SE Ultra Harmonizer, TC Electronic 2290, Lexicon PCM70 processor, Lexicon LXP-5, Lexicon LXP-1, Lexicon MRC MIDI remote controller, Alecis Quadraverb, (2) Yamaha SPX90, Yamaha R1000 digital reverb, Lexicon PCM 41. **Other Outboard Equipment:** (4) Focusrite ISA 110 mic/line preamplifier, (4) John Hardy M-1 mic preamplifier, Altec A322c tube limiter, (2) BSS 402 stereo compressor/limiter, (3) BSS 502 MIDI noise gate, BBE 802 processor, (2) Passac resonance systems, Altec 438 compressor, BBE 422, ADI 1000 (tube) compressors. **Microphones:** (2) Neumann U87, (2) AKG C-414, (3) AKG C-451, AKG C-460, AKG D-112, AKG 747, AKG 310, (4) Sennheiser 421, Beyer M201, (5) Shure SM57, (2) Neumann AKM84, AKG-422, Sony ECM-22. **Monitor Amplifiers:** Perreux 6000 MOSFET, (2) Crown DC-300, Crown PSA-2. **Monitor Speakers:** Tannoy NFM-8, Tannoy PBM-6.5, Yamaha NS-10s, Turbo TMS-1, Tannoy DMT-125. **Musical Instruments:** Gretsch drum kit, E-mu Emulator II, Linn 9000 w/Forat update, Roland D-50, Roland Octapad, Korg Polysix, Marshall amp, Mesa/Boogie amp. **Other MIDI Equipment:** 360 Systems MIDI patch bay. **Video Equipment:** JVC CR6650U 3/4" VCR w/remote, Sony 20" monitor. **Other:** Macintosh IIfx, CDC 600MB external hard drive, Digidesign

Sound Tools, Opcode Studio 3 SMPTE interface, Opcode Vision sequencing software, 11" Radius monitor, studio wired with Monster studio series cable. **Rates:** Call for rates.

[24+] **COURTLEN RECORDING;** 149 MaQuan St.; Hanson, MA 02341; (617) 294-8316; (617) 294-1218. **Owner:** Frederick Danner. **Manager:** Patricia Danner. **Engineers:** Bob St. John, Fred Danner, Anthony J. Resta, Jeff Calder, Paul Hager. **Dimensions:** Studio 26'x24', control room 18'x15'. **Mixing Consoles:** Klark-Teknik AMR-24 36x24, ARMS automation and disk mix. **Audio Recorders:** Sony/MCI JH-24 24-track w/ALIII, Otari MTR-10 2-track, Otari MX-5050B 2-track. **Cassette Recorders/Duplicators:** Sony TC-W7R. **Noise Reduction Equipment:** Dolby SR 24-track. **Synchronization Systems:** Adams-Smith Zeta-3. **Echo, Reverb & Delay Systems:** Lexicon 200, Lexicon PCM41, (1) TC Electronic 2290, (3) Yamaha SPX90, Lexicon LXP5, Lexicon PCM42, (2) Yamaha SPX900. **Other Outboard Equipment:** (2) Teletronix LA-2A, Brooke-Siren DPR-402, (2) dbx 160, Symetrix 522, (2) Gatec. (2) Ashly Audio SG33, dbx 165, Aphex B, Loft 440, Klark-Teknik DN-360B, Alesis DL-4, Wendell Jr., (3) dbx 166. **Microphones:** (2) Neumann U87, Neumann TLM170, (2) B&K 4000, (2) AKG 414, (2) AKG 451, (2) AKG 452EB, EV RE20, (4) Sennheiser 421, AKG D-12E, (20) Shure SM57 and SM58. **Monitor Amplifiers:** (2) Ashly Audio 500 FET, (2) Ashly Audio 200 FET, Crown, McIntosh. **Monitor Speakers:** (2) Tannoy SGM-1000, (2) Yamaha NS-10M, (2) Tannoy SRM-12B. **Musical Instruments:** Anything upon request. **Other MIDI Equipment:** (2) Macintosh computers w/Vision, Performer, Finale, etc. **Rates:** Please call.

[24+] **COVE CITY SOUND STUDIOS INC.;** 7 Pratt Blvd.; Glen Cove, NY 11542; (516) 759-9111; FAX: (516) 759-4963. **Owner:** Richie Cannata. **Manager:** David Barratt. **Engineers:** Tom Yezzi, Bob Cadway, Dan Hetzel, Denny Mc Nerney, Rick Bieder. **Dimensions:** Room 1: studio 40'x35'x22', control 30'x18'x12'. Room 2: control 17'x15'x14'. **Mixing Consoles:** Neve 8068. **Audio Recorders:** Studer A820, Studer A80, Studer B67 2-track. **Cassette Recorders/Duplicators:** (2) Tascam 122 MkII, Nakamichi MR1, Panasonic 3500 DAT. **Noise Reduction Equipment:** (4) dbx 160 VU, (3) dbx 160X, (2) Neve compressor/limiter, (5) Kepex II, (4) Drawmer gate. **Synchronization Systems:** TimeLine Lynx lockup, Aphex Studio Clock. **Echo, Reverb & Delay Systems:** AMS reverb, RMX 16, Lexicon PCM70, PCM60, (2) PCM42, 224XL, Yamaha REV7, (2) SPX900, SPX90, Eventide 969, 949, H3000, Roland SRV-2000. **Other Outboard Equipment:** (8) Massenburg GML mic preamps, (8) Massenburg GML 5-band parametric EQs, (2) Pultec EQP-1A, (3) API 550A EQs, UREI 1176LN. **Microphones:** (4) AKG 414, (4) AKG 452, (2) AKG D112E, (2) Electro-Voice RE20, (2) Neumann U87, (15) SM57, (7) 421, 441, (2) AKG G-460B, (2) SM81. **Monitor Amplifiers:** (2) McIntosh 225, Briston 4B, Crown DC-300A, Crown D-150, McIntosh 2155. **Monitor Speakers:** (2) UREI 813B, Westlake BBSM-5, (2) Yamaha NS-10M. **Musical Instruments:** (2) Akai S1000, Akai S-950, Roland R-8, Akai MPC60, E-mu Emulator II, all MIDI gear available, live drum kit and various guitar amps. **Other MIDI Equipment:** All MIDI gear, sequencers, samplers. **Specialization & Credits:** Large room 22-foot high ceiling, excellent tracking, overdubbing and 48-track lockup. Credits: Taylor Dayne albums *Tell It To My Heart* and *Can't Fight Fate*, Mariah Carey, Donny Osmond, Hall & Oates, Natalie Cole, Lita Ford, TNT, Brenda K. Starr, Lisa Stansfield, Eric Carmen, Hunter Hanes, Remixes by Whitney Houston, Martika, Kid Creole, Linear, Appollonia, Tracy Spencer. Two full MIDI suites with programmers for complete MIDI production. Call for full equipment list and studio rates.



CRYSTAL SOUND RECORDING
New York, NY

[24+] **CRYSTAL SOUND RECORDING;** also REMOTE RECORDING; 220 W. 19th St., 6th Fl.; New York, NY 10011; (212) 255-6745. **Owner:** Larry Buksbaum, Steve Vavagakis. **Manager:** Sharon Amadola.

[24+] **DAJHELON PRODUCTIONS INC.;** also REMOTE RECORDING; 234 East Ave.; Rochester, NY 14604; (800) 836-0438; (716) 232-1480; FAX: (716) 546-1681. **Owner:**



DAJHELON PRODUCTIONS INC.
Rochester, NY

David C. Schumaker, Robert V. O'Connor. **Manager:** Ethan Porter. **Engineers:** Steve Forney, Jeff Riedmiller, Phil Thorne. **Mixing Consoles:** Amek Mozart w/Supertrue automation, Fostex 1840, Akai 1214. **Audio Recorders:** Sony APR-24 24-track, Sony APR 50032-track, Fostex E16 16-track, Fostex E2 2-track, Parasonic SV-3700 R-DAT, Sony 2500 R-DAT. **Noise Reduction Equipment:** Dolby SR-A on mxdown. **Synchronization Systems:** Sony integrated sync system 5.01.05. **Echo, Reverb & Delay Systems:** Eventide H3000 SE, Lexicon 300, Lexicon LXP15, Lexicon PCM70, Lexicon PCM42, (2) Alesis Quadverb, Drawmer 1960, Drawmer M500, (2) Drawmer DS201, (4) Ashly SG35E, Klark-Teknik DN500, BBE 822A, BBE 422, (2) Alesis MIDverb, Summit Audio EOP-200A EQ. **Microphones:** (4) Microtech Gefel UM70, Neumann TLM170, Neumann KM84, (2) AKG 414ULS, (2) AKG 451EB, (10) Sennheiser M-421U, (4) Shure SM57, (2) Shure Beta 58, (4) Countryman Type 85 direct boxes. **Monitor Amplifiers:** (2) Haller 500, (2) Haller Pro 5000, (2) Ashly FET 500. **Monitor Speakers:** Tannoy System 125-DMT, Meyer HD-1, Tannoy PBM8, (2) Tannoy PBM-6.5, Yamaha NS-10M studio. **Musical Instruments:** Korg M1, M3R, 01/WFD, DDD-1, Roland D-50, Mks-50, TM-32, SH101, Kurzweil 1000 AX Plus, MIDI board/controller, Roland Octapad II, (2) Yamaha DMP7, Steinway 7' grand piano, Yamaha TX802, Emulator III, (2) Alesis HR16/HR16B. **Other MIDI Equipment:** Macintosh and Atari computers, Performer, Vision, Cubase, Alchemy, Finale. **Video Equipment:** Sony BVH-3100 1" VTR, Sony BVJ-950 3/4" VTR. **Digital Workstations:** Digidesign digital workstation.

[24+] **DAK AUDIO 24 TRACK;** also REMOTE RECORDING; 7249 Airport Rd; Bath, PA 18014; (215) 837-7550; FAX: (215) 837-0773. **Owner:** Jon K. Miller. **Manager:** Chris Miller.



DC POST INC.
Washington, DC

[24+] **DC POST INC.;** 1155 21st St. NW; Washington, DC 20036; (202) 466-7678; FAX: (202) 223-0992. **Owner:** Tom Angell. **Manager:** Adam Hurst. **Engineers:** Skip S. Relle. **Dimensions:** Room 1: studio 13'x7', control room 18'x22'. Room 2: studio 13'x7', control room 18'x22'. **Mixing Consoles:** DDA DCM232 2x32 input, Yamaha MR142. **Audio Recorders:** Studer A820 24-track, Studer A820 2-track, NED Post Pro 8-track Direct-to-Disk, Panasonic SV-3700 DAT. **Cassette Recorders/Duplicators:** Studer A727 CD player. **Noise Reduction Equipment:** Dolby SR on all tracks. **Synchronization Systems:** Alpha Audio Boss System w/TimeLine Lynx. **Echo, Reverb & Delay Systems:** Lexicon 480L, Lexicon PCM70, Quantec QRS/X1 room simulator, Eventide H3000 Ultra Harmonizer, dbx and Valley International noise gate/compressor, Klark-Teknik DN716 digital delay, BBE 802 audio compressor, Drawmer D5201 noise gate, Aphex Compellor. **Microphones:**

—LISTING CONTINUED ON NEXT PAGE

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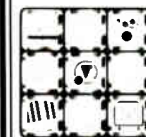
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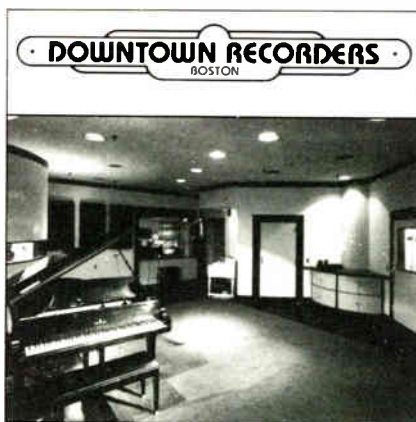
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NORTHEAST 24-track studios

—LISTING CONTINUED FROM PREVIOUS PAGE

AKG C-414, Neumann U47, **Monitor Amplifiers:** Brynton 4BP, (2) Crown D 75. **Monitor Speakers:** Tannoy FSMU, Tannoy PBM 6.5, Klark Teknik Jades, Auratone. **Musical Instruments:** Synclavier w/32 MB, 32 poly, 32 FM, 16 outs, optical disk, Roland D 550, Yamaha TX802. **Video Equipment:** All formats (1", Beta SP, 3/4 SP, D2, VHS), Mitsubishi 35" monitor. **Specialization & Credits:** On air programming for The Learning Channel: music composition and SF Xediting for ABC/NHK *Pearl Harbor: Two Hours That Changed the World*; Washington Post's production *The Secret Files*, *Washington, Israel and the Gulf*, local and national commercials for MacDonalds, COMSAT, etc.

[24+] **D.K. U.S.A. STUDIOS**; 353 W. 48th St.; New York, NY 10036; (212) 582-5732; FAX: (212) 581-9045. **Owner:** Daichi Kosho USA Inc. **Manager:** Leslie Ballard



DOWNTOWN RECORDERS
Boston, MA

[24+] **DOWNTOWN RECORDERS**; 537 Tremont St.; Boston, MA 02116; (617) 426-3455. **Owner:** Peter Cheung. **Manager:** Peter Cheung. **Engineers:** Joe Cunco—chief engineer, Vincent Buckholz—second engineer. **Dimensions:** Studio 23'x28' plus four iso booths. **Mixing Consoles:** MCI 636 modified 28x4 fully automated Roland M 24E 24 channel line mixer. **Audio Recorders:** Panasonic SV-3500 DAT, Tascam DA-30, MCI JH 24 24 track, MCI JH-110 2 track 1 2" and 1 4", Otari 5050B 2 track 1/4", Sony PCM-701 ES digital mastering. **Cassette Recorders/Duplicators:** Tascam 122 MkII. **Echo, Reverb & Delay Systems:** Lexicon LXP-1, Lexicon LXP-5 w/ MRC controller, Alesis Quadraverb, Lexicon 224XL digital reverb w/LARC, Lexicon PCM70, Lexicon Prime Time, Lexicon Super Prime Time, Lexicon PCM42, Korg DRV-3000, Yamaha SPX90, Alesis MIDivero II, TC Electronic 2290 16 bit sampler/processor, DeltaLab D-4. **Other Outboard Equipment:** BBE 802 exciter, Aphex B Aural Exciter, (2) UREI LA 4 compressor/limiter, (2) UREI 1176 compressor/limiter, (2) dbx 165A compressor limiter, Attec 436B tube compressor limiter, (2) Ashly Audio SC50 compressor limiter, (2) Valley People Dyna-Mite stereo gate, (4) Ashly Audio SC33 stereo gate, (2) Ashly Audio SC66 full stereo parametric EQ, Orban 674A 8-band stereo parametric EQ, Ashly CL52 stereo compressor, Sontex stereo mic pre. **Microphones:** (2) Neumann U87, (2) Neumann KM88, Neumann KM84, (2) Neumann KM85, (2) AKG 414EB, (2) AKG 451E, AKG D 12f, (2) EV RE20, EV RE 15, (2) Crown PZM, (6) Sennheiser MD 421, (2) Sennheiser MD-441, Beyer M260, (2) Shure SM81, Shure SM53, (3) Shure SM57, Pearl DC96. **Monitor Amplifiers:** (3) Ashly Audio FET 500, Ashly Audio FET 200, Crown 300A. **Monitor Speakers:** UREI 813A custom br-amped 800 watts per side, Yamaha NS-10M, Tannoy PBM-8, Auratone, JBL 4311 stud o. **Musical Instruments:** Roland D-50 synth., TR 808, TR 909, R8 drum machines, Roland MC 500 sequencer, Emulator II w full sample library, Hammond B-3 organ w/Leslie, Emulator SP-12 turbo, LinnDrum, Yamaha DX7, SH101, TB 303, (2) Technics SL-1200MK2 turntables. **Rates:**

Call for rates. **Specialization & Credits:** Clients: K9 Posse, Arista, Atlantic Records Remix. Recent albums include The Pixies, Roger Miller and Marimolin w/Lyle Mays. National credits include Aerosmith, Peter Wolf, Nils Lofgren, Bon Jovi, Bonnie Bramlett. **Direction:** We've always believed that a great performance makes a great recording, so we make sure that the entire recording process is relaxed and enjoyable, while keeping everything at the highest professional standards. Our room was designed for a comfortable feel and a great live sound. Our staff is experienced, knowledgeable, and they know music and the music business so they can give you all the assistance you desire. All of our engineers are also musicians so they know what it's like to be on the other side of the recording window. We're here to make your recording experience creative and enjoyable and, above all, to record great tracks. That's what we're best known for.

[24+] **DREAMLAND RECORDING STUDIO**; PO Box 383; Bearsville, NY 12409; (914) 338-7151; FAX: (914) 339-2505. **Owner:** Joel Bluestein. **Manager:** Joel Bluestein, Sarah F. Chi-onesse, asst. mgr. **Engineers:** David Cook chief engineer, John Yates, Dan McLoughlin, Jay Bender. **Dimensions:** Room 1: studio 40'x50'x33', control 25'x20'. Room 2: studio 25'x18'x12', control 25'x20'. Room 3: studio 15'x15'x9', control 20'x15'x9'. **Mixing Consoles:** API 3232 36x16x32 with 40/554, 7/550A, 5/560A, 2/560B EOs; API 1604 16x16x4. **Audio Recorders:** Studer A820 24-track 2", Otari MTR-90 II 24-track, Ampex ATR 102 2-track 1/4" and 1/2", Panasonic SV-250 portable DAT, Panasonic 3500 DAT. **Cassette Recorders/Duplicators:** (5) Tascam 122 MkII. **Synchronization Systems:** TimeLine Lynx. **Echo, Reverb & Delay Systems:** Two live rooms 40'x50'x33' and 25'x18'x12', (2) Lexicon 480L digital effects system, Lexicon 224, TC Electronics 2290, Eventide 3000 w/ sample option reverb, (2) Yamaha REV7, (2) Yamaha SPX1000, Korg SDD 3000, (6) Drawmer DS 201 stereo noise gate, Drawmer 1960 stereo tube comp/limiter pre amp, Neve 33609 stereo comp/limiter, (3) Lydtkraft CL 1A tube comp/limiter, (3) Universal Audio 175-B tube limiting amp, (3) UREI 1176 & 1178 comp/limiters, (5) Teletronics LA 3A audio levelers, (2) dbx 160 comp/limiter, (4) dbx 160X comp/limiter, (2) dbx 165A Over Easy comp/limiters, Lydtkraft PE-1A tube EQ, (7) Pultec EQ, (6) Neve 1073 I/O modified w/4-band EQ, (4) Focusrite ISA 116 mic preamp, (2) Lydtkraft MP-1A stereo tube mic preamp, (4) GML mic preamp, GML Model 8200 dual 5 band parametric EQ, Demeter stereo tube direct box. **Microphones:** (3) Telefunken, (15) Neumann, (2) Microtech Gefell, (11) AKG, (4) Schoeps, (10) Sennheiser, (5) Beyer, (3) Sanken, (3) Calrec, (5) RCA, (10) Shure, (2) Countryman, (3) Electro-Voice. **Monitor Amplifiers:** (2) Perreux 6000B, Brynton 4B, (2) McIntosh 2100, (3) Crown DC-300. **Monitor Speakers:** Meyer HD-1, UREI 813-B studio, Yamaha NS 20M and NS-10M studio, Tannoy PBM-6.5, Westlake BBSM10. **Musical Instruments:** Stenway 1934 B grand piano, Hammond B-3 organ w/Leslie floor speaker unit, Yamaha DX7 IIFD, Roland Super Jupiter MKS 80, Roland D-550 linear synthesizer, Roland U 220 sample player, E-mu Proteus sample player, Forat F-16 sampler, Akai S900, (6) individually adjustable stereo cue stations, in-house collection of guitars and amps by Fender, Gibson, Rickenbacker, Martin, Guild, Marshall, Vox, Ampeg and Roland. **Rates:** Please call in for rates. **Specialization & Credits:** Dreamland offers accommodations, a full kitchen, outdoor swimming pool, production assistance with in-house musicians and video support. Dreamland Recording Studio has established itself as one of the premiere cutting environments in the country with the ambience of a 100-year-old church and various acoustical environments to choose from. Due to be upgraded in the spring, 1992 will see the birth of a larger state-of-the-art control room. Dreamland has hosted clients such as the B-52's, 10,000 Maniacs, Suzanne Vega, Michelle Shocked, Joe Jackson, Bobby McFerrin, Yo Yo Ma, Jack DeJohnette, Pat Metheny, Graham Parker, Buckwheat Zydeco, The Golden Palominos, The Judy Bats, Marshall Crenshaw, Jill Sobule, Bill Frisell, Hot Tuna, NRBQ and Syd Straw.

[24+] **D.S.M. PRODUCERS INC.**; also REMOTE RECORDING; 161 W. 54th St.; New York, NY 10019; (212) 245-0006; FAX: (212) 265-5726. **Owner:** Corporation. **Manager:** Jamie Chaleff.

[24+] **EAST SIDE FILM AND VIDEO**; 216 E. 45th St., 3rd Fl.; New York, NY 10017; (212) 867-0730. **Owner:** The Gordon Media Companies. **Manager:** Lizzie Schwartz. **Engineers:** Bob Giammarco, Tom Jucarone, Glenn Laredo, Rod Zavala. **Dimensions:** Room 1: studio 10'x12', control room 36'x20'. Room 2: studio 10'x15', control room 32'x20'. Room 3: studio 10'x15', control room 30'x20'. Room 4: studio 10'x15', control room 19'x25'. Room 5: studio 12'x15' control room 18'x30'. **Mixing Consoles:** (2) SSL Series 6000, (3) SSL custom 4000 G series. **Audio Recorders:** NED ProStudio and (3) SSL ScreenSound digital workstations, (2) Studer A800, Otari MTR 90, (2) Studer A820, (13) Otari MTR-10 2/4-track 12 TC, (2) Naigra 4.2 IV-S, (4) Magna-Tech Series 2000 6-track and 30-frame capability. **Noise Reduction Equipment:** 96 tracks Dolby B, 24 tracks Dolby SR. **Synchronization Systems:** (5) Lynx edit systems. **Echo, Reverb & Delay Systems:** AMS RMX 16, AMS DMX 15-80, (2) Lexicon 224XL, Yamaha SPX1000, Lexicon 488. **Other Outboard Equipment:** Yamaha REV5, Yamaha REV7, Aphex, Dynaflex, (2) Pultec EQ, (2) Neve compressor, (6) UREI 7110, (2) Eventide 3000. **Microphones:** Neumann U87, Neumann U67. **Monitor Amplifiers:** (4) Brynton 4B, (2) Hafler 500, (3) Brynton 7B. **Monitor Speakers:** (5) UREI 813, (6) Yamaha NS-10M, (2) MDM 4, (10) Auratone. **Musical Instruments:** Akai S900 sampler, Ensoniq EPS,

Voyetra 8 synthesizer, Roland 707 drum machine **Video Equipment:** (2) Sony BVH 2000 1", Sony BVW-70, Sony 9850 3/4", Sony 5800 3/4", (4) JVC VHS, Sony DVR-20 (D 2), Sony BVU 950.

[24+] **EASTSIDE SOUND; REMOTE RECORDING only; 98 Allen St., New York, NY 10002; (212) 226-6365; FAX: (212) 226-0788. Owner:** 98 Allen Opco Inc **Manager:** Lou Holtzman, RJ Cicero. **Engineers:** Lou Holtzman, Nicholas Prout, A W Dick. **Dimensions:** Room 1: studio 25'x45', control room 20'x20'. **Mixing Consoles:** Harrison Series Ten "B". **Audio Recorders:** (2) Sony APR 24 48-track, Studer A80 2-track, Sony 2500 DAT, Sony 1900 DAT. **Synchronization Systems:** Garfield Masterboat, Adams-Smith Zeta-3. **Echo, Reverb & Delay Systems:** Lexicon 480, Lexicon 42DDL, Eventide H3000, (2) Instant Flanger, Boss DDL, TC Electronic TC2290 DDL, SPX90, Proverb, Master Room C, Master Room MkII, Yamaha 1500 DDL. **Other Outboard Equipment:** (2) UREI LA-4, (2) JBL 7110, (2) dbx 160X, (2) BBE 202R, (4) Drawmer gate, Drawmer tube/complimitor, Symetrix EQ, UREI 530 EQ, Klark Teknik EQ, Trois EQ. **Microphones:** Wide variety of microphones. **Monitor Amplifiers:** (3) Harrison, (2) Hafler. **Monitor Speakers:** (4) Roger Quedest. **Musical Instruments:** Steinway B grand piano, DX7, TX 816, Akai 950. **Other MIDI Equipment:** Sound Tools S20-60 minutes Mac Wien, Garfield MB. **Other:** Macintosh Ix, Macintosh II, Macintosh SE/30. **Specialization & Credits:** Eastside is known for its comfortable one on one atmosphere, with a professional staff that assists in accomplishing your goals. Our rates are competitive, and we make every effort to bring your project in on budget. The Series Ten B was the first and only totally automated audio console. It can be instantly configured for use in video post, motion picture production, music recording and mixing, interfacing with the Macintosh II, the Series Ten B stores all parameters and settings of every module, grouping faders and monitor control. Every knob and switch resets automatically, and every move is followed in real time and replicated exactly during playback. The Series Ten B is designed to free producers and engineers to use their creative talents in endless ways. If you think that you've mixed on a totally automated console then be prepared to be pleasantly surprised.



EDGEFIELD RECORDING COMPANY
Adamstown, MD

[24+] **EDGEFIELD RECORDING COMPANY; 5523 Mountville Rd., Adamstown, MD 21710; (301) 874-5394. Owner:** John Walker, Karen Kerber **Manager:** John Walker **Engineers:** Shawn Dennison, Jeff Poehler, Johnny Twilight. **Dimensions:** Room 1: studio 10'x10', control room 11'x11', Room 2: studio 8'x9', Room 3: studio 10'x12', Room 4: studio 10'x12'. **Mixing Consoles:** Soundcraft Series 200B 50x12x8 w/240 point patch bay, Tascam MM1 sub 28x4x2 w/MIDI mutes. **Audio Recorders:** Tascam MS16 HS 16 track 1" 30 ips, Panasonic SV-2700 DAT, Technics SV-DA10 DAT. **Cassette Recorders/Duplicators:** (2) Tascam 122B. **Noise Reduction Equipment:** (3) dbx 929. **Synchronization Systems:** JL Cooper PPS100 SMPTE-to MIDI. **Echo, Reverb & Delay Systems:** ART 01A reverb, ART DR2A reverb, ART PD3 DDL, DeltaLab ADM 1024 DDL, (2) Roland SDE-1000 DDL, Yamaha SPX90 II MFX, Digitech DSP MFX, ART SGE MFX. **Other Outboard Equipment:** (2) UREI 1176LN, UREI 539, dbx 165A, (2) dbx 160X, dbx 166, Valley 415, Aphex Type C, BBE 702, (5) Audio Logic MT44, (2) Drawmer DS-201, (2) Tascam PF40. **Microphones:** AKG 414, Sony C-500, (2) Neumann KM84, (4) Sennheiser 421, Electro Voice PL20, (4) Shure SM57, (2) Shure SM58, additional models on request. **Monitor Amplifiers:** Ashly FET 500, Ashly FET 200, Soundcraft. **Monitor Speakers:** UREI 809, Yamaha NS-10. **Musical Instruments:** Yamaha KX88 keyboard MIDI controller, Yamaha DX7iIFD synth, Oberheim 8 voice analog synth, Minimoog synth, Rhodes 73 suitcase piano, drums on request, (3) Yamaha TX81Z FM synth modules, (2) Korg Symphony sample player. **Other MIDI Equipment:** Akai S1000 26MB RAM, PS Systems 44MB SCSI removable hard drive media, (2) IBM w/Texture, Personal Composer and (8) other progs., (2) Roland MPU 101 MIDI to analog interface, JL Cooper MSB patch bay, Lexicon MRC MIDI remote controller, JL Cooper MixMate.

—LISTING CONTINUED ON NEXT PAGE

Q. A.

What do
The Boston Pops,
Maurice Starr,
The New Orleans
Jazz & Heritage
Festival, and
American
Playhouse
have in common?

GBH Mobile



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—LISTING CONTINUED FROM PREVIOUS PAGE

fader automation controller, (3) Niche 8x8 audio control modules, Akai MB73 6x7 effects send router, Akai ME35T 8-channel audio trigger. **Other:** Tripplite line conditioner, various custom routing and control capabilities. **Digital Workstations:** Microsoft Works Databases, standard MIDI File offline editing w/Texture, music printing and scoring w/Personal Composer.

[24+] ELECTRIC LADY STUDIOS; 52 W. 8th St., New York, NY 10011; (212) 677-4700; FAX: (212) 228-8054. Owner: Alan Selby. **Manager:** Mary Campbell.

[24+] EPSILON RECORDING STUDIO; also REMOTE RECORDING; 16 Volusia Ave., Hamilton, NJ 08610; (609) 586-6965. Owner: John Muradyan. **Manager:** John Muradyan.

[24+] JIM FEMINO PRODUCTIONS; also REMOTE RECORDING; 429 S. Lewis Rd., Royersford, PA 19468; (215) 948-8228; FAX: (215) 948-4175. Owner: Jim Femino. **Manager:** Jim Femino.

[24+] FILMSPACE; also REMOTE RECORDING; 615 Clay Ln., State College, PA 16801; (800) 346-8615; FAX: (814) 237-8588. Owner: Tom Keiter. **Manager:** Dave Paterson.

[24+] FLITE THREE RECORDING LTD.; 1130 E. Cold Spring Ln., Baltimore, MD 21239; (410) 532-7500; FAX: (410) 532-5419. Manager: Louis Mills Jr., Rita O'Brennan.

[24+] FORGE RECORDING STUDIOS INC.; also REMOTE RECORDING; Lincoln & Morgan St., Phoenixville, PA 19460; (800) 331-0405; (215) 935-1422; FAX: (215) 935-1940. Manager: Warren R. Wilson. **Engineers:** Mark McNitt, Warren Wilson. **Dimensions:** Studio 40'x50', control room 40'x30'. **Mixing Consoles:** Neotek Elite 32x24. **Audio Recorders:** Sony 3324 digital, 3402, 1630 w/3000 editor, Ampex ATR-100s, Otari 5050. **Cassette Recorders/Duplicators:** MTI, Versydne bin systems, Tandberg. **Noise Reduction Equipment:** Dolby—all and dbx. **Synchronization Systems:** Audio Kinetics. **Echo, Reverb & Delay Systems:** Klark-Teknik DN780, Lexicon PCM70, BASE, EMT 258, Eventide complete 3000 Harmonizer, Valley People Noise gates, dbx 161 limiters, Drawmer noise gates. **Microphones:** Neumann, AKG, Shure, Electro-Voice, Sennheiser, Crown, Sony—many models. **Monitor Amplifiers:** Crown. **Monitor Speakers:** JBL and UREI 813. **Musical Instruments:** Kurzweil 250, Baldwin grand, Rogers drum set, Octapad, Alesis drum machine. **Other:** Complete Sony digital editing #1630 premaster system. **Rates:** Call for brochure and demo.



GBH MOBILE
Boston, MA

[24+] GBH MOBILE; REMOTE RECORDING only; 125 Western Ave., Boston, MA 02134; (617) 492-2777 x2302; FAX: (617) 864-7927. Manager: John Voci. **Mixing Consoles:** Amek 39x24x2, (4) Yamaha M406 submixer. **Audio**

Recorders: (2) Otari MTR-9011 24-track, (2) Panasonic SV-3500 DAT, (2) Otari MkIII 2-track. **Cassette Recorders/Duplicators:** (2) Nakamichi MR1. **Noise Reduction Equipment:** Dolby SR 24-channels. **Echo, Reverb & Delay Systems:** Lexicon 224 reverb, (8) dbx 903 compressor/limiter, (2) Amek P/MO1 EQ, (2) Amek BPF00 EQ, (2) Amek CL01 compressor/limiter, Lexicon PCM70 reverb, (2) Lexicon PCM41 delay, dbx 162 stereo compressor/limiter. **Microphones:** B&K 4006, 4011; Neumann KM83, KM84, SM23, U87, KM130, KM140, KM150, Neuman SM69; Shure SM57, SM58, SM81; AKG C-414B; Sennheiser MD-211, MD-421; Electro-Voice RE20, RE16; Schoeps CMC5, MK8, MK4; Crown PZM. **Monitor Amplifiers:** Bryston 4B, Crown D75. **Monitor Speakers:** (2) UREI 811A, (2) Yamaha NS-10M, (2) Auratone 5C. **Video Equipment:** Panasonic WVCD 20 video camera, Panasonic 19" color monitor. **Other:** RTS TW intercom system, Belden multicable containing 40 microphone lines, custom Jensen equipped microphone splitter, (3) 12-pair stage snakes on winders, (3) 4-pair stage snakes on winders, production lounge with seating for live, central HVAC, Uniden cellular telephone. **Digital Workstations:** Sonic Solutions SS-104, available on request. **Rates:** Rates are available on request. **Specialization & Credits:** WGBH TV & radio; PBS, National Public Radio, TV credits include: Evening at Pops (1980-1991) with John Williams, Bobby McFerrin, Peter, Paul and Mary, and Dave Brubeck; American Playhouse; Let the Good Times Roll with B.B. King. **Recording credits:** Aerosmith, Maurice Starr, Darius Brubeck, Tom Rush, WBCN Radio live broadcast series (1981-1991) including: Animal Logic, BoDeans, The Cars, Toni Childs, Godfathers, Georgia Satellites, Little Feat, Ziggy Marley, NRBQ, 10,000 Maniacs, Todd Rundgren, George Thorogood, Johnny Winter. **Festival Recording & Broadcast:** New Orleans Jazz & Heritage, Newport Folk, Boston Early Music, American Jazz Radio Festival recordings of Henry Threadgill, David Murray, Carla Bley, John Scofield, NPR World of Opera: Phillip Glass' The Juniper Tree. Winner of 1989 and 1990 Edwin H. Armstrong award for Technical Achievement for live festival recording of 1989 Newport Folk Fest and 1990 New Orleans Jazz & Heritage Festival.

[24+] GET OUT OF THE WAY AUDIO/VIDEO PRODUCTIONS; also REMOTE RECORDING; 210 Tomahawk Trail, Sparta, NJ 07871; (201) 770-3208. Owner: Dan Erksen. **Manager:** Stephen Betsy. **Engineers:** Dan Erksen, Kevin Locke, Stephen Betsy, Jim Esposito, Gregg Hatten. **Dimensions:** Room 1: studio 20'x30', control 15'x15'; Room 2: studio 10'x15', control 10'x20'; Room 3: studio 20'x35', control 15'x25'; Room 4: studio 30'x40', control 15'x20'. **Mixing Consoles:** Trident 80B, Yamaha RM2408. **Audio Recorders:** Sony JH-24, Tascam 38-8, Fostex 1/4" w/TC, Tascam 32-2, JVC D5T-900 DAT w/TC, Tascam Pro-DAT, Tascam 234 4-track. **Cassette Recorders/Duplicators:** Tascam 112. **Noise Reduction Equipment:** Dolby A, B, C, dbx. **Synchronization Systems:** SoundMaster 4-machine lockup, SMPTE, IBM PS-2, MIDI 2-system. **Echo, Reverb & Delay Systems:** (2) Eventide H-3000, Lexicon PCM42, (3) Roland SDE-3000, Ursa-Major REV, Roland SDE-3000, (2) Lexicon PCM70, (2) Lexicon LXP-1, Klark-Teknik DN-780 REV, (2) Yamaha REV7, (3) Yamaha SPX9011, (2) TC 2290 w/32 sec. **Other Outboard Equipment:** (8) Drawmer gate, (4) GateX noise gate, Valley Leveler, Aphex Compeller, (4) Kepex gate, Aphex Type-B, Exciter, (2) Rocketron x/citer/imager and many dbx compressors. **Microphones:** (8) Neumann all types, (12) AKG all types, (4) EV, (16) Shure all types. **Monitor Amplifiers:** (3) Crown, (4) QSC-3500, (3) Carver Magnetic. **Monitor Speakers:** (2) JBL 4312, (2) EV SH-15 2, (2) Yamaha NS-10M, (2) Auratone, (2) Tannoy. **Musical Instruments:** (8) Yamaha TX816, (2) Roland S-550, (2) Yamaha TX16 w/st. samp., Baldwin 7' Grand, Prophet-5, Yamaha DX7, (2) Marshall amps, Ludwig 10-pc. drum set, Roland 909, Roland 707, Roland 727, Roland 808 w/MIDI. **Other MIDI Equipment:** Roland 808 w/MIDI, Roland Octapad, Roland MC-500, Voyetra Seq. Plus 64-track. **Video Equipment:** Sony 3/4 SP editing 2-system, (2) JVC CR-850U, (2) Chyron, Dubner CG-20K, Eclipse DVE, Valley 16-input SEG/switcher. **Other:** Soundmaster A/V w/sub frame accy, 4 machine. **Rates:** Call (201) 770-3208 for information.

[24+] GIANT RECORDING STUDIOS; 1776 Broadway, New York, NY 10019; (212) 247-1160; FAX: (212) 247-2081. Owner: Douglas Pell. **Manager:** Douglas Pell. **Engineers:** Ron Allaire, Steve Neal. **Dimensions:** Room 1: studio 25'x35', control room 20'x30'. Room 2: studio 18'x22'. **Mixing Consoles:** SSL 4056 w/48E and 8 G modules G computer and Total Recall. **Audio Recorders:** (2) Otari MTR-90, Otari MTR-12-11 2/4-track 1/2", Otari MTR-10-11 1/4", (3) Otari 5050B 2-track 1/4". **Cassette Recorders/Duplicators:** (2) Tascam 122 Mark II, (3) Tascam 122, Nakamichi MR-1. **Noise Reduction Equipment:** Telcom c4 28 channels, Dolby A 4 channels. **Echo, Reverb & Delay Systems:** (2) Lexicon PCM 42, Yamaha REV7, (3) Yamaha SPX90, Lexicon 480XL, AMS DMX 15-80S, AMS RMX 16, TC Electronic 2290, Lexicon PCM60, Lexicon PCM70, Lexicon Super Prime Time II, Lexicon Prime Time, Marshall 5402 Time Modulator, Panscan, Aphex Studio Aural Exciter stereo, (2) Lexicon LXP-1, Lexicon MRC controller. **Other Outboard Equipment:** (2) Pultec MEQ-5, UREI LA-2A, (6) API 550, (2) Neve EQ w/mic pre, (2) UREI 1178, (4) Drawmer DS-201 noise gate, (2) Pultec EQP-1A3 EQ, (2) Valley People dual, 4 API Mic Pre, (4) Dyna-Mite, (8) Melcor EQ w/API electronics, (2) Neve compressor/limiter, (2) UREI LA-3A, (2) dbx 904 noise gate, (3) dbx 903 compressor, dbx de-esser, Trident stereo compressor, ADR Scamp rack w/compressor/delay line, Orban parametric EQ, (2) dbx 160X comp. **Microphones:** (3)

Neumann M49 tube, (2) Sony C-37, Neumann U47 FET, (3) Neumann U67 tube, Neumann TLM-170, (4) Neumann U87, Neumann U89, (2) Neumann KM86, (2) Neumann KM84, (2) AKG 452, (2) AKG 224, (3) AKG 414, (2) AKG C-12A, (4) Sennheiser 421, (6) AKG 451 (2) Sennheiser 441, (2) Sennheiser MD211, (2) EV RE20, RCA 77, RCA 44, Shure SM81, (2) Shure SM57, Shure SM58. **Monitor Amplifiers:** (2) Bryston 4B, McIntosh 250, (2) Bryston 713, Macintosh 2100. **Monitor Speakers:** Yamaha NS-10, (2) Tannoy 6.5, (2) Tannoy DMT 215, (2) Tannoy DMT 12. **Other MIDI Equipment:** Mac IIsi, Yamaha DX7, Mac se Performer MIDI Paint, Music Prose, SyncLaver w/32MB RAM, 16 outputs, optical disk, 32 FM and 32 sampling, Korg M1R, Roland D-550 Proteus II, MIDI guitar. **Video Equipment:** JVC 6250, JVC 8250. **Other:** Plus much more.

[24+] GOLDEN HORN RECORDING STUDIOS; also REMOTE RECORDING; 97 West Second St., Freeport, NY 11520; (516) 623-1672. Owner: Sami Uckan. **Manager:** Elizabeth Hope.

[24+] GRACE RECORDING STUDIO INC.; also REMOTE RECORDING; 159 Pelham Ave., Hamden, CT 06518-2524; (203) 288-9771; FAX: (203) 248-9442. Owner: Fred Rossomando, Lee Walkup. **Manager:** Richard Osterlind.

[24+] GREENE STREET RECORDING; 112 Greene St., New York, NY 10012; (212) 226-4278. Owner: Steve Loeb. **Manager:** David Harrington. **Engineers:** Rod Hui, Nick Sansano, Jamey Staub, Dan Wood, Charlie Dos Santos, Josh Wertheimer. **Mixing Consoles:** Amek GML APC1000 80-input, Trident TSM 32x24. **Audio Recorders:** Studer 800 24-track, Studer 820 24-track, Studer 827 24-track, Studer A820 2-track, Studer A80 2-track, AEG 2-track. **Cassette Recorders/Duplicators:** (4) Tascam. **Noise Reduction Equipment:** (2) Dolby SR, (2) Dolby SR. **Synchronization Systems:** (2) Lynx. **Echo, Reverb & Delay Systems:** Publison Infernal Machine, Lexicon 480L, (2) TC Electronic 2290, Lexicon 224XL w/LARC, Lexicon PCM70, (2) Lexicon PCM60, (4) Lexicon PCM42, Eventide H3000, Bel BDB, AMS RMX 16, Ursa Major Space Station, Ursa Major 126, EMT 140 plate, TC 2290 Dynamal delay/sampler, Yamaha REV7, Yamaha SPX90 II, AKG spring reverb. **Other Outboard Equipment:** (2) TC Spatial expander, (2) Tubetec CLIA compressor, (2) Tubetec PE1 B EQ, (2) Barcus-Berry Electronics 802, Aphex II, Orban stereo EQ, (8) UREI 1176, (2) UREI LA-3A, (2) Brook-Siren DPR402, Neve stereo lim/comp, Kepex II/Gain Brain, Pultec EQP1, (2) dbx 166 stereo, (2) ADI 1000 (LAZ TYPE) limiter, BSS DPR 402, GML 8200 EQ, Pultec EQ P153, Pultec (MAVEC) mic pre, (2) Lang PEG mic pre, (2) Lang PEG-2 EQ, API rack, (2) 512 B mic pre, (2) 550b EQ, (2) 525C, Eventide phaser/flanger/omnipresser. **Microphones:** Neumann, AKG, Schoeps, Shure, Sennheiser. **Monitor Speakers:** Roger Quested tri-amped 4-12", John Meyer 833, Yamaha NS-10A, EV Sentry 100, Auratone 5C. **Musical Instruments:** Korg M1, E-mu Emulator II, Akai S900, Akai S950, Yamaha DX7, Yamaha DX7II, Yamaha TX816, Roland Super Jupiter MKS-80, Roland Planet P MKS-10, Roland Planet S MKS-30, Roland D-50, Roland GR-707 guitar synth/controller, Oberheim OB-8 MIDI, Sequential Circuits Prophet-5 MIDI, Roland Juno-106, Roland SBX-80, Roland MKS-700, Kahler Human Clock, Akai seq/drum machine, Linn seq/drum machine, E-mu SP-1200, Roland TR-707, Roland TR-505, Roland TR-808, Oberheim DMX, Oberheim DX, Steinway grand piano, Tama drum kit, Fender Rhodes piano, Hammond C-3 organ w/Leslie 145, Marshall gr. amp, Music Man 2x12 gr. amp, Fender Twin reverb. **Video Equipment:** Sony BVU-800 3/4" w/TBC, Videotek KV-25 XBR monitors. **Digital Workstations:** Pro Tools hard disk editing, Macintosh FX 600 w/reg.

[24+] HIGH HEEL STUDIOS INC.; 425 Fawcett St., Baltimore, MD 21211; (301) 235-0920. Owner: Arnold Geher. **Manager:** Arnold Geher. **Engineers:** Arnold Geher, Victor Giordano, Chris Evans. **Dimensions:** Studio A: 35'x16', control room 24'x19'. Studio B: 8'x12', control room 10'x12'. **Mixing Consoles:** Amek Mozart 32x32 fully automated, Amek Tac Scorpion 28x8. **Audio Recorders:** Sony APR-24 24-track, Otari MTR-12C 2-track, Otari MTR-10 2-track, Sony PCM-2500 DAT, Sony DTC-D10 DAT, Sony PCM 7010 DAT, Digidesign Pro Tools digital audio workstation. **Cassette Recorders/Duplicators:** (4) Nakamichi MR-1, Tascam 122. **Synchronization Systems:** (2) Adams-Smith Zeta-3 w/remote A-V synchronizers. **Echo, Reverb & Delay Systems:** Lexicon 480L digital effects system, Lexicon PCM70 digital effects processor, Lexicon PCM-60 reverb, Lexicon PrimeTime II digital delay, Lexicon PCM42 digital delay, (2) TC Electronic 2290 delay/sampler, Yamaha REV5, Yamaha REV7, Eventide H3000 Ultra-Harmonizer, (2) Yamaha SPX90, Drawmer 1760 compressor/preamp, Tubatec program EQ, Drawmer M-500, UREI LA-4, UREI 1178, dbx 165, (2) dbx 160-X, (4) dbx 903 compressor, (4) dbx 904 gate, Valley People Dyna-Mite, Orban de-esser, BBE 802 Exciter, Orban 622B parametric EQ, (3) Ashly Audio Stereo gate, Symetrix Quad gate, (2) Symetrix telephone interface. **Other Outboard Equipment:** Sony ESCD player, Symetrix Phonepatch. **Microphones:** AKG tube, AKG 414, Neumann U87, Neumann U89, AKG 451, AKG D-12, Sennheiser 421, Sennheiser 441, EV PL20, Crown PZM, Shure SM57, Shure SM58. **Monitor Amplifiers:** Bryston and Crown. **Monitor Speakers:** UREI 813, Tannoy PBM-6.5, Yamaha NS-10, Auratone. **Musical Instruments:** Korg M1 music workstation, Akai S900 sampler, Yamaha RX11 drum machine, Yamaha DX7 synth, Rockman guitar module, Roland JC120

guitar amp, Remo 5-piece acoustic drum set. **Video Equipment:** Sony 58" 3/4" video recorder, Sony VP-7090 3/4" video player. **Other:** Complete selection of sound effects and production music libraries.



HIP POCKET RECORDING STUDIOS
New York, NY

[24+] **HIP POCKET RECORDING STUDIOS:** 37 W. 20th St., New York, NY 10011; (212) 255-5313; FAX: (212) 645-1787. **Owner:** Bob Merrill. **Manager:** Jim Doherty. **Engineers:** Joe Ariotta, Butch Jones, Rich Oliver, Mark Zampella, Gerry V. Jk-ersz, Bob Fleischacker. **Dimensions:** Room 1: studio 35'x45' x15', control room 20'x26'. Room 2: studio 20'x30'x12', control room 8'x12'. Room 3: studio 8'x10', control room 16'x8'. Room 4: program room 15'x21'. **Mixing Consoles:** SSL 60i6E 56x32 w/total Recall/BG options/update. MCI JH-542C modified 42x32 w/options/updates. MCI 416 24x16. Soundcraft TS-12 28x24. **Audio Recorders:** Otari MTR-90 MkII 24-track. Sony PCM-3324 24-track digital. Studer 2-track 1 2". MCI 110B 2-track 1/2" modified. (5) MCI 2-track 1/4" modified. MCI 4 track 1/2" modified. Otari 5050 4-track. Mitsubishi 32-track full SSL hookup available. (3) Sony AP3 24-track. (2) Panasonic and Sony DAT. **Cassette Recorders/Duplicators:** (7) Nakamichi MR-1. (4) Sony. **Synchronization Systems:** (2) Adams-Smith full system, Lynx system. Echo, Reverb & Delay Systems: Lexicon 224XL, Lexicon PCM60, Lexicon PCM70, Lexicon PCM42, Audicon plates, Lexicon 200, Deltalab AcousticComputer, Yamaha SPX90, BelBD 80, Marshall AR-300 tap eliminators. **Other Outboard Equipment:** dbx 160, dbx 165, Orban 622B, Orban 516EC, Valley People Dyna-Mite, Panscan, Drawmer gates, Eventide Harmonizer/effects, UREI 1176, UREI LA-2A, UREI LA-3A, UREI graphics, Prime Time, Yamaha REV5, Yamaha REV7. **Microphones:** Neumann U87, Neumann U67, Neumann U47 original tube, Neumann KM84, AKG tubes, AKG 414EB, AKG 451, EV RE20, Shure SM57, RCA 44 ribbons, RCA 77 ribbons, Sennheiser 441, Sennheiser 421, Crown PZM, Beyer ribbons. **Monitor Speakers:** UREI 813A, UREI 813, (-) EV 100A (3) Yamaha NS-1GM, (6) Aurator-cube. **Musical Instruments:** Synclavier 16 outs/16 FM/32 Poly/14 MB RAM (optical disk drive, 4-track Direct-to-Disk), all SMPTE, MIDI and sampling, Yamaha DX7, Tama drums, Yamaha grand piano, Steinway grand piano, Roland Super Jupiter, Yamaha TX816, percussion. **Video Equipment:** JVC B250U w/RM70, JVC 6650 w/RM70. **Other:** Resolver for Otari and all MCIs (to-line pilot, 60 xtal, 50 xtal, compsite, video, 59.9), interstudio lines, multitrack format layback for video and film, direct 1" video layback special request, MCI extra headstacks 1/4" mono and 1/4-track, surround-sound mixing. **Specialization & Credits:** One of New York's most complete recording studios, Hip Pocket includes five state-of-the-art rooms to meet the diverse needs of major label recording artists, leading advertising companies and top music production companies. A member of the Society of Professional Audio Recording Services (SPARS), Hip Pocket has a reputation for combining technical sophistication with a knowledgeable staff and caring, personal service.

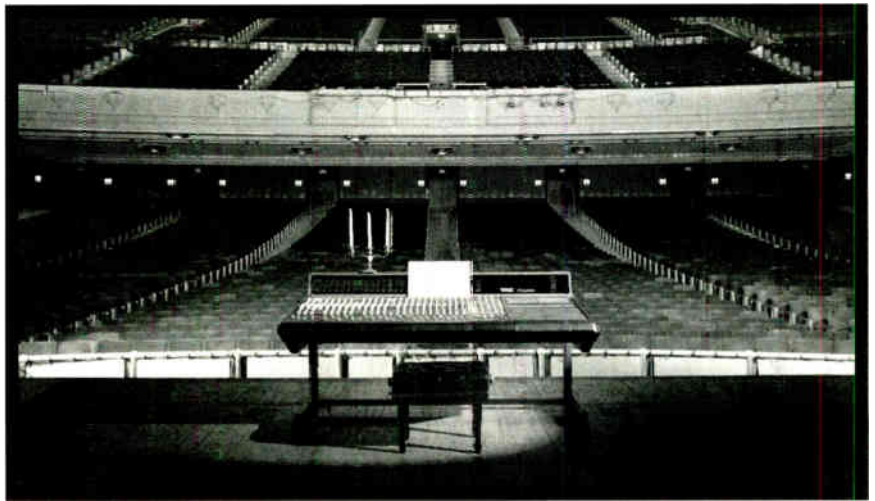
[24+] **THE HIT FACTORY:** 237 W. 54th St.; New York, NY 10019; (212) 664-1000; FAX: (212) 246-2252. **Owner:** Edward Germano. **Manager:** Troy Germano.

[24+] **THE HIT FACTORY TIMES SQUARE:** 130 W. 42nd St.; New York, NY 10036; (212) 354-2444; FAX: (212) 391-8060. **Owner:** Edward Germano. **Manager:** Danielle Germano.

[24+] **HIT AND RUN STUDIOS INC.;** also REMOTE RECORDING; 18704 Mucaster Rd.; Rockville, MD 20855; (410) 948-6715. **Owner:** Steve Carr. **Manager:** Steve Carr.

[24+] **HITHOUSE RECORDING:** 674 Long Ridge Rd.; Stamford, CT 06902; (203) 322-7340. **Owner:** John Silver, Scott Marzullo. **Manager:** Scott Marzullo.

[24+] **HOUSE OF MUSIC:** 1400 Pleasant Valley Way; West Orange, NJ 07052; (201) 736-3062. **Owner:** Charles and Irene Conrad. **Manager:** Irene Conrad. **Engineers:** John Rollo, Paul Higgins, Mike Weisinger, Ron London, Nelson Ayres, Jenny
—LISTING CONTINUED ON NEXT PAGE



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NORTHEAST

24-track studios

—LISTING CONTINUED FROM PREVIOUS PAGE

Grigsby. **Dimensions:** Room 1: studio 30'x40', control room 18'x22'. Room 2: studio 18'x23', control room 16'x22'. MIDI room 1: 18'x22'. MIDI room 2: 13'x17'. **Mixing Consoles:** Neve VR60 w/Flying Fader Automation, MCI 528 w/automation, Yamaha RM2408 24x8x2, Soundcraft 600 16x8. **Audio Recorders:** Studer A800 MkIII 24-track, (2) Sony/MCI JH-24 24-track, (4) Studer A80RC 2-track, Tascam MS-16 16-track, Sony PCM F.1, Sony PCM 2500 Pro DAT, (2) Panasonic 3700 DAT. **Cassette Recorders/Duplicators:** (4) Tascam 122. **Noise Reduction Equipment:** dbx 216D 24-track, dbx 310D 4-track, Dolby A2 track. **Synchronization Systems:** Adams Smith 2600, Sony/MCI JH-45. **Echo, Reverb & Delay Systems:** (3) EMT 140 plate, EMT 250 reverb, (2) AMS RMX 16 reverb, (2) AMS DMX 15-80S DDL, Lexicon 224XL reverb, (2) Lexicon PCM70 reverb, Yamaha REV7, (4) Yamaha SPX90, Lexicon PCM41, Lexicon PCM42, AKG BX20, Roland SRV-200C, Eventide H3000 U Ultra-Harmonizer, Eventide 949 Ultra-Harmonizer, (4) Eventide 910 Ultra Harmonizer, (2) Fairchild 670 stereo limiter, (12) UREI limiter, (12) dbx 160, (4) dbx 165, (5) Pultec equalizer, (10) B&B equalizer, (16) Dyna-Mite gate, (4) Kepex II gate, (4) Drawmer gate, (6) B&B gate, Neve stereo compressor, (4) Aphex II Aural Exciter, (2) Aphex II Aural Exciter. **Microphones:** (140) assorted, Neumann, AKG, Shure, Crown PZM and Neumann tube. **Monitor Amplifiers:** (8) Crown DC-300, (2) McIntosh 2500, (8) Crown DC-150, Hafler 500, Sony V FET. **Monitor Speakers:** UREI 813B, Westlake TM1, (6) Yamaha NS-10M, (2) Big Red, (2) Tannoy NFM-8, (4) ROR and Auratone. **Musical Instruments:** (2) Yamaha 7'4" grand piano, Hammond B-3 w/Leslie, drum kits and percussion equipment, assorted guitar amplifiers. **Other MIDI Equipment:** Atari, Macintosh hardware and software, comprehensive selection of state-of-the-art synthesizers and MIDI implementation, Yamaha grand w/Forte MIDI retrofit, Akai S1100 sampler. **Video Equipment:** Synchronization to Sony 3/4" Adams-Smith lockup. **Specialization & Credits:** Comprehensive synthesizer consultation and production services available on arrangement with Larry Fast/Synergy and Khalis Bayyan (Ronald Bell). Also available is a full range of digital and analog sampling, hard disk digital recording and integrated MIDI digital recording. In house production, arranging and film scoring services available for all styles of music from an experienced staff who have impressive track records including Kool and the Gang, Bonnie Tyler, Jimmy Cliff, Peter Gabriel, Southside Johnny, Meat Loaf, Joe Cocker, Brnity Fox, Paula Abdul, Gutterboy, Wynton Marsalis, Soundgarden, Color Me Badd, Cinderella, a Surface, Bang Tango, Buster Poindexter, Warrant, Quarterflash, Dirty Looks and others. Scenic seven-acre site 25 minutes from midtown Manhattan with our own 24-hour car service, pool, jacuzzi. House of Music provides a full range of client services for record production, audio-for-visual post-production for TV, music video, film and commercial advertising work.

[24+] **IMAGE RECORDING:** 1591 Lockport-Olcott Rd.; Olcott Beach, NY 14126; (716) 778-5683. Owner: Mitch Metzler. Manager: Mitch Metzler.

[24+] **I.N.S. RECORDING:** 19 Murray St.; New York, NY 10007; (212) 608-1499; FAX: (202) 608-1526. Owner: Ian North, Debbie North. Manager: Trude Kay.

[24+] **IVORY PRODUCTIONS;** also REMOTE RECORDING. 212 N. 12th St., Ste. #3; Philadelphia, PA 19107; (215) 948-3448; FAX: call first. Owner: David Ivory. Manager: Vince Kershner.

[24+] **KAJEM STUDIOS LTD. USA:** 1400 Millcreek Rd.; Gladwyne, PA 19035; (215) 642-2346; FAX: (215) 642-3572. Owner: Joe Alexander, Mitch Goldfarb, Sam Moses, Kurt Shore. Manager: Monica Tannan. Engineers: Joe Alexander, Mitch Goldfarb, Brian Stover, John Fairhead, Sheila Materson, Scott Berke (chief tech.). **Dimensions:** Room 1: studio 75'x30', control 20'x20'. Room 2: studio 35'x30'. **Mixing Consoles:** SSL 4048E/G w/G Series computer. **Audio Recorders:** Studer A80 MkIII 24-track, Otari MTR-90 24-track, Studer A80 1/2" 2-track, Studer B67 1/4" 2-track, (3) Otari 5050BII 1/4" 2-track & 1/4-track, (2) Panasonic SV-3500 DAT. **Cassette Recorders/Duplicators:** (6) Tascam 122/122MkII.

Noise Reduction Equipment: (2) Dolby A/SR. **Synchronization Systems:** Adams Smith synchronizer rack. **Echo, Reverb & Delay Systems:** Lexicon 480L, AMS RMX 16, AMS DMX 15, EMT 251, Sony DRE-2000, (2) Lexicon PCM70, Lexicon Prime Time II, Yamaha REV5, Eventide H949 Harmonizer, Eventide H3000, Eventide flanger/phaser, Eventide DDL, Lexicon PCM42, Yamaha SPX1000, Yamaha SPX90, Dyno My Tri stereo chorus, Roland Dimension-D, MXR 1500, DeltaLab ADM 1024, Effectron Rockman Sustainer/EFX rack, AD&R Panscan. **Other Outboard Equipment:** (4) Focusrite EQ Mic Pre filters, Massenburg stereo EQ 8200, (4) Neve 1081 EQ, preamp/filters, (2) Pultec EQP-1A, (2) Pultec MEQ, (6) API 550A, UREI graphic 535, ADR sweep EQ, ADR compex stereo limiter, (2) Teletronix LA-2A, (2) UREI 1176LN, UREI LA 3A, Drawmer 1960 stereo valve compressor, limiter, preamp, compressor, (2) Kepex II/Gain Brain, (3) Aphex 612 gates/stereo, (2) dbx 163, (4) Omnicraft G1 4 gate, (2) Scamp exp/gate, Scamp Lo Pass filter, (2) Scamp stereo de-esser, BBE stereo processor, EXR Aural Exciter stereo, dbx Boomboss stereo. **Microphones:** Various Neumann, AKG, Telefunken, Sanken, RCA, Shure, Beyer, Sony, EV 60. **Monitor Amplifiers:** (4) Hafler P-500, (2) Hafler 220, (2) Crown DC-300. **Monitor Speakers:** (2) UREI 813 modified, (2) Yamaha NS-10, (2) Tannoy SRM-12B, (2) Tannoy PBM-6.5, (2) Spica TC50, (2) Visonik Little Davids. **Musical Instruments:** Marshall Preplexiglass head and cabinet, Fender Deluxe amp 1967, Hammond Porta B w/Leslie and Leslie preamp, (2) Premier and Tama drums. **Other MIDI Equipment:** Roland SBX-90. **Other:** 12 Channel per station custom cue mixers 400 watts each. **Specialization & Credits:** Kajem Victory is one of the East Coast's premier residential 48-track SSL studios. A six-bedroom Victorian home is now available exclusively for clients. Incredible 2,000-sq-ft ambient room with 25' ceiling for drums and guitars or as a chamber. Vintage mics, limiters, EQ and wine. Trout fishing, woods and waterfalls. Clients include Cinderella, Queensryche, Doro, Metal Church, Prong, David Chastain, Lynyrd Skynyrd, Teddy Pendergrass, Patti LaBelle, New Kids on the Block, DJ Jazzy Jeff and the Fresh Prince, 3X Dope, Stephanie Mills, Crimson Glory, Tangier, Lou Rawls, George Benson, Pretty Poison, Bobby Rydell, Heavens Edge, Miles Jaye, 9 Ways to Sunday, Judy Mowatt, Vinnie Moore, The Great Kat, Greenhouse, Bleeding Hearts, Popscool Love, Black Eyed Susan.

[24+] **KAMEN RECORDING STUDIOS; 701 7th Ave.; New York, NY 10036; (212) 575-4660. Owner:** Roy and Marina Kamen. **Engineers:** Roy Kamen, Paul Urmsion, Keith Goldstein, James Kocik. **Dimensions:** Room 1: studio 31'x21', control room 19'x20'. Room 2: studio 30'x22', control room 22'x17'. Room 3: studio 12'x7', control room 16'x13'. Room 4: control room 10'x17'. **Mixing Consoles:** MCI JH 636 36-input automated, Trident 80B 32-input, Neo Tek 16-input, Hill 16-input, Roland M 16E 16-input. **Audio Recorders:** MCI JH-24 24-track, Ampex MM1200 24-track, Tascam 38 8-track w/dbx, (2) Otari MTR 12 2-track, (3) Otari MK 55 2 track, Studer A810 2-track, Sony APR-5000 2-track, (3) Foxtel E-2 2-track. **Cassette Recorders/Duplicators:** (2) Nakamichi 700XL, (2) Nakamichi BX-300, (2) Denon DR-M24H, (8) Denon DR-DRM80i, Sony DAT DCT D10 Pro-DAT. **Synchronization Systems:** Adams Smith 2600, (3) Adams Smith Zeta-3. **Echo, Reverb & Delay Systems:** (2) Lexicon 224X reverb, (2) Lexicon REV7 reverb, (2) Alesis Quadraverb, (2) Lexicon LXP-1, (2) Lexicon PCM42, (17) assorted reverb and delay, (10) Valley People Kepex II gate, (4) Valley People Gain Brain compressor, (3) dbx 166 compressor, (8) UREI LA-4 compressor, (3) BBE 822 Sonic Maximizer exciter, (2) assorted processors, (2) Lexicon LXP-5. **Microphones:** (8) Neumann U87, (2) AKG C-414, (15) Sennheiser 421, (15) Shure SM57, (25) other assorted. **Monitor Amplifiers:** (3) McIntosh 2500, Bogan, Bryston, Hafler. **Monitor Speakers:** Big Reds, UREI 813B, Yamaha NS-10M, Tannoy PBM-6.5 near-field. **Musical Instruments:** Yamaha DX7/IFD, (3) Akai S1000 HD, Akai S900, Korg M-1R, Roland D-550, Roland D-50, Oberheim Matrix 1000, Alesis HR-16, Roland MKS-50, Kawai K1, (2) Steinway 7" grand piano, Hammond B-3 organ w/Leslie, guitar amps, drum kit, mic and music stands and perc toys. **Other MIDI Equipment:** (3) Mac Iix, Macintosh SE/30, Roland MC-500 sequencer, (3) Opcode "Studio Vision" and other sequencers, (3) Digidesign Sound Tools, O-Sheet A/V, ProTools. **Video Equipment:** Sony BVH-3000 1" recorder, (2) JVC CR8250 3/4" recorder, (2) NEC 26" color monitor. **Other:** (60) CD and LP music libraries, (25) CD and LP SFX libraries. **Digital Workstations:** (3) Soundtools/ProTools digital recorders. **Specialization & Credits:** Music recording, tracking, overdubs, MIDI, jingles, scores, radio production, TV soundtracks, 1" layback, phone patch, voice-over casting and recording, engineering services, mix-to-pix, sound design, complete audio service for just about any job. Sound Design specialists.

[24+] **KINGDOM PRODUCTIONS;** also REMOTE RECORDING. Rt. 6 E., PO Box 506; Mansfield, PA 16933; (800) 334-1456; FAX: (717) 662-3875. Owner: Kingdom Company. Manager: Peter Bombar, Mark Hamilton.

[24+] **LAKEWEST RECORDING STUDIO;** also REMOTE RECORDING. 200 Mishnock Rd.; West Greenwich, RI 02817; (401) 397-4828. Owner: Jack Gauthier. Manager: Jack Gauthier.

[24+] **RICHARD LEPAGE & ASSOCIATES;** also REMOTE RECORDING. Suffern, NY 10901; (914) 357-6453; FAX: (914) 357-6806. Owner: Rich LePage. Manager: W. LePage.

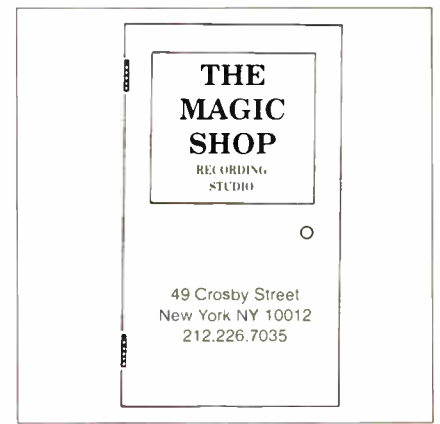
[24+] **LIEBERT RECORDING STUDIOS INC.:** 16 W. 46th St., 6th & 8th floors; New York, NY 10036; (212) 840-1350; FAX: (212) 724-4093. Owner: Bob and Carmen Liebert. Manager: Rosanne Zisa.

[24+] **LION AND FOX RECORDING INC.;** also REMOTE RECORDING. 1905 Fairview Ave., NE; Washington, DC 20002; (202) 832-7883. Owner: Hal Lion, Jim Fox, Sally Lion. Manager: Rob Buhman.

[24+] **THE LOOKING GLASS STUDIOS INC.;** also REMOTE RECORDING. 632 Broadway, 9th Fl.; New York, NY 10012; (212) 353-2000. Owner: Euphorbia Productions Ltd. Manager: Rob Brenner.

[24+] **THE LOVE OF JESUS RECORDING STUDIO;** 448 Highland Ave.; Orange, NJ 07050; (201) 676-4200/4940; FAX: (201) 678-3415. Owner: Love of Jesus Ministries. Manager: George Hillman.

[24+] **LYX MUSIC PRODUCTION & RECORDING STUDIO;** 25 Foster St.; Worcester, MA 01608; (508) 752-6010. Owner: Paul Weddle, Bob Gilpatrick, Andy Celley. Manager: Bob Gilpatrick. **Engineers:** Bill Robinson. **Dimensions:** Room 1: studio 60'x25' (includes 2 isolation booths), control room 20'x18'. Room 2: studio 10'x8', control room 12'x8'. **Mixing Consoles:** Anek 2500 36x24 upgraded w/CASS-1 automation. **Audio Recorders:** Sony APR-24, Revox PR99 2-track upgraded, Otari MX5050 2 track w/TC-50 control time code mod., Technics RS-1500 2 track, Sound Tools (Mac II) 2 track digital sampler recorder/editor. **Cassette Recorders/Duplicators:** Tascam 122 MkII upgraded, Technics RS1-80R, (4) JVC TDW-999 dual, Sony 55 ES DAT. **Noise Reduction Equipment:** Dolby SR 2 channel. **Synchronization Systems:** (4) Timeline Lynx VSI. **Echo, Reverb & Delay Systems:** Lexicon PCM70 dual reverb, Lexicon PCM60 digital reverb, Lexicon LXP-1, Lexicon LXP-5, Yamaha SPX90, Alesis MIDiverb II, DeltaLab Comp. Effectron digital delay, DeltaLab ADM 64, (3) Lexicon PCM41, EMT 240 stereo gold plate reverb, EMT 140 stereo plate reverb. **Other Outboard Equipment:** ISS CASS-1 Sound editor/console automation, Drawmer 1960 dual tube compressor, (2) UREI 1176 limiter, (2) UREI LA 3 compressor, (2) UREI LA-4, (4) Ashly 5633 dual gate, Ashly PG-66 dual parametric EQ, TC 2240 dual parametric EQ, Summit Audio E/P 200A dual tube program EQ. **Microphones:** Neumann U87 (Klaus Heyne modified), Neumann U47, (2) Neumann KM84, AKG 414-EB, AKG D22A-E, AKG C451 E, (2) AKG D140-E, AKG D-12, AKG C-61 (Norelco), (2) Sennheiser 421, Shure SM81, (6) Shure SM57, (2) Beyer M-500, (2) Crown PZM, RCA ribbon, Sony ECM 989. **Monitor Amplifiers:** Bryston, AB Systems, Yamaha. **Monitor Speakers:** UREI 813C (w/IRP Time Based room EQ), Yamaha NS-10, Auratone. **Musical Instruments:** Ludwig drumset, Kawai grand piano, Hammond B 3 w/Leslie, Memory Moog, Yamaha DX7. **Other MIDI Equipment:** Opcode Studio III, Sound Tools (Mac II) w/Studio Vision Sequencer, Akai S1000 w/32MB memory and scuzzy, E-mu Proteus w/Protologic expander. **Video Equipment:** Sony BVU 800, Sony 19" monitor. **Specialization & Credits:** Overlooking the Centrum in downtown Worcester, MA, Lyx's automated 24-track offers its services to label acts, looking to record while in town. Five state-of-the-art acoustically designed rooms, excellent signal path integrity and a discrete loading access. Our studio services include 2 and 24 track recording, automated mixing, audio-for-video post, MIDI sequencing, digital editing, and real-time cassette duplication. We also offer creative services including full artist production, as well as custom music and audio production for advertising and industry. We are the most modestly priced studio w this level of services in the area.



THE MAGIC SHOP
New York, NY

[24+] **THE MAGIC SHOP;** 49 Crosby St.; New York, NY 10012; (212) 226-7035; FAX: (212) 226-7094. Owner: Steve Rosenthal. Manager: Nina Marks. Engineers: Steve Rosenthal, Edward Douglas, Joseph Warden. **Dimensions:** Studio 42'x23', control room 36'x23'. **Mixing Consoles:** Neve 80

—LISTING CONTINUED TOP OF NEXT PAGE

Series custom wraparound 40-input, Trident Series 24 sidetrack 24-input. **Audio Recorders:** Sony PCM-3324 24-track w/ Apogee filters, Studer A80 MkIV 24-track, Panasonic 3500 DAT, Panasonic SV-DA10 DAT, Ampex ATR-102 2-track 1/2", Tascam 22-2 2-track 1/4". **Cassette Recorders/Duplicators:** (10) TEAC U-670. **Synchronization Systems:** (2) Time-Line Lynx time code module. **Echo, Reverb & Delay Systems:** Lexicon 224 digital reverb, Eventide H3000 Ultra-Harmonizer, Lexicon PCM70 digital reverb, Yamaha REV7 digital reverb, (2) Yamaha SPX90, Alesis MIDiverb digital reverb, TEAC spring reverb, Lexicon PCM42 digital delay, Roland SDE-2500 digital delay, Korg SDD-2000 sampling digital delay, Multivox MXP-5 analog echo, ART DR2 reverb. **Other Outboard Equipment:** Pultec EQ-PIA, Lang PEQ-2, (2) Teletronix LA-2A compressor, UREI 1176 limiter/compressor, (4) Neve 2254 limiter/compressor, (4) Neve width enhancer, (4) Drawmer DS-201 dual gate, (8) Gates 4-channel gate, Aphex Aural Exciter, (2) dbx 160X compressor, (2) dbx 163X compressor, Collins tube limiter, Music Valve Electronics D.I. **Microphones:** Neumann U47 tube, (2) Neumann U87, Neumann U67 tube, (2) Neumann KM56 tube, (3) AKG 414EB, (3) AKG 451, EV RE20, AKG D-112, Beyer ribbon, (5) Sennheiser MD-421, (4) EV BK1, (5) Shure SM57, Shure SM58, (2) RCA 77, (2) AKG D-12E. **Monitor Amplifiers:** Perreux 9000B, (2) Crown Powerbase, Hafler Pro 500. **Monitor Speakers:** (2) Tannoy FSM-U, (2) Yamaha NS-10 near-field, (2) Tannoy 6.5, (2) Altec 604E. **Musical Instruments:** Yamaha 6' baby grand piano, Korg M1 synth, Roland D 50 synth, Akai S900 sampler w/drum triggers, Oberheim DPX-1 sampler player, Roland Super Jupiter synth. **Other MIDI Equipment:** Opcode Studio 3 interface, Akai patch bay, Macintosh SE 40MB w/Performer & Galaxy software. **Video Equipment:** Sony BVU-950 Umatic SP. **Other:** Mega-Mix automation 40-channel. **Rates:** Hourly, daily, weekly, monthly rates are available. **Specialization & Credits:** The Magic Shop continues to provide the best of the old, the new and the classic in recording technology along with the unique vibe that's made so many consider The Magic Shop their professional home away from home. Recent album releases include Lou Reed's *Magic and Loss*, Phil Spector's *Back to Mono*, Charles Brown's Grammy-nominated *All My Life* and They Might Be Giants' *Apollo 18*. Clients include George Benson, Sonic Youth, The Ramones, Christine Lavin, Lonette McKee, Natural Selection and all major recording labels.

[24+] **MANHATTAN CENTER STUDIOS INC.;** also REMOTE RECORDING; 311 W. 34th St.; New York, NY 10001; (212) 279-7740; FAX: (212) 465-2367. **Owner:** One Up Enterprises. **Manager:** Victor Moore. **Engineers:** Roy Clark, Robert Carvell, Richard Clark, Leon Harris. **Dimensions:** Room 4: studio 32'x20', control room 32'x22'. Room 7: studio 94'x98'x45' w/54'x95'x30' stage, control room 18'x28'. Room 8: studio 24'x28'x12', control room 14'x15'. **Mixing Consoles:** SSL 4056 G Series 56x32 w/Total Recall Ultimotion (moving faders), Neve VR 36x36 w/recall and Flying Faders, Neve VR 60x48 w/recall and Flying Fader, TAC Scorpion 28x12, Soundcraft 20x2. **Audio Recorders:** Sony PCM-3348 48-track digital, Sony PCM-3324 24-track digital, Otari MX-80 24-track analog, Otari MTR-10 2-track analog w/Dolby SR, Otari 5050 2-track analog w/dbx, NED Synclavier 9600 PostPro 16-ch Direct-to-Disk, Panasonic SV-3500 R-DAT, Sony 7010 R-DAT, Panasonic SV-250 R-DAT. **Cassette Recorders/Duplicators:** Tascam, Nakamichi, Sony, KABA real-time duplication system. **Noise Reduction Equipment:** Dolby SR 2 channels, dbx 2 channels. **Synchronization Systems:** Adams-Smith Zeta-3. **Echo, Reverb & Delay Systems:** Lexicon, Quantec, TC Electronic, Eventide, Yamaha, Alesis, Summit Audio, UREI, dbx. **Other Outboard Equipment:** BASE stereo expander, Focusrite, Boulder, Tube-Tech, Aphex, Rane, AMS, GK ART, Drawmer, Summit, Demeter, Digitech. **Microphones:** B&K, Schoeps, Neumann, AKG, Yamaha, Sennheiser, Shure, EV, and many others. **Monitor Amplifiers:** Perreux, Hot House, Carver, Briston, Ramsa. **Monitor Speakers:** Tannoy FSM-U, Tannoy 15B w/C150 subwoofers, Genelec 1031A, Digital Design, Yamaha and Tannoy near-fields. **Musical Instruments:** NED Synclavier 9600 w/32 voices, 32MB, 16 outs, optical drive, Denny Yaeger library, many synthesizers, Steinway L 5'6", Kawai baby grand, Yamaha professional drum kit. **Video Equipment:** Available upon request. **Rates:** Available on request.

[24+] **MANHATTAN CENTER STUDIOS REMOTE;** REMOTE RECORDING ONLY; 311 W. 34th St.; New York, NY 10001; (212) 279-7740; FAX: (212) 465-2367. **Owner:** One Up Enterprises. **Manager:** Robert Carvell. **Engineers:** Roy Clark, Robert Carvell, Leon Harris. **Dimensions:** Control room: 14'x8". **Mixing Consoles:** Neve VR 48 with Flying Faders and Total Recall. **Audio Recorders:** Sony PCM-3348 48-track digital, Studer Revox C270 w/SMPTE, Panasonic SV 3700 DAT. **Cassette Recorders/Duplicators:** (2) Nakamichi MR-1. **Echo, Reverb & Delay Systems:** Lexicon 480L, Quantec, TC Electronic 2290, TC Electronic 1210, Drawmer M500, Drawmer 1960, DigiTech, Eventide H3000, Yamaha REV7, Yamaha SPX900. **Other Outboard Equipment:** Summit Audio EQP 2000, Tube-Tech PE 1B, Aphex Exciter, Roland GP-16, GK head. **Microphones:** Beyer, Crown, AKG, Yamaha, Sennheiser, Shure, Countryman. **Monitor Amplifiers:** Perreux, Hot House, Carver, Ramsa. **Monitor Speakers:** Tannoy 15B, Tannoy System 2, Yamaha NS-10, Auratone 5C. **Video Equipment:** Minolta video camera, NEC video monitors. **Other:** Stage Box including: Jensen mic splitter, Hardy M-1 mic preamps, Telex wireless intercom system, AKG 240 headphones, Beyer mic stands. The remote is housed in 1990 PreVost LeMirage 40" bus.

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[24+] MARATHON RECORDING; 12 W. 37th St., 6th Fl.; New York, NY 10018; (212) 967-1515; FAX: (212) 594-2731. Owner: David Forrest. Manager: Susan Tobocman. Engineers: Will Schilling, Maurice Puerto, Jose Fernandez, Bob Mitchell, Richard Harniblow. Dimensions: Room 1 studio 25'x20', control room 17'x24'. Room 2 studio 10'x19', control room 14'x19'. Mixing Consoles: Otari MTR-9C MkII 24-track, Studer A80 MkII 24 track. Cassette Recorders/Duplicators: (5) Tascam 822B. Synchronization Systems: (2) TimeLine Lynx. Echo, Reverb & Delay Systems: Too numerous to mention. Microphones: Too numerous to mention. Monitor Amplifiers: Hot House. Perreux. Monitor Speakers: Tannoy FSMU, Westlake, (6) misc small monitors. Musical Instruments: Misc MIDI gear, Steinway grand. Video Equipment: (2) JVC 8250. Digital Workstations: Sample Cell, Sound Tools. Rates: Call for rates

[24+] MARK STUDIOS; also REMOTE RECORDING, 10815 Bodine Rd.; Clarence, NY 14031; (716) 759-2600. Owner: Mark J. Morette. Manager: Frederick Betschen. Engineers: Fred Betschen, Bruce Leek, Glenn Bernardis, Hugh Bone, Tim Kiernan, Mark J. Morette. Dimensions: Room 1 studio 883 sq ft., control room 3C3 sq ft. Room 2 control room 21'x15'. Mixing Consoles: Amek M3000 42x24x4x2, Ramsa WR S216, (4) Ramsa WR-133, Panasonic WR 450. Audio Recorders: Otari MTR 9024-track, Sony PCM-1630/DMR-2000 2-track digital, (2) Panasonic SV 3500 DAT, (3) Panasonic SV 255 DAT, (2) Panasonic SV-250 DAT, (2) dbx 700 digital audio processor, (3) Nakamichi DMP 100 2-track digital, Ampex ATR 100 2-track analog, Otari MX-5050B 2-track analog. Cassette Recorders/Duplicators: (50) Nakamichi MR-1 3-head, (50) Nakamichi LX-5 3 head. Noise Reduction Equipment: Dolby 361 Type A 2 channels. Echo, Reverb & Delay Systems: Lexicon 224XL digital effects processor, AKG ADR 68K digital reverb and effects, Lexicon PCM70 digital effects processor, Lexicon PCM60 digital reverb, (2) Yamaha SPX900 digital effects processor, Lexicon PCM42 digital delay, Roland SDE-1000 digital delay, MXR 175 digital delay, MXR flanger/doubler. Other Outboard Equipment: (2) dbx 902 de-esser, (2) dbx 903 compressor, (5) dbx 904 noise gate, (3) dbx 905 parametric EQ, (6) dbx 160X compressor/limiter, (2) UREI 1176 peak limiter, UREI LA-3 audio leveler, UREI LA-4 compressor/limiter, (3) UREI 535 parametric EQ, (2) Barcus-Berry BBE 802 Sonic Maximizer. Microphones: (2) AKG C 12 vintage tube, (2) AKG The Tube, (4) AKG C-414-P48, (4) AKG C-463, (2) Sennheiser MKH-40 cardioid, (4) Sennheiser MKH 20 omnicondenser, (10) Sennheiser MD-421, many others. Monitor Amplifiers: UREI many varied amps, Crown DC-300A. Monitor Speakers: (4) UREI 8131A Time Align, various near-field reference. Musical Instruments: Kimball 6'7" grand piano, Yamaha PF80 MIDI electric piano, Roland Alpha Juno-2 programmable polyphonic synth, Lindrum computer w/MIDI

retrofit, Yamaha SP35 electric piano, any drum machine/synthesizer/sampler available on request. Specialization & Credits: We specialize in complete studio packages. Our compact disc premastering studio is available for immediate 1630 transfer. While working in the studio, you may go over to our fully staffed art department and plan your CD booklet, album jacket or cassette/DAT insert card. After your day has ended, we can run off up to 100 cassettes in our state-of-the-art cassette duplication facility. One hundred Nakamichi MR-1 and LX-5 cassette decks comprise our cassette duplication room. We custom-load only TDK high bias cassette tape into the newly designed Shape Mark X shell. It's no wonder why Denny Lane, Richie Havens and author Geoffrey Giuliano referred to it as one of the truly unique studios they have ever been in. Mark Studios is also the launching pad of Rick James, Spyro Gyra, Jeff Tyzik, 10,000 Maniacs, New York Voices and Billy Sheehan.

[24+] MARYLAND PUBLIC TELEVISION; 11767 Owings Mills Blvd.; Owings Mills, MD 21117; (301) 581-4082; FAX: (301) 581-4338. Manager: Don Barto.

[24+] MASTER SOUND ASTORIA; 34-12 36th St.; Astoria, NY 11106; (718) 786-3400; FAX: (718) 729-3007. Owner: Ben Rizzi. Maxine Chrain. Manager: Maxine Chrain.

[24+] MASTERBLASTER SOUND; 5 E. 22nd St., Ste. 14M; New York, NY 10010; Owner: Joshua Tanner.

[24+] MEDIA ARTS CENTER/NICKEL STUDIOS; also REMOTE RECORDING; 753 Capitol Ave.; Hartford, CT 06106; (203) 951-8175. Owner: Jack Stang. Manager: Jon Bolduc.

[24+] MEDIA RECORDING STUDIOS; 410 Harvard Rd.; Babylon, NY 11704; (516) 669-1872; FAX: (516) 669-1898. Owner: Steve Young. Manager: Yodi Berglund.

[24+] MERLIN MUSIC; 224 Sullivan St., E-41; New York, NY 10012; (212) 254-1027. Owner: Paul Goodrich. Manager: Paul Goodrich.

[24+] METROPOLIS RECORDING STUDIO; also REMOTE RECORDING; 54 School St. (rear); Middleton, MA 01949; (508) 777-6270. Owner: John Weston, Jim Lightman. Manager: John Weston. Engineers: Jim Lightman, John Weston, Bob Tudor. Dimensions: Studio 16'x24', control room 17'x20'. Mixing Consoles: Neve V Series 48 input fully automated. Audio Recorders: (2) Otari MX 80 24-track 2" analog, MCI JH 110 2 track 1/2" and 1/4" analog, Panasonic SV-3700 Pro DAT, 2 & 4-track hard disk recording system. Synchronization Systems: TimeLine Micro Lynx. Echo, Reverb & Delay Systems: Lexicon 300 digital effects system, Eventide H3000S Ultra-Harmonizer, TC Electronic 2290 delay w/sampler, 15 other processors from Lexicon, Alesis, Korg and Yamaha. Other Outboard Equipment: Summit Audio tube EQ, (2) Drawmer M500 dynamics processor, various units from Aphex, Ashly, Barcus-Berry, dbx, Drawmer, Klark-Teknik, Orban, Symetrix and UREI. Microphones: Wide selection of Neumann, AKG, Audio-Technica, EV, Milab, PZM, Sennheiser and Shure. Monitor Amplifiers: Ashly Audio FET 2000, PS Audio 200C. Monitor Speakers: UREI 813C, Yamaha NS-10M, AKG headphones. Musical Instruments: Marshall and Mesa/Boogie tube amplifier, variety of guitars and basses, Alesis HR-16, Alesis HR-16B, Drum Kat MIDI controller, E-mu Proteus, Ensoniq ESQ-1, Kawai K-1R, Korg Wavestation, Korg MIR, Korg M3R, Korg SG-1D, Roland D-50, Roland D-70 Roland D-110, Roland JX-10, Roland R-8, Simmons drumpad, Yamaha TX802. Other: Macintosh lici w/color monitor, 16MB RAM & 1200MB hard disk drive, Atari 1040ST color monitor, all the major software packages including Opcode Studio Vision, Mark of The Unicorn Performer and Hybrid Arts SMPTE-track. Digital Workstations: Digidesign Sound Tools 2 & 4 track digital recording & editing w/more than 1.5 hr. capacity, sampling, re-mixing, time compression/expansion, CD pre-mastering, digital signal processing and much more. Digidesign SampleCell w 8 MB RAM and sample library. Extensive sound effects and music library. Rates: Please call for rates and more information.

[24+] MIDIMATION INC.; also REMOTE RECORDING; 124 West 24th St.; New York, NY 10011; (212) 620-0740. Owner: C. Martinak. P. Simpson, M. Weaver. Manager: Patrick Simpson.

[24+] MISSION SOUND STUDIO (FORMALLY EMMAUS SOUND STUDIO); 533 Oak Terrace; Pt. Pleasant, NJ 08742; (908) 899-5586. Owner: Joe and Jane Santucci. Manager: June Santucci. —SEE PHOTO/LOGO ON NEXT PAGE

[24+] MO MUSIC; 155 Henry St., #1E; Brooklyn Heights, NY 11201; (718) 852-3572; FAX: (718) 449-6814. Owner: Mike "Mo" Morgenstern. Manager: Mike "Mo" Morgenstern.

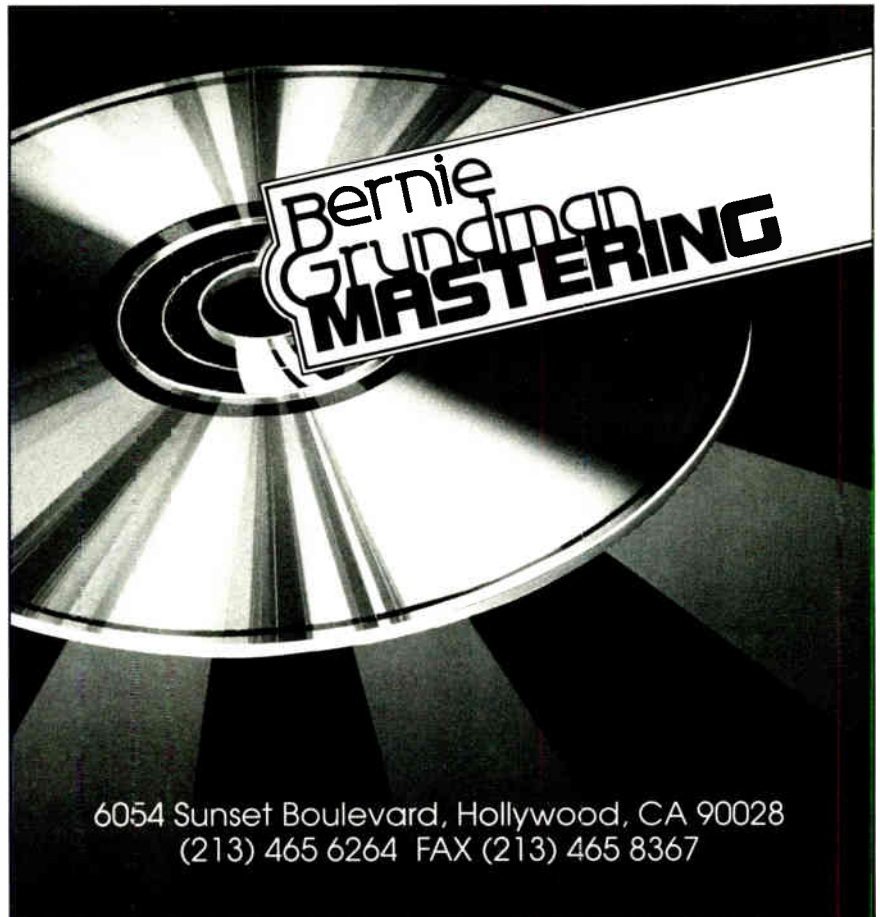
[24+] MODERN AUDIO PRODUCTIONS INC.; also REMOTE RECORDING; 1650 Market St., 3rd Fl.; Philadelphia, PA 19103; (215) 569-1600. Owner: Modern Video Inc. Manager: Chris Quin. Engineers: Bob Schachner, Elfrann Torres. Mixing Consoles: Soundcraft TS 24 28x24 automated, Soundcraft TS 24 8x24 automated, Soundcraft 200 8x4. Audio Recorders: MCI JH-24 24-track, Tascam Model 50 8-track, Otari MTR-12 3 track w/center-track, (7) Otari 5050 2-track, Sony 1630 and DMR 4000, Tascam DA-30. Cassette Recorders/Duplicators: (4) Awa F770, (2) Awa AD-515.

Noise Reduction Equipment: (28) Dolby A, (8) dbx I. **Synchronization Systems:** Boss automated editor w/(3) Adams-Smith synchronizer, Adams-Smith compact controller w/(4) Adams-Smith synchronizer. **Echo, Reverb & Delay Systems:** Klark-Teknik DN780, Yamaha REV7, Yamaha SPX90, Lexicon PCM60, Alesis Microverb II, Lexicon Prime Time II, Eventide 969 Harmonizer, Lexicon LXP-1, Lexicon LXP-5, Lexicon 224 XL. **Other Outboard Equipment:** (8) dbx 160 limiter, Drawmer 201 gate, (2) Valley People gate, (2) Valley People Gain Brain, Valley People de-esser, (2) Orban de-esser, GML 8200 parametric, (2) GML mic preamp. **Microphones:** (2) Neumann TLM170, (2) Neumann U87, (2) Neumann KM84, (2) B&K 4007, EV RE20, (2) Sennheiser MD-421, Shure 57, AKG 422, Neumann U47 FET. **Monitor Amplifiers:** (9) Hafler P-250. **Monitor Speakers:** (2) Klein & Hummel 092, (2) Yamaha NS-10, (2) ROR, (2) Fostex, (2) Sony, (2) Tannoy 6.5. **Musical Instruments:** Yamaha recording drums, various amps, Tokai baby grand piano, Roland D-50, Yamaha DX7, Oberheim Matrix-1000, Roland Octapad, Proteus 1 & 2, Yamaha TG77, Roland S770 w/44MB removable drive and CDROM, Roland R8M, Ensoniq VFX(SD). **Other MIDI Equipment:** Yamaha MSS1 MIDI/SMPTE synchronizer, Opcode Studio 3, Macintosh SE w/performer, KMX MIDI patch bay. **Video Equipment:** Complete post-production facility w/(2) 1" edit bays, AVA paint system, Rank Cintel film-to-tape transfer, Montage picture editor, TDI software w/Silicon Graphics hardware & workstation. **Other:** (2) Technics SL-P1200CD.

[24+] **NEON CITY RECORDING;** 627 Main St., Simpson, PA 18407; (717) 282-0863; FAX: (717) 282-0362. Owner: Carl Caneby. Manager: Bill Vargas.

[24+] **NEVESSA PRODUCTION;** also REMOTE RECORDING; One Artist Rd.; Saugerties, NY 12477; (914) 679-8848. Owner: Chris Andersen. Manager: Kristyn Fett.

[24+] **NEW ENGLAND MOBILE RECORDING;** PO Box 409; Stow, MA 01775; (508) 562-2111. Owner: Alan W. Goodrich. Manager: Jay W. Goodrich.



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[24+] **NEW YORK DIGITAL RECORDING INC.;** also REMOTE RECORDING; 636 Sixth Ave., New York, NY 10011; (212) 675-0600; FAX: (212) 675-3724. Owner: MacDonald Moore. Manager: Maura McGloin. Engineers: Paul Zinman, Jeff Zaraya, Nelson Wong, Daniel Kincaid, Mane Fontaine. **Dimensions:** Editing suite 1: 15.5'x19'. Editing suite 2: 15.5'x19'. Editing suite 3: 15.5'x19'. Vocal Booth: 7.66'x5'. **Mixing Consoles:** Studer 962 w/custom break-out boxes and Mogami cabling, Studer 961. **Audio Recorders:** PCM-3324 w/remote/V-clock/DABK-3003 w/rapid DAE-3000 edit/video lock/vansync, (2) DAE-3000/PCM-1630/DMR-4000/DTA-2000/DMU-30 edit system, DAE-1100A/PCM-1630/DMR-2000/DTA-2000 offline editing system, (3) Sony PCM-2500 Pro-DAT, (2) Tascam DA 30 pro-DAT, (2) PCM-F1/PCM-601 F1 format Beta/VHS/U-matic, Ampex ATR-102 2-track, Revox PR-99 2-track, Sonic Solutions hard disc based editing system w/multitrack mixing and editing; format conversion; machine control; sample rate conversion; PQ editing; sound-for-picture editing, Sony-start labs CD writer. **Noise Reduction Equipment:** (2) Dolby 360, (1) dbx 180A. **Synchronization Systems:** (2) Adams-Smith Zeta-3 w/Zeta remote/MIDI lock/3 transport control. **Echo, Reverb & Delay Systems:** Lexicon 300 digital effects system, (2) Yamaha SPX1000 multi-effect processor. **Other Outboard Equipment:** Roland E-660 digital equalizer, (2) Yamaha DMP7D digital mixing/EQ/format transfer/RTC-1 remote/interfaces, Benchmark MIA 4x4 mic. preamp/mixer, Massenburg 8202 parametric equalizer. **Microphones:** AKG, B&K, Schoeps, Neumann, Sennheiser, etc. **Monitor Amplifiers:** P.S. Audio, Adcom, NAD, Denon. **Monitor Speakers:** Thiel, Snell, Celestion. **Video Equipment:** JVC CR-600U U-matic VCR. **Other:** RTW-8804 F1 to 1630 digital format converter, Sony DFX-2400 sampling rate converter, Sony VSU-3310 vari-sync unit, (21) Stax SR lambda pro headphones, (6) Beyer DT990/770 headphones.



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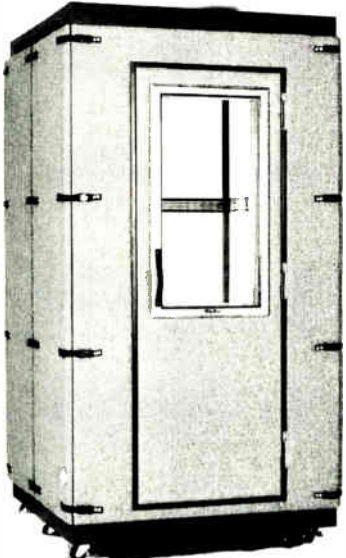
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NORTHEAST 24-track studios

[24+] **NOLA RECORDING STUDIOS**; 111 W. 57th St., New York, NY 10019; (212) 586-0040. Owner: Jim Czak, John Post. Manager: Mark Sullivan.

[24+] **NORMANDY SOUND INC.**; 25 Market St., Warren, RI 02885; (401) 247-0218; FAX: (401) 247-1280. Owner: Phil Greene, Ralph Petrarca, Ogden Fell. Manager: Ralph Petrarca. Engineers: Phil Greene, Tom Soares, Jamie Locke. Dimensions: Studio 40'x28', control room 22'x18'. Mixing Consoles: Solid State Logic 4056E w/G computer, 56 automated channel w/Total Recall. Audio Recorders: (2) Studer 827 24-track, Studer A80 1/2" 2-track, Studer A80 RC 1/4" 2-track, (2) Panasonic SV-3500 Pro DAT. Cassette Recorders/Duplicators: (3) Tascam 122 decks. Synchronization Systems: (2) TimeLine Lynx. Echo, Reverb & Delay Systems: Acoustic chamber, EMT 140s plate reverb, Lexicon 224X, Lexicon PCM70, (2) Yamaha SPX90, AMS RMX 16, Lexicon PCM60, Yamaha SPX900, Lexicon LXP-1, Yamaha REV7, AMS 15-80S w/ dual lock 6.5 sec per side, Eventide 949H Harmonizer, TC Electronic 2290 stereo effects processor, Lexicon Prime Time, (5) Lexicon PCM42, Loft 440 delay line flangers, DeltaLab CompuEffectron CE 1700, DeltaLab 1024 Effectron, Korg SDE 3000, ADR Panscan. Other Outboard Equipment: Telatronix LA-2A, UREI LA-3A compressor, (2) UREI 1176LN, (2) UREI LA-4, (3) Orban de-essers, (2) dbx 902 de-essers, (2) Valley People Dyna-Mites, (2) Alison Gain Brain Limiters, Focusrite rack w/4 isa 110 mic pre/EQ modules, (6) Dean Jensen/Boulder twin servo mic preamps, Pultec EQP-1A, Tube-Tech PE 1A EQ, Scholz Rockman sustainer. Microphones: Neumann M49 (tube), Neumann M269 (tube), Neumann U47 (tube), (2) Neumann U87, (3) Neumann KM84, AKG C-12 (tube), AKG C-12A (tube), (4) AKG C-414 EB, (3) AKG C 451, AKG D-12, AKG C-1000S, AKG D-112, (5) Sennheiser MD-441, (5) Sennheiser MD-421, Beyer 160, Beyer 88, Shure SM56, (6) Shure SM57, (2) Shure SM58, (2) Shure SM53, Shure SM81, Shure SM7. Monitor Amplifiers: McIntosh, Briston, Crown. Monitor Speakers: UREI 813 custom, Yamaha NS-10, Auratone. Musical Instruments: Yamaha C5 6'8" grand piano, Emulator II w/sample library, Yamaha TX216 rack, Roland D-50, 1960 Fender Stratocaster, Music Man Stingray bass, Yamaha and Guild acoustic guitars and various guitars amps. Rates: Upon request. Specialization & Credits: Normandy Sound has become celebrated for ensembling a unique staff of innovative engineers whose credentials have become notorious for their non-stop flow of hits on *Billboard's* Hot 100 and Top Album Charts. The combination of top engineers, superlative equipment and a worry-free, retreat setting with free accommodations for up to eight people in a full efficiency apartment has catapulted Normandy into a new dimension of excellence in world-class recording and mixing. Located a short distance from Providence, Newport and Boston, Normandy Sound is close to major metropolitan airports, and all travel arrangements can be made by contacting the studio manager.



NORTHEASTERN DIGITAL RECORDING INC.
Southborough, MA

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—SEE PHOTO/LOGO BOTTOM OF PREVIOUS COLUMN
[24+] **NORTHEASTERN DIGITAL RECORDING INC.**; also REMOTE RECORDING; 2 Hidden Meadow Ln.; Southborough, MA 01772; (508) 481-9322; FAX: (508) 624-6437. Owner: Dr. Toby Mountain. Manager: Anne Shepard. Engineers: Dr. Toby Mountain, Jonathan Wyner. Dimensions: Room 1: Studio 20'x13', Room 2: Studio 18'x12', Room 3: Studio 16'x12'. Mixing Consoles: Tronix SA 200 custom 12x4x2, Tronix SA 200 custom 4x2. Audio Recorders: (2) Sony PCM-1630 2-track digital processor, (2) Sony PCM-1610 2-track digital processor, Sony PCM-701 2-track digital processor, Sony PCM-501 2-track digital processor, Sony PCM-F1 2-track digital processor, (2) Sony PCM-2500 DAT, Sony DTC-1000, Panasonic SV-3500 DAT. Sony APR 5002H 2-track analog 1/2" or 1/4", Sonic Solutions Start Labs CD recorder, Cassette Recorders/Duplicators: (3) Denon. Noise Reduction Equipment: Dolby A, Dolby SR, dbx Type 1, dbx Type 2. Synchronization Systems: Sonic Solutions sonic pre-mastering system w/hard disk editing, (2) Sony DAE 1100A digital audio editor, Echo, Reverb & Delay Systems: Lexicon 300, Lexicon PCM70. Other Outboard Equipment: Digidesign Sound Tools Macintosh editing, processing, Digidesign DECK Macintosh multitrack recording/mixing. Microphones: Schoeps, B & K, AKG 414, Sennheiser. Monitor Amplifiers: Briston 4B, Perreaux. Monitor Speakers: Snell Acoustics Type C, Tannoy DMT-12. Musical Instruments: Yamaha DX7II FD, Roland D-50, Alessi HR-16. Other MIDI Equipment: Macintosh IIx, Macintosh IIfx, Performer and Composer software. Video Equipment: (2) Sony DMR-4000 3/4" for digital audio/video, (2) Sony BVU-800 3/4" for digital audio/video. Digital Workstations: Digidesign Sound Tools Macintosh editing and processing system, Digidesign DECK Macintosh multitrack recording and mixing. Specialization & Credits: We specialize in CD pre-mastering and digital editing using the Sonic System and the Sony PCM 1630, including transfers from a wide variety of digital and analog formats. Write-Once recordable CDs and CD manufacturing services are also available. Our composers' suite offers digital editing and sequencing with Sound Tools, and MIDI recording and mixing with DECK. We also offer live remote recording and post-production. Please call for rates and additional information. Credits: David Bowie, Frank Zappa, Bob Marley, Nils Lofgren, Arlo Guthrie, Buddy Guy, Paul Winter, Richie Havens, Kingston Trio, Rykodisc, Rounder, Omega/Vanguard Classic, Alligator, Musical Heritage Society, New World, Newport Classic, Northeastern, Biograph, SBK, EMI, A&M, Atlantic, Chrysalis, RCA.

[24+] **NORTHLAKE SOUND**; 3 Lakeview Drive; N. White Plains, NY 10603; (914) 682-0842/43. Owner: Elliot Roth-pearl. Manager: John Stech.

[24+] **NOTEWORTHY STUDIOS INC.**; also REMOTE RECORDING; PO Box 238; E. Randolph, VT 05041; (802) 728-4600; FAX: (802) 767-9652. Owner: Roger Staus. Manager: Bob Sparadeo.

[24+] **OCEAN RECORDING STUDIOS**; also REMOTE RECORDING; 700 Ocean Gate Dr., PO Box 743; Ocean Gate, NJ 08740; (908) 269-8660. Owner: Dennis B. Bourke. Manager: Christine Bourke.

[24+] **ODYSSEY SOUND STUDIO**; 350 Chelsea Ave.; Long Branch, NJ 07740; (201) 870-3554. Owner: Thomas Maggio. Manager: Thomas Maggio.



OMEGA RECORDING STUDIOS
Rockville, MD

[24+] **OMEGA RECORDING STUDIOS**; also REMOTE RECORDING; 5609 Fishers Ln.; Rockville, MD 20852; (301) 230-9100. Owner: Bob Yesbek. Manager: Bill Brady. Engineers: Bob Yesbek, Bill Brady, Tom McCarthy, Brian Smith, Chris Murphy, Andy Evans, Brian Gerstner. Dimensions: Room 1: studio 50'x40'x18', control room 24'x27', Room 2: studio 26'x25'x12', control room 23'x19', Room 3: studio 22'x20'x9', control room 20'x15', Room 4: 27'x27' (MIDI room). Mixing Consoles: Solid State Logic 4048 w/Total Recall and studio computer, API 2488 32x32 automated, Audionics 24x16x8. Audio Recorders: Mitsubishi X-850 32-track w/Apogee filters.

(2) Studer A80 MkIV 24-track, Studer A80 2-track 1/2", (2) Studer A810 2-track 1/4" w/center-track SMPTE, (6) Studer B67 2-track 1/4", Ampex A800 4-track 1/2", (4) Sony PCM-2500 digital, Studer/Dyaxis direct-to-hard disk digital editor/recorder. **Cassette Recorders/Duplicators:** (9) Nakamichi MR-1 real-time. **Noise Reduction Equipment:** (2) Dolby M-24, dbx 216 24-track, (4) Dolby 361, dbx 187, (2) Dolby SR. **Synchronization Systems:** (2) TimeLine Lynx. **Echo, Reverb & Delay Systems:** TC 2290, AMS RMX 16 digital reverb, EMT 251 digital reverb w/250 software, (2) EMT 1405T plate reverb, EMT 2405T Gold Foil reverb, (6) Lexicon PCM70 digital reverb, (9) Yamaha SPX90, (3) Eventide Harmonizer, dbx Boom Box low-frequency processor, (3) Lexicon Prime Time, (4) DeltaLab Electronics, AKG BX-20E reverb, (2) Alessis QuadraVerb, Ultra Harmonizer H3000 w/extended memory, Sony REV-1 reverb. **Other Outboard Equipment:** (12) UREI LA-4 limiter/compressor, Sontec parametric equalizer, Sontec compressor/limiter, Neve stereo compressor/limiter, (12) Allison Research Kexex, (4) Drawmer gate, (2) Orban stereo parametric equalizer, Audioarts stereo parametric equalizer, (2) dbx 110 comp/limiter, (2) dbx 162 comp/limiter, (2) Pultec equalizer, (2) BBE Sonic Maximizer, (2) Neve 4-band equalizer/mic preamp, Demeter tube preamp. **Microphones:** (22) Neumann U87 condenser, (18) EV RE20 dynamic, (12) Sennheiser 421 dynamic, (14) Neumann FET17 and KM83 etc. condenser, AKG The Tube, (4) Neumann U47 and U67 tube, (4) AKG C-414 condenser, (2) Milab DC-96B, TLM-170, (2) Sony C-48 condenser, (4) Crown PZM, (2) Schoeps, (12) Shure SM57. **Monitor Amplifiers:** (20) Bryston/Crown. **Monitor Speakers:** (2) Westlake TM-1, (4) UREI 813/811. **Musical Instruments:** Steinway grand piano, Kawai grand piano, Kurzweil 250, (3) Yamaha drums set, Roland D-50, Emulator II, Yamaha DX7/TX802, Oberheim DPX-1, (2) Akai S900, Hammond B-3 w/Leslie, Korg M1, M3, Roland D-110, D-550, D330, Kawai D-3M. **Other MIDI Equipment:** Macintosh II w/380MB HD, (2) J. Cooper 16/20 MIDI patcher. Atan, IBM computers, Roland S-550, Akai S1000. **Video Equipment:** (2) Sony VO-5850 recorder, Panasonic professional TV monitors built in to control rooms. **Rates:** Studio A—\$130/hr., Studio B—\$115/hr., Studio C—\$85/hr., Studio D—\$75/hr. Package rates available for block booking. **Specialization & Credits:** Each control room and studio separately air cond. and heated. Electrostatic air cleaners in all rooms, 48-line, building-wide tie-line system for audio and video, various music and SFX records and tapes available in music library and two lounges. Producer's office in control room #1. Omega Studios' huge studio #1 is for concert bands, marching bands, stage bands, choirs and orchestras of up to 100 pieces. Omega control #1 features a 10' producer/client's desk and an SSL console, plus 32-track digital recording w/Apogee filters. Capable of 48 inputs, #1 is equipped for up to 56 tracks analog/digital. Studio #2 offers 24 tracks. Grand pianos are available in both studios. Studio #3 offers 24 inputs and 2/4/8-track production. SFX and music libraries are available on CD, record and tape. Studio #4 is MIDI-based and features a Macintosh w/380MB hard disk. Digital editing is available using the Dyaxis direct-to-hard disk system featuring one-hour recording capability and direct-to-digital connection to the Sony PCM-2500s.

[24+] ONE WORLD RECORDING CORPORATION; 72 E. Dedham St.; Boston, MA 02118; (617) 426-8078; FAX: (617) 422-0698. Owner: Steve Van Natta. **Manager:** Alexander Milne. **Engineers:** John Breglia, Steve Van Natta. **Dimensions:** Room 1: studio 68'x30', control 34'x20'. Iso booth 16'x20'. **Mixing Consoles:** Neve 8038 35 input (32x16x24) w/1081 EQ, Hill Multimix submixer. **Audio Recorders:** Studer A80 24-track 2", Studer A807 2-track 1/4", Otari 5050B 2-track 1/4", Panasonic 3700 DAT, Panasonic 3500 DAT. **Cassette Recorders/Duplicators:** (6) Nakamichi MR-1. **Noise Reduction Equipment:** Dolby SR 365. **Synchronization Systems:** J.L. Cooper PPS-100. Southworth Jambbox 4+. **Echo, Reverb & Delay Systems:** UREI 1176 compressor, UREI 1178 compressor/limiter stereo, (2) Lexicon PCM42 digital delay, Klark-Teknik DN780 digital reverb, (2) Yamaha SPX90 II digital reverb, (2) Alessis QuadraVerb II, Alessis MIDVerb II, Roland SRV-2000, (3) Lexicon PCM70, (2) Neve 2254/E compressor, (6) Ashley SG33 gate, AMS S-DMX digital delay/sampler, (2) dbx 160X compressor, (2) dbx 166 gate/compressor, Spectra Sonics 610 compressor/limiter, Spotmaster Sound Britever, Symetrix 528 voice processor, Ampex tube mic and preamp (4 channel). **Other Outboard Equipment:** (6) Neve 2074 EQ. **Microphones:** (2) Neumann TLM170, Neumann U87, Neumann U47, (2) AKG 414 B-ULS, (2) AKG 451 CK 1 (matched), AKG 224, (8) Sennheiser 421, (2) vintage Sony ECM 56F (matched), AKG 451 EB, (2) Shure SM58, (6) Shure SM57, (2) Electro-Voice RE20, Sony C-37, Sony C-33, Beyer M69, (2) PZM Plates, AKG "Tube", (2) Electro-Voice PL20, (2) Sennheiser 441. **Monitor Amplifiers:** Belles 500 (mains), Belles 700 (near-fields), (2) QSC 1400 (cue-mix), Ashley MOSFET 200 (studio). **Monitor Speakers:** Yamaha NS-10M, custom Audio Pro AR 18Bxi, JBL 4435 (modified). **Musical Instruments:** Emulator II+ 20MB HD w/full library, Kurzweil MIDIboard, Kurzweil 1000 PX 24 voice Pro Expander, E-mu SP12 sampling percussion, Oberheim OB-8, Yamaha DX7IIIFD, (2) Yamaha DX7, Yamaha TX8 16 (8 track), Yamaha CS5, Korg mono/poly, Alessis SR16 plus others to extensive to list. Yamaha Recording Series (9 pieces). **Digital Workstations:** IBM PS2 running Voyetra Sequencer Plus MkIII and Librarian, Mac IIfx running Sound Tools w/20 MB RAM 1.5 gig hard disk. **Specialization & Credits:** Our Steven Durr-design control room combines an oversped Neve 8038 recording desk with a Studer A80 24-track, supported by an extensive inventory of both state-of-the-art and vintage gear from all of the top manufacturers. A vast array of MIDI equipment including both IBM and Mac based sequencing as well as CD pre-mastering on Sound Tools is

available on and off site. An antique Stenway grand piano highlights the largest live room in Boston. Completing the total One World package is our experienced in-house production staff and creative working environment suitable for any album or recording project. One World is centrally located in downtown Boston, minutes from Logan airport, making it the ideal cost effective and convenient alternative for both the national and international artist. Clients include: Warner, Atlantic, Polygram, London, East/West, Stomppoff, Flying Fish, etc. Multimedia: Maxwell Electronic Publishing, WGBH Communications. Contact for rates and availability.

[24+] 1137 RECORDING; also REMOTE RECORDING; 1137 Fillmore St.; Baltimore, MD 21218; (301) 889-4228. Manager: Robert J. Friedman.

[24+] OZ; also REMOTE RECORDING; 310 E. 53rd St.; Baltimore, MD 21202; (410) 234-0046; FAX: (410) 519-2835. Owner: Voltage Studios Inc. **Manager:** Stephen Palmer.

[24+] PARIS RECORDING; also REMOTE RECORDING; 466 Hawkins Ave.; Lk. Ronkonkoma, NY 11779; (516) 467-5143; FAX: (516) 471-4026. Owner: Brian Unger. **Manager:** Diana Perez.

[24+] PENNY LANE STUDIO; 1350 6th Ave.; New York, NY 10019; (212) 687-4800; FAX: (212) 307-4133. Owner: H. Flaum. **Manager:** A. Varner.

[24+] PERMANENT WAVE PRODUCTIONS; also REMOTE RECORDING; PO Box 276 M.O.; Shrewsbury, MA 01545; (508) 842-4422. Owner: Brian D. Markey. **Manager:** Brian D. Markey. **Specialization & Credits:** Permanent Wave is a full-service multimedia production company specializing in the development of program materials for corporate clients (see Brian Markey's "Business Opportunities in Multimedia" article in January, 1992 issue of *Mix*). Our services include: Video and audio for commercial advertising and training productions. Digital and analog multitrack recording. Post-production and audio-for-video. Film/video scoring and soundtrack production. Music composition and arranging. Sampling, MIDI system design and programming. Session musicians.

[24+] PHOTOMAGNETIC SOUND STUDIOS; 222 E. 44th St.; New York, NY 10017; (212) 687-9030; FAX: (212) 687-9298. Manager: Beverly Dichter-Jacobs. **Specialization & Credits:** Five mix suites including four automated Neve V Series and one Neve 8058 console. New this year at Photomag are a NED Synclavier with Direct-to-Disk and a Sony 3324 digital multitrack machine. We are able to bring our clients through every stage of the audio post-production process. From transfers in any format, to sound design, electronic and automatic sound assembly (via our AMS AudioFile), to the mix (in mono, stereo or Dolby Surround) and layback (to our 1", 3/4" Beta SP or D2 recorders). With our centrally located machine room, we can provide all of our rooms with the tools necessary for any job. A wide variety of audio and video gear is accessible via our Adams-Smith synchronization system and serial patch bay. Complete stock music and sound effects libraries along with our highly creative staff assist our clients in production of commercials, documentaries, trailer, music videos and long-form television programming. Photomag is dedicated to bringing the latest in post-production technology to our clients. Call for rates and information.



PLATINUM ISLAND STUDIOS
New York, NY

[24+] PLATINUM ISLAND STUDIOS; 676 Broadway; New York, NY 10012; (212) 473-9497; FAX: (212) 505-8277. Owner: RLK Enterprises. **Manager:** Richard Kessler. **Engineers:** Doug Deangelis, John Wall, Axel Niehaus, Hoover Le, Keith Senior. **Independents:** Jason Corsaro, Bob Rosa, Michael Hutchinson, Steve Peck. **Mixing Consoles:** Floating MIDI track: Akai S-900 w/triggers, D550, M-3R. Super Jupiter w/programmer, TX81Z, Proteus XR, KMX MIDI patcher, choice of Macintosh SE, Atan 1040ST, IBM clone and Roland SBX-800 sync box, Akai S-1000. **Audio Recorders:** (2) Studer A800 MkIII 24-track, Studer A827 24-track, Studer A80 24-track,

Studer A820 2-track, Studer A80 2-track, Studer B67 2-track, Studer A80 4-track 1/2", Tascam 122 MkII, Nakamichi MR-1, (2) Panasonic 3700, (2) Panasonic 3500. **Synchronization Systems:** (4) TimeLine Lynx, Adams-Smith 2600. **Echo, Reverb & Delay Systems:** Lexicon 480L, (2) AMS RMX 16, (2) Lexicon 224SL, EMT 140TS, Ecoplate 1, (4) Lexicon PCM70, Lexicon PCM60, (5) Yamaha REV7, (2) SRV2000, (2) DEP-5, MKR 01A, (2) AMS 1580, (7) Lexicon PCM42, (3) PCM41, Prime Time II, (3) Yamaha SPX90II, SPX900, (2) SPX90, Publison 90, Publison 89, Ursula Major SST-282, (2) MRX-Auto Phaser, (2) Auto Flanger (2) H3000, (2) H-949, (2) H-910 Eventide Harmonizer. **Other Outboard Equipment:** (3) UREI LA-2A, (3) Summit TLA-100, Spectra Sonic 610, (4) UREI LA-4, (4) UREI 1176LN, (9) dbx 160X, (2) dbx 165A, (2) dbx 160, dbx 166, dbx 162, BSS DPR-002, Neve 2254/A, (4) Trident "A" Range limiter, (12) Drawmer DS, (4) Valley Dyna-Mite, (2) dbx 904 gate, (2) Pultec EQ-1A, (2) EQH-2, (2) EOP-1, (3) MEO-5, (2) Ficktnkers EQ, (12) Neve 1066A mc pre EQ, (4) Trident CB9066 EQ, (16) API 550A, (3) 560B EQ, Klark-Teknik, UREI graphic EQ, (3) Aphex "C" Exciter, (2) BBE 802, dbx 120HS processor. **Microphones:** Neumann U49, Neumann U48, (2) Neumann U67, (2) U47 tubes, AKG "The Tube", Milab VIP-50, (6) Neumann U87, (2) U47 FET, (5) AKG 414EB, (3) AKG 451 EB, AKG 452, (4) AKG 460, AKG D-112, D-12E, RCA 44DX, (2) RCA Q77DX, Beyer M-160 ribbon, (6) Sennheiser MD421, (2) M-409, 441, (5) Shure SM57, Shure SM58, (2) SM81, (2) PZM, Countryman active and Jensen passive direct boxes. **Monitor Amplifiers:** (2) Perreux 9000B, (8) Bryston 4B, (5) Crown DC-300, (4) DC-150, **Monitor Speakers:** (4) UREI 813-B, (8) Yamaha NS-10, (6) Tannoy PVM-6.5, (4) Tannoy LGM-12, (4) EV Sentry 100A, Auratone 5C, (2) Kef 101. **Musical Instruments:** Yamaha C7 & Young Chang grand pianos, Ampeg B15 & Marshall amps, Leslie cabinet, MIDI room: Korg M1, Roland, Super Jupiter w/ prog., D-50, Super JX, Juno 106, Juno 60 w/MIDI, MKS-50 and JX3-P; Yamaha DX7IIIFD, DX7, TS 812, TX 802, and DX-100; Minimoog w/MIDI, Oberheim 08-8 w/MIDI, Matrix 6R, E-mu Proteus XR, Samplers: Akai S-1000 HD, S-950, S-900, Emulator II. Drum machines: E-mu SP-1200, Roland R-8. Computer Sequencers: Mac IIcx, SE30, Atan 1040ST and 1040SE, Premier IBM clone. **Video Equipment:** JVC-8250 edit recorder w/remote, black burst generator, Sony monitors. **Specialization & Credits:** Platinum Island is a 3-studio complex, (2) 48-track and a 24-track, with 3/4" video lock available; featuring SSL 4056 E/G, Neve and Harrison consoles along with copious state-of-the-art outboard gear. We offer state-of-the-art mixing, tracking, and overdubbing, and can accommodate a chamber orchestra, smoothly interface a programmer's MIDI rack, and everything in between. Recent clients: Madonna, C&C Music Factory, Deee-Lite, Latoya Jackson, Robert Palmer, Chaka Khan, Thompson Twins, Marky Mark and the Funky Bunch, Ryuichi Sakamoto, Rumblefish, Vanessa Williams and David Byrne. Go Platinum with us!

[24+] PLATINUM SOUND; 406 Centre St.; Boston, MA 02130; (617) 983-9999. Owner: Akhil Gariand.

[24+] POWER PLAY STUDIOS; 37-20 30th St.; Queens, NY 11101; (718) 729-1780; FAX: (718) 729-3193. Owner: Anthony Ari. **Manager:** Cary Dean Hart. **Specialization & Credits:** Our clients include: Big Daddy Kane, Boogie Down Prod., Brand New Heavies, Deee-Lite, EPMD, ICE-T, Kid 'n Play, LL Cool J, Queen Latifah, Lady Smith GQ MacMabazo, MC Lyte, R.E.M., Salt-n-Pepa, Teddy Riley, Sly & Robbie, Steel Pulse, Prong, Swans, Ziggy Marley, NAJEE, Sinead O'Connor, Main Source, Ingrid Chavez, Marley Marl, Pal Joey, Tone Loc, Bunny Wailer, Jam Master Jay, Father MC, Nice & Smooth, GWAR, Enc B. & Rakim. **Specializing in** digital editing and pre-mastering with over 70+ minutes of stereo editing time. Show tapes, radio spots, LP sequencing.

[24+] POWER STATION INC.; 441 W. 53rd St.; New York, NY 10019; (212) 245-2900; FAX: (212) 586-0326. Owner: Bob Walters. **Tony Bongiovi. Manager:** Barry Bongiovi, Bari Kaye. **Specialization & Credits:** Power Station consists of four studios: Studio A has an 8068 Series Neve 40 in 24-track custom console. Studio B has a SSL 6000E series console, with 48 inputs, 32 bus outputs and 48-track record/mix capabilities. This console also features Total Recall and "G" computer software. Studio C has a 60 input/48 bus Neve VRP 60 with Flying Faders Automation and Recall. All are capable of video lockup. Power Station has recently integrated its sound recording expertise with the realm of audio post-production. D-AV1 has a customized 80-input automated SSL 4080 G console equipped to synchronize multiple audio and video machines simultaneously. It has a 1" C format, D2 and 3/4" video formats, four 36" Mitsubishi color monitors plus a GE Light Valve Projection system with large-screen viewing. D-AV1 has audio mix down capabilities in mono, stereo or stereo surround. A Synclavier 9600 and PostPro digital workstation with a digital sound effects library rounds out the room.

[24+] PREMIER RECORDING INC.; 2121 Wisconsin Ave. NW, Ste. 250; Washington, DC 20007; (202) 333-5588; FAX: (202) 337-6928. Owner: Demos Chrissos. **Manager:** Barnaby Bristol. **Engineers:** Demos Chrissos, Barnaby Bristol, Mac Squier, Bill Plummer. **Dimensions:** Studio 22'x14', control room 26'x21', MIDI room 16'x11'. **Mixing Consoles:** Neotek Elite 36x26, Yamaha M2404 (MIDI room), Seck 242MkII (MIDI room). **Audio Recorders:** Otari MTR-90 II 24-track, Otari MTR-1011 1/4" w/center track time code, Otari MTR-1011 1/4" 2-track, Otari MX-5050 MkIII-2 1/4" 2-track, Sony PCM-2500 DAT. —LISTING CONTINUED ON NEXT PAGE

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**N O R T H E A S T
24-track
studios**

—LISTING CONTINUED FROM PREVIOUS PAGE

Panasonic SV-3500 DAT. **Cassette Recorders/Duplicators:** (2) Otari MX-5050B MkII (dupe room), (3) Nakamichi BX-100. **Noise Reduction Equipment:** Dolby XP-24 Type A. Dolby 363 Type A/SR. **Synchronization Systems:** (3) TimeLine Lynx. TimeLine keyboard control unit, VAC 100PZ-2PC sync generator. JL Cooper PPS-100. **Echo, Reverb & Delay Systems:** Lexicon 200, Lexicon PCM70, Lexicon LXP-1, Lexicon LXP-5, Yamaha SPX90II. **Other Outboard Equipment:** Aphex Type C Aural Exciter, (3) Aphex 300 stereo Compellor, (2) Aphex 612 exp/gate, (3) dbx 160C comp/limiter, dbx 166 comp/limiter, DeltaLab ADM 1024, Drawmer DS-210 gate, Symetrix 511 noisereduction, (2) Symetrix 528 voice processor, Symetrix 544 quad gate, (4) UREI LA-4 comp/limiter. **Microphones:** AKG D-112, AKG C-414EB/P48, AKG 460B/CK61ULS, Neumann U87, Sennheiser 421. **Monitor Amplifiers:** UREI 6500, Crown D-75, Crown D-150A (cue), Crown D-75, Halfer PRO-120. **Monitor Speakers:** UREI 813B, Tannoy PBM-8. **Musical Instruments:** Kawai GS-40 acoustic grand piano, Akai S900, Akai S950, E-mu Emax SE, (2) E-mu Proteus-1, E-mu Proteus-2, Ensoniq VFx, Korg EX M1R, Kurzweil 250, Kurzweil AX+, Kurzweil PX+, Oberheim DPX-1, Oberheim Matrix 6R, Roland D-550, Roland R-8M, Roland U-20, Yamaha TX802. **Other MIDI Equipment:** IBM PC w/sequencer Plus, (2) JL Cooper MSB 16/20, JL Cooper MSB+, Lexicon MRC, Macintosh IIfx w/Performer v3.5. **Video Equipment:** Sony VO 5800. **Digital Workstations:** Studer Dyaxis w/320MB drive, MaxMix v2.3 and Q-Sheet. **Rates:** Upon request.

[24+] **PRESENCE STUDIOS; also REMOTE RECORDING; 13B Riverside Ave., Westport, CT; (203) 467-9038; FAX: (203) 468-8165. Owner:** Jon Russell. **Manager:** Nancy Strouse. **Engineers:** Joe Carrano, Jon Russell, Mark Diamond, welcome. **Dimensions:** Room 1: Studio 30'x34', control room 24'x22'. Room 2: studio 12'x14', control room 12'x12'. **Mixing Consoles:** SSL 4056BG-TRG. **Audio Recorders:** Studer D-B820-48 48 digital, Studer A827 analog, Studer A820 TC 1/2", Ampex ATR-800 1/4" 2-track, Panasonic SV-3700 DAT, Panasonic SV-3500 DAT, Panasonic SV-250. **Cassette Recorders/Duplicators:** (40) Sony TCK-620 real time duplication, (2) Tascam 122MkII. **Noise Reduction Equipment:** (2) Dolby 361 A/SR. **Synchronization Systems:** (3) TimeLine Lynx. **Echo, Reverb & Delay Systems:** Lexicon 480L 3.0, Lexicon 224XL, Lexicon PCM70, Lexicon PCM60, TC 2290 11 sec, (4) Roland SDE-3000, Lexicon Super Prime Time M97, (2) MXR digital delay, Loft 44 1 analog delay, (2) Marshall AR-3000 tape eliminator. **Other Outboard Equipment:** Eventide H3000 B, Eventide H949, (2) Yamaha REV7, (3) Yamaha SPX90, (4) Neve 1073 EQ, (2) Drawmer DS-201 gate, Drawmer 1960 stereo comp/limiter, (2) UREI 1176LN, Summit TLA-100, dbx 162, dbx 902 de-esser, (4) dbx 165 over easy, (2) Tube Tech PE-113, dbx 905 parametric. **Microphones:** Neumann U47, Neumann U87, (6) AKG C-414ULS-TL, (4) AKG C-414ULS, (6) AKG C-460ULS, (10) AKG C-451EB, (5) Sennheiser MD-421, Sennheiser MD-441, AKG "The Tube", (2) Crown PZM, (2) Shure SM57, (2) EV RE20. **Monitor Amplifiers:** (8) Halfer DH-220, (2) Halfer DH-500, Halfer DH-5000. **Monitor Speakers:** (2) Westlake Audio HR-7U, (2) Westlake Audio TM-1, (4) Yamaha NS-10M, (2) Tannoy PBM 6.5. **Musical Instruments:** If we don't have it, we'll get it. **Other MIDI Equipment:** Roland SBX-80, Yamaha C1. **Video Equipment:** Sony BVU-950 3/4", Proton 600M monitor. **Other:** Krups Espresso/Cappuccino maker. **Digital Workstations:** Fairlight Series III 9.0 software w/optical. **Rates:** Honest, reasonable and easy to live with.

[24+] **PRIME CUTS STUDIOS; 1600 Broadway, Ste. 704; New York, NY 10019; (212) 265-1800. Owner:** Tuta Aquino, Mark Kamins. **Manager:** Tuta Aquino. **Engineers:** Tuta Aquino, Rick Van Benschoten, Gary Clugston, Shaun James, Steven Barkan. **Dimensions:** Room 1: (MIDI room) studio 12'x9', control room 18'x16'. Room 2: (analog & digital editing) control room 12'x9'. Room 3: (vinyl mastering/reference) control room 12'x9'. **Mixing Consoles:** Trident Series 65 Model 24 28x24x24. **Audio Recorders:** Otari MX-80 24-track, (2) Otari MTR-12 2-track 1/2" and 1/4", Sony PCM-2500 DAT. **Cassette Recorders/Duplicators:** (2) Nakamichi MR-2, Tascam 122 MkII B, Sony DTR-1000ES DAT, Sony DTR-100 DAT. **Synchronization Systems:** Roland SBX-80. **Echo, Reverb & Delay Systems:** Yamaha REV5, (2) Yamaha SPX90II reverb, Alesis Quadraverb reverb, (2) Lexicon LXP 1 reverb, Lexicon

MRC controller, Lexicon PCM42 delay, Ibanez SDR-1000+ reverb, Korg DD-3000 digital delay. **Other Outboard Equipment:** (2) API 550B parametric EQ, (2) Pultec EQP-1, (2) dbx 160X compressor, Aphex expander/noise gate, (2) Valley People GateX noise gate. **Microphones:** AKG 414, (2) Shure SM58. **Monitor Amplifiers:** Yamaha P2150, Yamaha P2250, Crown D-40, Sansui AugX77XII. **Monitor Speakers:** (2) Yamaha NS-10M, Tannoy 6.5, Auratone 5C, UREI 813, Yamaha NSW2 subwoofer. **Musical Instruments:** Akai MPC60 drum machine/sequencer, Yamaha DX7IIFD keyboard controller, Moog Minimoog w/MIDI retrofit, Akai S950 sampler, Korg M1R MIDI keyboard, Korg EX-8000 MIDI keyboard, Roland D-550 MIDI keyboard, Roland MKS-80 Super Jupiter MIDI keyboard, Roland programmer for MKS-80, Roland MKS-70 Super JX MIDI keyboard, Roland D-110, Yamaha TX802, Yamaha TX81Z, Oberheim Matrix-1000, Casio CZ-1000, Roland TR-808 drum machine, Roland TR-707 drum machine, TR-303 bassline MIDI keyboard, Kawai K1r keyboard, E-mu Proteus MIDI keyboard, Roland Juno-106 keyboard, Oberheim Matrix 6 keyboard, Ensoniq ESQM keyboard. **Other MIDI Equipment:** Macintosh SE30 sequencer w/Opcode MIDI interface, Atan 1040ST sequencer w/color monitor, Akai MPC60 w/expanded memory. **Rates:** Visa/Mastercard accepted.

[24+] **THE PRODUCTION BLOCK; also REMOTE RECORDING; 2833 North Front St.; Harrisburg, PA 17110-1222; (717) 233-4155. Owner:** Michael and Sarah Block. **Manager:** Ashley Block.

[24+] **PRODUCTION MASTERS INC. (PMI); also REMOTE RECORDING; 321 First Ave.; Pittsburgh, PA 15222; (412) 281-8500; FAX: (412) 391-7529. Owner:** David A. Case. **Manager:** Jack Bailey.

[24+] **PULSE WAVE UNDERGROUND RECORDING STUDIO; 19 Norwood Terr., Trumbull, CT 06611; (203) 268-1018. Owner:** John P. Mozzi. **Manager:** Fred Loulis. **Engineers:** John P. Mozzi, Fred Loulis, Rich Kwiat. **Dimensions:** Room 1: Studio 22'x25', control room 13'x16'. Room 2: studio 20'x11'. **Mixing Consoles:** Sony MXP-3036 36-channel. **Audio Recorders:** Sony JH-24 24-track, Otari MX-5050 IIB stereo, Panasonic SV-3700 R-DAT. **Cassette Recorders/Duplicators:** Tascam 122B. **Echo, Reverb & Delay Systems:** (2) Yamaha SPX1000, Lexicon 300, Lexicon PCM70, Lexicon PCM60, (4) Korg SDD-3000. **Other Outboard Equipment:** Drawmer DS-301, Aphex Dominator II, (2) Aphex Expressor, (2) dbx 160X, Drawmer DS-201, Valley People Dyna-Mite, Klark-Teknik DN360. **Microphones:** AKG C-414ULS, (2) AKG C-535, AKG D-222, Beyer MC-500, (9) Sennheiser MD-421, (2) Sennheiser MD-431, (2) Sennheiser MD-441, Sennheiser ME40, Sennheiser ME80, (3) Shure SM57, (4) Neumann U67, Neumann U87, Bruel & Kjaer 4011, (2) Bruel & Kjaer 4006X. **Monitor Amplifiers:** Bryston 4B, (2) Crown D 150A, Crown D-75. **Monitor Speakers:** Tannoy PBM8, Genelec 1031A, UREI 809, Electro-Voice MS802, (2) Yamaha NS-10. **Musical Instruments:** Korg O1WR, Akai S1100, Korg SGX1D digital piano, Korg M1R, Kurzweil 1000PX, Roland U-220, E-mu Proteus 2, (2) Korg EX8000 synthesizer. **Other MIDI Equipment:** Lexicon MRC controller, MIDI Timepiece, Roland A880 patcher/mixer/merger. **Video Equipment:** Panasonic PV-1730. **Other:** (4) John Hardy mic pre-amps, (2) API 550 EQ, Macintosh SE30, Performer, Finale & Digidesign software.

[24+] **PYRAMID RECORDING STUDIO; 449-51 Central Ave.; Orange, NJ 07050; (201) 678-1663. Owner:** Lou Massa. **Manager:** Lou Massa.

[24+] **PYRAMID SOUND INC.; 105 E. Clinton St.; Ithaca, NY 14850; (607) 273-3931; FAX: (607) 273-3936. Owner:** John Perlas. **Manager:** Lorr Hunter.

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[24+] **QUAD RECORDING STUDIOS; 723 7th Ave.; New York, NY 10019; (212) 730-1035; FAX: (212) 730-1083. Owner:** Lou Gonzalez-McLean. **Manager:** Carla Angel. **Engineers:** Rick Slater, Chris Theis, Russ Elevado, Grant Austin,

Pavel de Jesus, Arty Skye. **Dimensions:** Room 1: studio 30'x40', control room 20'x30'. Room 2: studio 25'x25', control room 20'x30'. Room 3: studio 15'x20', control room 25'x35'. Room 4: studio 15'x20', control room 30'x15'. **Mixing Consoles:** (2) SSL 4072 w/G Series computer 64-channel, SSL 6064 w/G Series computer, Neve 8058 MkII (36-input). **Audio Recorders:** Studer A800 24-track, (2) Studer A80 24-track, (3) MTR-90 24-track, (6) Studer A80 1/2" 2-track, (2) Panasonic 3500 DAT, (2) Panasonic 3700 DAT. **Cassette Recorders/Duplicators:** (5) 122 MkII. **Noise Reduction Equipment:** Dolby A rack 24-channel. **Synchronization Systems:** (3 pair) Time-Line Lynx. **Echo, Reverb & Delay Systems:** (3) AMX 16, (3) DMX 1580, (9) PCM42, (2) PCM41, (3) PCM70, (5) REV7, (3) Prme-time II, Eventide 969 Harmonizer, Eventide 910 Harmonizer, (3) H300SE, 480L, (2) 224XL, 224, (6) EMT 140, (4) SPX90, (2) TC 2290, (3) Roland Dim-D, Roland SRV-2000, (3) Pan Scans. **Other Outboard Equipment:** (8) dbx 160, (6) 1176, (3) PxBX 165, (3) LA 2A, (2) dbx 166, (6) Valley People Dyna-Mite, (3) Drawmer gate, (8) API 550 EQ, (8) API mic pre, (5) Pultec EQP-1, (4) Pultec MEQ, (2) Orban 621 EQ, (4) Pultec EQH. **Monitor Speakers:** (4) UREI 813 B, many NS-10M, (2) PBM8, (2) PBM 6.5, (3) Auratone. **Musical Instruments:** Akai S1000HD, Akai 900, E-mu SP-12, Roland D-550, Juno-106, Juno-60 w/MIDI, E-mu Proteus I, DX7IID, DX7, D-1000, Prophets. **Other MIDI Equipment:** Sound Tools digital editing, Macintosh IIfx 5/80 (5 MB RAM).

[24+] **RAM'S DEN STUDIOS INC.;** 32 West St.; Northport, L.I., NY 11768; (516) 754-1333. **Owner:** Salvatore Minetta III. **Manager:** Marc Gershuny. **Engineers:** Marc Gershuny. **Dimensions:** Room 1: control room 22'x14'. Room 2: studio 26'x15'. Room 3: studio 25'x13'. Room 4: MIDI studio 9'x9'. Room 5: studio 25'x12'x10'. **Mixing Consoles:** Trident 24 (60-input), Sound Workshop. **Audio Recorders:** Sony APR-24 2" 24-track analog, Otari 1/2" MX-5050 8-track, (2) Panasonic SV-3700 DAT, Otari 1/4" MX-5050 2-track. **Cassette Recorders/Duplicators:** Nakamichi MR-1, Nakamichi 681-ZX, Nakamichi CR-3A, Tascam 122MkII. **Noise Reduction Equipment:** (10) dbx 900 series/model 411, (2) Aphex Type C Echo, **Reverb & Delay Systems:** (2) Eventide H3000SE, Crown DRV-2000, Korg SDD-1000, Lexicon PCM42, Lexicon PCM70, Roland SRV-1000, TC Electronic TC 2290, dbx 900 series flanger, Ecoplate II plate reverb. **Other Outboard Equipment:** (4) Aphex 612 stereo gate, (2) ART 270 IEQ's, Audioarts 1200 comp/limiter, (4) dbx 166 compressor, (2) Valley People Dyna-Mite gate, Yamaha GC2020 comp/limiter, (2) Rane GE30 EQ. **Microphones:** (2) Neumann U87, (2) AKG C-414, (6) Sennheiser 421, (2) AKG D-12E, (10) Shure SM57, (10) Shure SM57, (6) Shure SM58, (2) AKG C-460B, AKG C-535EB, Beyer M69N(C). **Monitor Amplifiers:** UREI 6500, Crown D-150A series I, BGW model 100 headphone, Rane HC6, BGW 750C. **Monitor Speakers:** (2) UREI 813, (4) Yamaha NS-10M, (2) Tannoy PBM-6.5, (2) Auratone, (4) Fender 2851 studio play. **Musical Instruments:** D-drum electronic drums, (3) Marshall stacks, Roland JC-120, Yamaha custom drum set (11 pc.), Yamaha custom drum set (8 pc.), Baldwin baby grand piano, (4) Korg DSM-1 samplers, Korg M1, Korg SGX-1, Roland R-8, Roland R-8M, Roland U-20, Korg M3R, Roland Super JX10, Roland D-550. **Other MIDI Equipment:** (2) Macintosh SE30, performance software by MOTU, Opcode Performance software, Mark of The Unicorn MIDI Timepiece, MIDIKit. **Other:** Megamax automation. **Rates:** Rates designed to fit all budgets. Call for more info.

[24+] **RAWLSTON RECORDING;** 1271 Fulton St.; Brooklyn, NY 11216; (718) 622-0010; FAX: (718) 622-0216. **Owner:** Rawlston Charles. **Manager:** Akili Walker.

[24+] **RBV RECORDING AND VIDEO;** also REMOTE RECORDING; 920 N. Main St.; Southbury, CT 06488; (203) 264-3666; FAX: (203) 264-3667. **Owner:** Jack Jones, Evan Jones. **Manager:** Marjorie Jones (phone first).

[24+] **RECORD PLANT REMOTE;** also REMOTE RECORDING; 109 Pinecliff Lake Dr.; West Milford, NJ 07480; (201) 728-1955; FAX: (201) 728-8017. **Owner:** Kooster McAlister.

[24+] **RECORDED PUBLICATIONS LABORATORIES INC.;** also REMOTE RECORDING; 1100 State St.; Camden, NJ 08105; (609) 963-3000; FAX: (609) 963-3854. **Owner:** Ronald J. Olanio. **Manager:** Dennis Drake. **Specialization & Credits:** Turn Key facility offering comprehensive audio services including recording, audio mastering with digital workstations and hi-speed cassette duplication, with in-house printing and packaging.

[24+] **RED ROCK RECORDING;** also REMOTE RECORDING; Rd #4, Box 4135; Saylorsburg, PA 18353; (717) 992-5777. **Owner:** Kent Heckman. **Manager:** Lois Brownsey. **Engineers:** Kent Heckman. **Dimensions:** Studio 25'x22' with 17' ceiling with isolation room, control room 20'x16'. **Sound Lock:** 10'x6', Lounge 16'x10'. **Mixing Consoles:** Anek Magnum 36x24x8x2 4-band EQ and 8 aux sends 672-point patch bay. **Audio Recorders:** Sony/MCI JH-24 24-track, MCI JH-110 2-track, (2) Panasonic SV-3700 DAT. **Cassette Recorders/Duplicators:** Sony MCI JH-24 24-track, (2) Panasonic SV-3500 DAT, MCI JH-110 2-track, (2) Tascam 103 cassette decks. **Echo, Reverb & Delay Systems:** Lexicon 200, (2) Lexicon LXP-1, (2) Lexicon LXP-5, Lexicon PCM70, Alessis Quadverb, Eventide H3000SE Ultra-Harmonizer, Ibanez SDR 1000, Roland SRY-2000, Korg SDD-2000 sampling delay. **Other Outboard Equipment:** (2) UREI/Teletronix LA-3A

compressor, (2) UREI 1176LN compressor, (4) dbx 160 compressor, Aphex 612 dual gate/expander (2) Valley People Dyna-Mite dual noise gate, Peavey Gate Keeper, Studio Technologies Mic-PreEmmence mic preamp, BBE 802 Sonic Maximizer, Aphex Type B Aural Exciter, (3) UREI 7110 compressor, Roland E-660 digital EQ, BSS DPR-502 MIDI noise gate. **Microphones:** Neumann U47 tube, (2) Neumann U87, (2) AKG C-414EB, AKG C-460, Audio-Technica ATM 4033, (2) Audio-Technica ATM-4031, Audio-Technica ATM-25, (2) ATM 31, (2) RCA 77D, Sennheiser 421, Sennheiser 441, (2) Electro-Voice RE20, (2) Shure SM81, (5) Shure SM57, (7) Stewart active direct box. **Monitor Amplifiers:** Haller DH-500, (2) Carver PM-175, Crown Microtech 1000, Macintosh 250. **Monitor Speakers:** JBL 4425, KRK (close-field), (10) Fostex T-20, (10) AKG K-240. **Musical Instruments:** Yamaha C7F 7'6" grand piano, Yamaha DX7 synth, Korg M3R synth, Oberheim Matrix-1000 synth, E-mu Proteus 1, E-mu Proteus 2, Alessis SR16, Alessis D-4 drum module. **Other MIDI Equipment:** Lexicon MRC remote controller, Mark of the Unicorn MIDI Time Piece, Macintosh Plus w/45MB HD. **Rates:** \$65 per hour.

[24+] **REEL PLATINUM STUDIOS INC.;** 259 Paterson Ave.; Lodi, NJ 07644; (201) 471-3464. **Owner:** Bob Allecca. **Manager:** Bob Allecca.

[24+] **REELSOUND RECORDING;** also REMOTE RECORDING; 53 Old Fairwood Rd.; Bethany, CT 06524-3042; (203) 393-3819. **Owner:** Dan Fiorillo. **Manager:** Dan Fiorillo.

[24+] **RIGHT COAST RECORDING INC.;** REMOTE RECORDING only; 151 Delp Rd.; Lancaster, PA 17601; (717) 560-1530; FAX: (717) 560-0433. **Owner:** Dave Wilkerson. **Manager:** Dave Natale.

[24+] **RIGHT TRACK RECORDING;** 168 West 48 St.; New York, NY 10036; (212) 944-5770; FAX: (212) 944-7258. **Owner:** Simon Andrews. **Manager:** Nancy West.

[24+] **ROAR PRODUCTIONS RECORDING & MUSICAL SERVICES;** also REMOTE RECORDING; 6655-H Dobbin Rd.; Columbia, MD 21045; (800) 466-ROAR; FAX: (410) 381-9486. **Owner:** Steven and Jerome Rosch. **Manager:** Steven Rosch. **Engineers:** Andrea Weatherhead, Michael Hamilton, Steven Rosch, Eric Wenocur, Steven Steckler. **Dimensions:** Room 1: studio 21'x23', control room 22'x16'. Room 2: 18'x23', control room 11'x14'. Room 3: control room 8'x10'. **Mixing Consoles:** Neotek Elan 40x24 w/80 returns at mix-down (room 1), Neotek Series II 24x8 (room 2), Ross 16x2 (MIDI ste.). **Audio Recorders:** (3) Panasonic 3700 DAT, Ampex ATR-124 24-track, MCI JH-16 16-track, Otari MTR-10C 2-track w/ time code track, Otari MX-50 8-track 1/2", Otari MX-5050 2-track, (5) Technics 1500 2-track and 4-track. **Cassette Recorders/Duplicators:** (5) Nakamichi ZX, MR-1, BX-100 master, (5) KABA Audiophile real time/double time, Tascam 124AV 1/2 track. **Noise Reduction Equipment:** (26) dbx Type 1. **Synchronization Systems:** Adams-Smith Zeta-3 audio/video/MIDI. **Echo, Reverb & Delay Systems:** (2) Lexicon LXP-1 digital effects processor, Lexicon 300 digital effects processor, Lexicon LXP-5 digital effects processor, AKG BX-10 spring reverb, Ecoplate II plate reverb, ART DR1, ART DR2, (3) ART Proverb, Alessis Microverb II digital, Alessis MIDIVerb, (3) DeltaLab DDL Effectrons, Lexicon PCM42 DDL, MXR Flanger/doubler, Eventide H910. **Other Outboard Equipment:** (2) Aphex Compeller compressor, (2) Omni Craft GT-A passive noise gate/4 channel, (2) Symetrix 522 comp, limiter, expander, gate, Symetrix CL 150 de-esser/mono compressor, Audio Logic MTMT-66 compressor/noise gate, (2) Dyna-Mite compressor/limiter, dbx 162 stereo compressor, (2) Furman Quadgate 4 channel, Audio Logic MT-66 stereo compressor, Ashly Audio Parametric Equalizer—4 channels. **Microphones:** Neumann U47, (2) Neumann KM100, (4) AKG 414, (2) AKG 451, (6) Sennheiser 421, (2) Sennheiser 441, AKG D112, (2) EV PL20, (5) Shure SM57, (2) Shure SM58. **Monitor Amplifiers:** Crown DC 300, SCS 2350A, BGW 250B, Hafler PRO-1200. **Monitor Speakers:** KRK, Meyer Sound Labs HD-1, Ed Long MDM-4, Tannoy PBM-6.5, JBL 4313, JBL 4301. **Musical Instruments:** Alessis D-4, Oberheim OBXA digital/analog synthesizer, 360 Systems ProMIDI Bass, 8-piece studio drum kit, Toyo 6'2" studio grand piano, Roland R8 digital drums/human rhythm composer, Kawai K1 digital synthesizer, Oberheim DPX1 digital sample player, 360 Systems digital sampler keyboard Eprom, Yamaha TX FM tone generators. **Video Equipment:** Sony 5850 3/4" recorder w/remote. **Rates:** The lowest rates for pro studio in Washington/Baltimore—Call!

[24+] **RODEL AUDIO;** also REMOTE RECORDING; 1028 33rd St. NW; Washington, DC 20007; (202) 338-0770; FAX: (202) 338-7695.

[24+] **RPM SOUND STUDIO;** 12 East 12th St. 11th Fl.; New York, NY 10003; (212) 242-2100. **Owner:** Robert Mason.

[24+] **SABELLA RECORDING STUDIOS;** 49 Oakdale Rd.; Roslyn Heights, NY 11577; (516) 484-0862. **Owner:** James Sabella. **Engineers:** Jim Sabella, Ken Gioia. **Dimensions:** Studio 17'x22' w/6'x8' vocal booth, control room 14'x16'. **Mixing Consoles:** Neve 8068 MkII w/VCA grouping MegaMix automation. **Audio Recorders:** Studer A80 24-track, MCI JH-110 2-track, (2) Ampex AG350 2-track w/15 and 30 ips, Sony DTC-1000ES DAT. **Cassette Recorders/Duplicators:** (2) Harman Kardon CDS-491. **Echo, Reverb & Delay Systems:** —LISTING AND PHOTO/LOGO CONTINUED ON NEXT PAGE

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SABELLA RECORDING STUDIOS
Roslyn Heights, NY

EMT 251 reverb, (2) EMT ST.140, EMT 240, Lexicon 224, Eventide H3000 Harmonizer, TC Electronic TC 2290, (2) Bel delay, Lexicon PCM41, PCM41, Lexicon Prime Time, (2) Lexicon 92, ADA delay, Delta Lab delay. **Other Outboard Equipment:** (9) Pultec equalizer, UREI LA-175B tube compressor, (2) UREI 1176 compressor, UREI 1178 stereo compressor, UREI LA-3A, (2) Neve compressor, (2) Neumann compressor, (4) Drawmer dual noise gate, (5) Roger Mayer gate, CDT expander. **Microphones:** Neumann U47 tube, (2) Neumann M49B tube, (2) Neumann U67 tube, (2) Neumann U47FET, Neumann KM86, Neumann KM84, (2) AKG 414, (2) AKG 451, AKG D-12, (6) Shure SM57, (4) Sennheiser 421, (2) Sony C-37, (2) Beyers M160, (2) Beyers M88, EV RE20. **Monitor Amplifiers:** Perreux 8000B, (2) Hafler, Mac-60 tube. **Monitor Speakers:** (2) Altec Big Red, Tannoy PBM-6.5, Yamaha NS-10. **Musical Instruments:** Baldwin baby grand piano, Gibson Les Paul, Gibson L5 guitar, Dan Electro guitar, Fender Stratocaster guitar, Fender Precision bass, Fender Telecaster, Rickenbacker, Guild acoustic, Fleta nylon-string guitar, Ludwig drum set, Noble & Cooley snare, Yamaha snare, 1954 Gretsch snare, Demeter Studio Series (tube) guitar amplifier, Groove Tube studio series guitar amp, Marshall Vintage 4x12 cabinet. **Other:** (8) Simmons direct boxes, Demeter (tube) direct box. **Rates:** Available upon request. **Specialization & Credits:** Offering complete recording services including television and film scoring, narration, radio spots and jingles, editing and dubbing, high-speed duplication plus all mastering needs, and Macintosh SE computer with complete MIDI workstation. Also...producer with contacts with major record labels like Atlantic, PolyGram, Geffen, CBS, Warner Bros., etc., and also many independent labels, offering services to talented artists and bands: He will help you record, arrange and produce your material to shop to these record labels and open doors and get your music heard. We are offering you the complete package at a price you can afford. Call now for details, Monday through Friday, EST 1:00-6:00 pm. Ask for Jim.

[24+] HOWARD SCHWARTZ RECORDING INC.; also REMOTE RECORDING, 420 Lexington Ave., Ste. 1934; New York, NY 10170; (212) 687-4180; FAX: (212) 697-0536. **Owner:** Howard Schwartz. **Manager:** Lorna Levine. **Engineers:** Roy Latham, Michael Unger, George Meyer, Ralph Kelsey, Roy Yokelson, Richie Becker, Joe Vagnoni. **Dimensions:** West Room: studio 25'x20', control room 15'x17'. East Room: studio 12'x20', control room 15'x17'. Nine room: studio 9'x8', control room 16'x18', Room A: studio 14'x16', control room 14'x12'. **Mixing Consoles:** (2) SSL 6048G, SSL 4040, (4) Sony MXP-3036. **Audio Recorders:** (2) Sony PCM-3348 digital multitrack, (4) Sony PCM-3324 digital multitrack, Studer A820 24-track, Studer A827 24-track, (5) Otari MTR-90 MkII 24-track, (4) Studer A820 2-track, (6) Sony HU-1106 4-track, (10) Otari MTR-10 2-track, (2) Otari MTR-10 4-track, Sony APR-24 24-track, Sony APR-5003 2-track, (2) Sony PLM-

7030 TC R-DAT, (7) Panasonic SV-3700 R-DAT. **Cassette Recorders/Duplicators:** (16) Nakamichi MR1, (3) Magnafax stereo duplicators. **Noise Reduction Equipment:** (7) Dolby SR-24, (3) Dolby XP-24A, (5) Dolby M-24A, (12) Dolby 361. **Synchronization Systems:** Adams-Smith 2600 AV system, Adams-Smith/Motionworker system, (2) Adams-Smith 2600 compact control system, Adams-Smith Zeta-3, (2) EECO MQS-100A system, Otari Universal resolver. **Echo, Reverb & Delay Systems:** EMT 250, (2) EMT 140S stereo plate, Lexicon PCM300, (6) Yamaha REV5, (8) Yamaha SPX90, (8) Lexicon PCM42, (6) Lexicon PCM60, Lexicon PCM70, AKG ADR-68K, (4) Eventide Ultra-Harmonizer. **Other Outboard Equipment:** (24) dbx 160X limiter, (12) Pultec EQ, (4) LA-2A limiter, (8) Orban EQ, SSL Logic EFX compressor, (12) Aphex 612 noise gate, (2) Aphex Aural Exciter, (2) Orban 290X processor. **Microphones:** Numerous Neuman, AKG, Sennheiser. **Monitor Amplifiers:** Numerous amplifiers. **Monitor Speakers:** Numerous UREI monitors. **Musical Instruments:** Steinway concert grand piano, numerous amps, drums, synthesizers. **Other MIDI Equipment:** (6) Studer Telephone Hybrid, Compusonics digital workstation, (7) Magna-Tech film dubber, stereo digital satellite uplink and downlink. **Video Equipment:** Sony DVR-10 D2 digital recorder, Sony BVU-70 Betacam recorder, (3) Sony BVH-3100 1", (2) Sony BVH-2000 1" recorder, Sony BVU-950 3/4" recorder, (2) Sony BVU-870 3/4" recorder, (4) JVC CR850 3/4" recorder, (6) Sony PVM-2530 monitor, Mitsubishi projection monitor, Ikegami 14" precision monitor, (4) Tektronik Waveform/Vector, numerous Sony monitors. **Other:** (6) Magna-tech MR1000, MR2000 6-/4-/3-track film duffers. **Digital Workstations:** (2) SSL ScreenSound, (2) Digidesign Sound Tools, Compusonics DSP2002, Akai 51100 sampler.

[24+] SECOND CITY SOUND STUDIOS INC.; 67-B Glen Cove Ave.; Glen Cove, NY 11542; (516) 759-9110; FAX: (516) 674-4204. **Owner:** Clay Hutchinson. **Manager:** Clay Hutchinson. **Engineers:** Clay Hutchinson, Danny Vitalo, Glenn Spinner, Manny Mancuso. **Dimensions:** Room 1: studio 40'x36', control room 36'x19'. Room 2: studio 15'x15', control room 15'x18'. **Mixing Consoles:** Neve 8078 w/Necam 96 automation 40x24, Soundtrack MRK-34PB. **Audio Recorders:** (2) Studer A827 24-track, (2) Studer A80 24-track, Studer A80 2-track 1/2", (2) Studer B67 2-track 1/4", Ampeg AG-440-C 2-track 1/4". **Cassette Recorders/Duplicators:** (3) Nakamichi MR-1, Nakamichi BX-100, Panasonic SV-3700 DAT, Panasonic SV-255 DAT. **Synchronization Systems:** (2) TimeLine Lynx. **Echo, Reverb & Delay Systems:** Lexicon 224XL, Lexicon PCM60, Lexicon PCM70, EMT 140 Plate, Eventide 3000SE, (2) Eventide Harmonizer 910, (4) GML mic pre, (2) GML EQ, (2) LA-2A limiter, (4) LN1176 limiter, (2) LA-3A limiter, (8) Kepex II, UREI 7110 limiter/comp., (2) API 550 EQ, (4) dbx 160 VU, (4) dbx 160X, (2) Lexicon PCM42, Lexicon 200 reverb, AMS RMX 16, Aphex Aural Exciter, (2) Ureid EQP-1A, Pultec MEG-5, dbx 165, Yamaha SPX90, Yamaha REV7, (6) Drawmer gate, AKG BX-20, AMS 1580 DDL 6.3, (2) Neve comp/limiter, (8) Orban de-esser, Alembic tube preamp. **Microphones:** (6) AKG 414, (6) AKG 452, (4) Neumann U87, (2) Neumann U67 tube, Neumann U47 tube, AKG "The Tube", (8) 421, (4) EV RE20, (2) AKG D-12, U47 (FET), Sanken 41, (16) SM57, (2) PZM, (11) AKG 412. **Monitor Amplifiers:** UREI 6500, (2) Crest 3001, (2) Crown MA2400, MacIntosh 2150, (2) Crown DC-300A. **Monitor Speakers:** UREI 813B, (2) Yamaha NS-10M, Big Reds (6204E2). **Musical Instruments:** (8) Yamaha DX7, Slingerland drums, DX7FDII, Leslie speaker cabinet. **Other MIDI Equipment:** Macintosh SE, SBX-80, S-1000, MIDI Moog, Korg M1, TX-802, TX-812, Super JX, P-330, Studio 3, (8) TX-816, MIDI Time Pece, LinnDrum, Mac SE/40MB HD, 81Z (rack), Akai switcher. **Other:** (6) Marshall, Boogie, Jazz Chorus, B15N amps, Magnavox CD player, Onkyo CD player. **Rates:** Call for info and rates.



SHEFFIELD AUDIO-VIDEO PRODUCTIONS
Phoenix, MD

[24+] SHEFFIELD AUDIO-VIDEO PRODUCTIONS; also REMOTE RECORDING, 13816 Sunnybrook Road; Phoenix, MD 21131; (410) 628-7260; FAX: (410) 628-1977. **Owner:** John J. Arosa Jr. **Manager:** Richard Van Horn. **Engineers:** William Mueller—chief engineer, Fred Derby, Garth Michael.

Dimensions: Room 1: studio 50'x40', control room 25'x20', Room 2: studio 21'x16', control room 22'x20'8". **Mixing Consoles:** (2) Solid State Logic 4048E G-computer w/Total Recall, Neve 5104. **Audio Recorders:** (2) Sony PCM-3324 multitrack, (2) Otari MTR-90 MkII, (2) Sony 3202 2-track digital, Studer A810, Studer B67, Studer A80 1/2-track, Sony PCM-2500 DAT. **Cassette Recorders/Duplicators:** (12) Tascam 122 MkII, (13) Nakamichi MR12. **Synchronization Systems:** TimeLine Lynx, Cipher Digital. **Echo, Reverb & Delay Systems:** AMS 15-80S, Lexicon 224XL, EMT-140S, Lexicon Prime Time, Lexicon 200, Yamaha SPX90 II, Yamaha REV5, Eventide Ultra-Harmonizer (fully loaded), Sony DAL 1000 digital limiter, Barcus-Berry 833, Yamaha D1500, AMS RMX16, TC Electronics 2290, Yamaha REV7, Drawmer M-5000 gate, Sontec limiter/compressor. **Other Outboard Equipment:** 12 channels of Sontec mic preamps and EQ. **Microphones:** AKG, B&K, Crown, Neumann, Sennheiser, Shure, Sony. **Monitor Amplifiers:** Crown, UREI, Crest. **Monitor Speakers:** UREI 8111, Yamaha NS-10M. **Musical Instruments:** Yamaha C7 piano, Sonar drums, Hammond B3, Kurzweil 250. **Other MIDI Equipment:** Mac Plus computer. **Video Equipment:** (9) Ampex 1" VTR, Betacam SP 75 w/Dynamic tracking, Quantel Mirage w/Starlight, ADO NEC System 10, Ampex VPR 5 portable 1", (2) Ampex Ace editor, Ampex ESS5—graphic and still store system, Ampex AVC 33 switcher w/3 ME, 2 channels of Ampex digital optics, Quantel Paintbox V Series, Ikegami HL-55 chip cameras, 44'x52' sound stage, (2) 1" video edit suites, video remote truck. **Specialization & Credits:** We specialize in remote digital and analog multitrack recording, as well as audio and video production and post-production. Our new remote truck is a 48' custom-built tractor trailer with a Solid State Logic 4048E w/G Series computer and Sony multitrack digital recorders. The truck also offers a Neve auxiliary console, Sontec mic pre-amps and EQ. Some recent recordings include Disney/MGM *Raiders of the Lost Ark* and *Cranium Command*, Fox TV *Hall and Oates*, Tommy Conwell, Lillian Axe, CBS new artist jazz series, Renee Diggs, Billy Joel, Childs Play, B.B. King, Polygram/Wing Records, Aretha Franklin, SRQ concert series, Laura Brannigan, Wynton Marsalis, Hooters, Elektra Records.

[24+] SHELTER ISLAND SOUND; 30 W. 21st St.; New York, NY 10010; (212) 366-6690; FAX: (212) 366-0465. **Owner:** Steve Addabbo, AGF Entertainment Ltd. **Manager:** Melissa Bailey.

[24+] SHELTON LEIGH PALMER & CO.; also REMOTE RECORDING, 19 W. 36th; New York, NY 10018; (212) 714-1710; FAX: (212) 714-0132. **Owner:** Shelton Leigh Palmer. **Manager:** Audrey Berger.

[24+] SHOWPLACE STUDIO; 347 S. Salem St.; Dover, NJ 07801; (201) 328-4400; FAX: (201) 328-4933. **Owner:** Ben Elliott, Larry Gribler, Steve Schiff. **Manager:** Karen Renken. **Engineers:** Ben Elliott, chief engineer; Gene Porfido, engineer; Dave Hamp, assist. engineer. **Dimensions:** Studio 45'x32', control room 25'x23'. **Mixing Consoles:** Amek Mozart/Rupert Neve input modules w/Supertrue automation. **Audio Recorders:** Otari 90-MkIII 24-track, Studer A820 2-track w/1/2" or 1/4" center tc, Ampex 600, Panasonic SV-3700 DAT, Panasonic 3500 DAT. **Synchronization Systems:** Adams-Smith Zeta-3. **Echo, Reverb & Delay Systems:** Lexicon 480L, Lexicon 224XL, (2) Lexicon PCM70, EMT 140 stereo tube, Lexicon LXP-15, Yamaha SPX900, (2) Lexicon PCM42, DeltaLab DL-2, Cooper Time Cube, Yamaha REV7. **Other Outboard Equipment:** Eventide H3000SE w/sampling, TC 1210 Special Expander, Pultec EQP-1A, Pultec MEQ-5, MXR flanger/doubler, UREI 31-band graphic EQ, dbx 500 subharmonic synthesizer, Aphex 612, Drawmer 201, Roland dimension D, Summit Audio TLC100, Teletronix LA-2A, (2) dbx 160, dbx 162, Trident stereo compressor, UREI 1176LN, (2) Aphex Expressor, UREI 1178, (3) Symetrix 544 Quad gate, Russian Dragon, Drawmer 500. **Microphones:** (2) Neumann U87, Neumann U47 FET, (3) AKG 414EB, (6) Sennheiser MD-421, (2) AKG 460 w/CK62, AKG 451, (6) Shure 57, AKG D-112, Electro-Voice RE20, Demeter tube direct, B&K 4007S. **Monitor Amplifiers:** Perreux 9000B, Haller 280. **Monitor Speakers:** Yamaha NS-10, Tannoy/FSM, Tannoy 6.5 PBM. **Musical Instruments:** Yamaha KX88, Hammond B-3 w/Leslie 122, Roland R-8, E-mu Proteus 1/XR, E-mu Performance, E-mu Emax II, Korg M1, Marshall 100W amp w/4x12 cabinet, Yamaha 6-pc. recording drum set w/assorted cymbals, Fender Twin. **Video Equipment:** JVC 3/4" 850U, JVC VHS Hi-fi 970U. **Other:** Mac IIcx w/4 MB/BOMB hard drive, Atari Mega 2. **Digital Workstations:** Digidesign Sound Tools w/600MB hard drive.

[24+] SIGMA SOUND SERVICES; 212 N. 12th St.; Philadelphia, PA 19107; (215) 561-3660; FAX: (215) 496-9321. **Owner:** Joe Tarsia. **Manager:** Frank McNulty.

[24+] SILVER CITY STUDIOS; also REMOTE RECORDING, 944 Somerset Ave.; Taunton, MA 02780; (508) 823-9014. **Owner:** Ronald W. Pires. **Manager:** Cynthia Moreau.

[24+] SKYLINE STUDIOS INC.; 36 W. 37th St. (3rd & 6th fl.); New York, NY 10018; (212) 594-7484; FAX: (212) 239-9776. **Owner:** Paul Wickliffe, Lloyd P. Donnelly. **Manager:** Barbara Moutenot. **Engineers:** Paul Wickliffe, chief audio eng, Francis Manzella, chief technical eng, Katherine Miller, David Schiffman, John Williams, Hiro Ishihara, Michal Jurewicz, Justin Luchter, Doreen Pinto, Richard Lamb. **Dimensions:** Control Room 3. —LISTING AND PHOTO/LOGO CONTINUED TOP OF NEXT PAGE



SKYLINE STUDIOS INC.
New York, NY



SONY CLASSICAL PRODUCTIONS INC.
New York, NY

eps MK-2S, Schoeps 4, Schoeps Collette series, Sennheiser MKH 20, Sennheiser MKH-30, Sennheiser MKH-40. **Monitor Amplifiers:** Mark Levinson ML-23. **Monitor Speakers:** B&W 801 matrix. **Video Equipment:** Sony BVU-950 (NTSC & Pal versions) U-matic, Sony PVM-2503 NTSC monitor, Sony PVM-2044QM, Sony PAL monitor. **Specialization & Credits:** We continually record a wide variety of productions on location throughout the U.S. and Europe. Our New York studio is a digital audio post-production facility with special expertise in digital audio for picture, either NTSC or PAL, as well as exemplary restoration of analog masters to compact disc. Recent artists recorded include: Claudio Abbado/Chicago Symphony, Vlad-

—LISTING CONTINUED ON NEXT PAGE

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25'x20'x12'. Studio 3: 30'x30'x13', plus 2 iso booths: 8'x10' & 7'x12'. Control Room 6: 25'x23'x11'. Studio 6: 32'x30'x12', plus 3 iso booths: 12'x16', 9'x11', 6'x8'. MIDI Room: 25'x22'x11', plus iso booth 8'x5'x12'. **Mixing Consoles:** Studio 3: SSL 4064 GvU w/24E and 36G modules, Total Recall. Studio 6: SSL 4064 EvU w/24E and 36G modules, Total Recall. MIDI room: Amek 250036-input. **Audio Recorders:** (4) Studer A800 MkIII 24-track, Studer A320 2-track w/ 1/2" heads & 1/4" CTS heads, A80 2-track w/ 1/4" & 1/2" heads, A80 4-track 1/2", B67 1/4" 2-track mono, Mitsubishi 7-300 32-track w/Apogee filters, Ctrai MTR-90 MkII 24-track, Ampex ATR-102 2-track, (2) Sony PCM-2500 DAT, EIS-1000 DAT, (7) TEAC 122 MkII. **Noise Reduction Equipment:** (2) Dolby XP-24, (6) Dolby Type A 361, (2) Dolby 363 SR/A 2-track. **Synchronization Systems:** (2) TimeLine Lynx module, (3) IVC 3/4" U-matic video decks, Roland SBX-80. **Echo, Reverb & Delay Systems:** Lexicon 480L, (2) Lexicon 224XL, (2) Quantec stereo ORS room simulator, (2) EMT 140 stereo plate reverb w/remote, EMT 240 stereo gold foil plate reverb w/remote, (2) AMS RMX 16, (2) Yamaha REV7, (3) FCM70, (1) AMS DMX 15-80S (6.4s, 3.2s), (2) Lexicon Prime Time II, (8) PCM42, (4) Eventide 949 Harmonizer, (2) Eventide H3000 Ultra-Harmonizer, Marshall Time Modulator, (2) Roland Dimension-D stereo chorus, and more. **Other Outboard Equipment:** (8) Neve 1064 3-band EQ, Focusrite 115HD Dual EQ, Massenburg 8200 EQ, (2) Pultec EQP-1, Pultec MEO-5, Tube Tech PE-1A, (2) APIEQ racks, (3) LA-2, Neve 32254E stereo, (2) JREI 1176, (6) dbx 160x, (2) dbx 165A, (6) Kexpex II, (2) Drawmer dual noise gate, (2) AD&R Pannican, Private C-12 channel, multistation, individual cue mixing system and more. **Microphones:** (82) modern and vintage tube microphones. **Monitor Amplifiers:** (12) power amps by Yamaha, Perreux, Crown and McIntosh, (2 pr.) custom soffit speaker systems w/ 40 cubic ft. enclosures, Altec 604K coaxials, TAD low frequency drivers and JUREI time-aligned crossovers, (3 pr.) Yamaha NS-10M, (1 pr.) Tannoy LGM and others. **Musical Instruments:** Steinway B grand piano circa 1896 (rebuild) w/Forte MIDI mod., Yamaha C7E grand piano, Hammond C-3 organ w/Leslie, (14) synthesizers and samplers, Roland JC-120, Fender, Marshall & Ampeg guitar & bass amps, Yamaha Recording Series and Pearl Pro drum kit. **Specialization & Credits:** Studio 3 and Studio 6 are identically equipped, recall compatible 18-track rooms equally suitable for both recording and mixing. Studio 6 features a 1,200-sq.-ft. recording space with three iso booths. The angular walls of cedar paneling in the main room produce an excellent live environment for drums, guitar solos and orchestral sections. Studio 3 also features live cedar paneled walls, but has a floor-to-ceiling theatrical drape that can be drawn when more contained acoustics are desired. Our technical staff has developed eight 12-channel individual cue mixers, allowing each musician to control his own headphone mix. Both rooms provide a private artist's lounge, a producer's office and dining facility. Skyline's recent credits include James Taylor, Mariah Carey, C&C Music Factory, Richie Sambora, Talking Heads, Chaka Khan, Garland Jeffries, B-52's, Chic, Ric Ocasek, Vaughan Brothers, Living Color, Eric Clapton, Suzanne Vega, Lionel Richie, New Kids on the Block, The Commitments, Shawn Colvin, Rosanne Cash, Kevin Killen, Neil Dorfsman, Nile Rodgers, Wayne's World.

[24+] **SONY CLASSICAL PRODUCTIONS INC.; REMOTE RECORDING ONLY:** 1370 Ave. of Americas, Ste. 2301; New York, NY 10019; (212) 445-1800; FAX: (212) 262-0228. **Owner:** Sony Classical CMBH, Hamburg GR. **Manager:** Maureen McGrath. **Engineers:** Bud Graham, Christian Constantinov, Charles Harbut, Bob Wolff. **Mixing Consoles:** Sony MXF-3036 (mono-timed) w/GM automation. **Audio Recorders:** Sony PCM-334B, Sony PCM-3324A, Sony PCM-3402, Studer A820 w/Mark Levinson electronics, Sony PCM-1630/DMR-4000. **Cassette Recorders/Duplicators:** Nakamichi MR-1. **Noise Reduction Equipment:** Dolby SR/A. **Synchronization Systems:** Adams-Smith 2530. **Echo, Reverb & Delay Systems:** Lexicon 480L, Lexicon 300. **Microphones:** B&K 4006, B&K 4009, E&K 4011, Neumann KM130, Neumann KM140, Neumann KM150, Neumatic TLM170i, Schoeps MK-2, Scho-

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24-track studios

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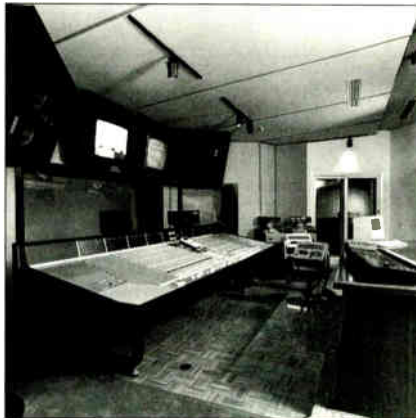
imir Horowitz, Juliard Quartet, James Levine/NY Metropolitan Opera, Yo-Yo Ma, Loren Maazel/Pittsburgh Symphony, Zubin Mehta, Berlin Philharmonic, Midori, Mandy Patinkin, Murray Perahia, Itzak Perlman, Robert Shaw/Atlanta Symphony, Isaac Stern, John Williams/Boston Pops, plus Broadway musical productions of *Man of La Mancha* and *Kismet*.

[24+] **SONY MUSIC STUDIO**; 49 E. 52nd St.; New York, NY 10022; (212) 445-2958; FAX: (212) 755-8311. **Owner:** Sony. **Manager:** Risa Kantor, Tim Geelan, Rob Grabowski. **Specialization & Credits:** Compact disc mastering is our specialty. Our consoles include Neve DTCs. We also have a Cedar digital audio restoration system as well as Sonic Solutions hard disk editing and CD maker. We also offer 24-track mixing and editing (Sony 3324) and real time advance cassette duplication. Our credits include: Michael Bolton *Time, Love & Tenderness, Soul Provider*; Firehouse; Aerosmith *Pandora's Box*; The Byrds *Box Set*; Wynton Marsalis *Thick In the South Vol I, Uptown Ruler Vol II*; Peabo Bryson *Can You Stop the Rain*; Robert Johnson, *The Complete Recordings*; Billie Holiday *The Legacy* (1933-1958); Harry Connick Jr. *When Harry Met Sally*; Mahalia Jackson, *Gospel, Spirituals & Hymns*; Eric Anderson, *Stages: The Lost Album*; Johnny Mathis, *Sings Ellington*; Van Morrison, *Bang Masters*; Tony Bennett, *The Artistry Of*. For more information call, Risa Kantor/acct. service mgr., Tim Geelan/engineering, Rob Grabowski/sales & adm.

[24+] **SORCERER SOUND**; 19 Mercer St.; New York, NY 10013; (212) 226-0480. **Manager:** Vera Beren. **Specialization & Credits:** Sorcerer Sound is a full-service, two-room facility using the finest equipment, customized by Acoustilog for peak operation. We offer in-house, top-quality maintenance, with a fully stocked shop. Our environment is totally unique, and the rates are sensible. Please call to arrange a tour.

[24+] **SOUND DESIGNERS STUDIO**; also **REMOTE RECORDING**; 424 W. 45th Street; New York, NY 10036; (212) 757-5679; FAX: (212) 265-1250. **Owner:** Sound Associates, Fox and Perla. **Manager:** Gene Perla.

[24+] **SOUND ON SOUND RECORDING INC.**; 322 W. 45th St.; New York, NY 10036; (212) 757-5300; FAX: (212) 757-5816. **Owner:** David Amlen. **Manager:** David Amlen.



SOUND TECHNIQUES INC.
Boston, MA

[24+] **SOUND TECHNIQUES INC.**; 1260 Boylston St.; Boston, MA 02215; (617) 536-1166; FAX: (617) 536-4446. **Owner:** Sound Techniques Inc. **Manager:** Lance Duncan. **Engineers:** Lance Duncan, Jim Anderson, Chris Anderson, Don Goodan, Jennifer Spaziani. **Dimensions:** Room 1: studio 30'x20', control room 18'x27'. Room 2: studio 20'x20', control room 18'x27'. Room 3: studio 10'x10', control room 15'x17'. **Mixing Consoles:** SSL 4056 G Series 48 inputs w/ Total Recall, Neve V Series 36-input, Allen & Heath 54BER Series 32-input. **Audio Recorders:** Sony 5003V 2-track analog w/time code, Mitsubishi X-86 2-track digital, Otari MX-70 16-track analog, Sony APR-24 24-track analog, (2) Sony PCM-3324A 24-track digital, Otari MTR-10 2-track w/time code, Sony 2-track digital. **Cassette Recorders/Duplicators:** (16) Tascam 122 MXZ, (10) Tascam 32. **Noise Reduction Equipment:** dbx Type I 16-channels. **Synchronization Systems:** TimeLine Lynx w/system supervisor. **Echo, Reverb & Delay Systems:** Lexicon 480L. (5) Roland SDE-3000, Quantec ORS-XL digital processor, Klark-Teknik DN780, Dynacord DRP-20, Lexicon 224 V. 4.4, (2) Yamaha REV5, EMT 240 stereo plate, (2) Lexicon PCM70, (2) Eventide H3000, (2) Yamaha SPX90II, Lexicon LXP-1, Lexicon LXP-5, Lexicon MRC MIDI controller, (2) Lexicon PCM42. **Other Outboard Equipment:** Tubetech CLIA tube compressor, (2) UA175 tube compressor (3) dbx 900 rack w/902/903/904/905/907 26-ch., (3) dbx 165A comp/limiter, Aphex Compeller level processor, (5) dbx 166 comp/noise gate, Dynedee 4-channel exciter, BBE Sonic Maximizer, (2) Orban 622B EQ, dbx 160X comp/lim. **Microphones:** (5) Neumann U87A, (2) Neumann U67, Neumann U47, Neumann U47 FET condenser, AKG C-24 stereo tube condenser, (8) AKG C-414 EBULS, (4) AKG C-46 GULLS, (2) Beyler MC-740N large diaphragm condenser, PLM DC96 condenser, (2) Neumann KM841 small diaphragm, B&K 4003, (3) Beyler M160N. **Monitor Amplifiers:** (4) Bryston 7B, (2) Bryston 2B, (8) various Crown, AB. **Monitor Speakers:** (2) Westlake BBSM12 series, Tannoy LGM, (2) Meyer HD1, Yamaha NS-10, Westlake BBSM4. **Musical Instruments:** Young Chang 7' concert grand piano, Roland JX-10, Akai S1000, Roland D-550, Yamaha DX7. **Video Equipment:** (2) Sony VH-3100 1", Sony BWV-70 Betacam SP, (4) Sony VO-5850 3/4. **Other:** Digidesign Sound Tools-audio-for-video & film hard disk recording system, satellite uplink. **Rates:** \$110/hr to \$325/hr. **Specialization & Credits:** Sound Techniques is a new audio facility in Boston designed to accommodate the most demanding recording sessions. Highly qualified engineers and the finest equipment facilitate the completion of virtually any audio project, whether it is recording an album, mixing to picture or working on a spot. Three independent suites are linked through a central machine room, offering a wide selection of equipment packages and acoustic environments. The spacious control rooms of all three suites are acoustically designed for accuracy and highly detailed listening. Studio A & B are live, dynamic rooms with extremely natural, even decay and contain both "live" and "warm" isolation booths. Studio C is set up primarily for pre-production, MIDI production, overdubs, and voice-overs. Our well-known staff enjoys a reputation for friendly, efficient service. A kitchen and lounge are located within the facility, and a wide range of restaurants, hotels and night clubs can be found nearby.

[24+] **SOUNDESIGN**; Main Street Gallery, 181 Main St.; Brattleboro, VT 05301; (802) 257-1555. **Owner:** Billy Shaw. **Manager:** Joanne Singer. **Engineers:** Billy Shaw, Joe Podiesny, Al Stockwell. **Dimensions:** Studio 28'x30' w/separate iso room, control room 28'x18'. **Mixing Consoles:** Sound Workshop 28x32, Audio Recorders: Sony/MCI JH-24 24/16/8-track, MCI JH 2-track, Otari MX-5050 8-track, (3) Otari MX-5050B 2-track, Revox A77 2-track, Audiotronics AV132B 2-track reel-to-reel high-speed duplicator, Panasonic RV-3500 DAT Cassette Recorders/Duplicators: Nakamichi, (10) Akai FX71, Otari DP-4050 high-speed duplicators. **Noise Reduction Equipment:** (24) dbx. **Echo, Reverb & Delay Systems:** Yamaha REV7, (2) Yamaha SPX90, Lexicon digital reverb, Master-Room XL-210 stereo reverb, Korg sampling digital delay, Effectron DDL, (2) MXR DDL. **Other Outboard Equipment:** (8) Valley People Kepex, (2) UREI 1176N limiter, (2) Teletronix LA-2A tube compressor, (2) dbx overeasy compressor, (2) Ashly Audio stereo parametric EQ, (4) Omni Craft noise gate, (4) Ashly Audio limiter, Altec Voice IIE 27-band stereo graphic EQ, MXR 15-band EQ. **Microphones:** (4) Neumann U87, Neumann KM84, Neumann KM81, AKG C-414, AKG 451E, (8) Sennheiser 421, (2) Sennheiser 441, (2) Sennheiser 403, AKG D-12, (4) AKG SE-10, Shure SM57, Shure SM58, Shure SM25. **Monitor Amplifiers:** Crown DC-300A, BGW, Soundcraft. **Monitor Speakers:** JBL 4311, Yamaha NS-10M, Auratone, custom air suspension system. **Musical Instruments:** IBM computer for automation w/music software, Yamaha C 6'6" grand piano, Ludwig drum kit, Oberheim DMX drum machine, Fender Twin, Fender Princeton, (2) Crate amplifier, Ampeg B15, Yamaha DX7, Roland JX-3P, Kurzweil K1000. **Rates:** Block book and prepay discounts available. 24-track \$50/hr., 16-track \$40/hr., 8/2-track \$30/hr.

[24+] **SOUNDHOUND INC.**; also **REMOTE RECORDING**; 45 W. 45th St.; New York, NY 10036; (212) 575-8664; FAX: (212) 575-9412. **Owner:** Jeffrey Berman. **Manager:** Gail Nord. **Specialization & Credits:** Radio and television audio post-production in 4 mixing suites. Multitrack digital workstations, mixing to all video formats, industrial and audio/visual track creation, 40 music libraries, stock and custom sound effects, casting service, real-time and high-speed duplication, original scoring, multiplex digital satellite. Staff engineers: Hank Aberte, Rick Granoff, Frank Toamino.



SOUNDMIRROR INC.
Boston, MA

[24+] **SOUNDMIRROR INC.**; also **REMOTE RECORDING**; 76 Green St.; Boston, MA 02130; (617) 522-1412; FAX: (617) 524-8377. **Owner:** John Newton. **Manager:** Nancy Grossman. **Engineers:** Hank Koolstra, Brad Michel, John Newton and Everett Porter. **Mixing Consoles:** Studer analog 42 input, Lexicon Opus digital w/automation, **Audio Recorders:** (2) Sony 3324 w/Apogee filters and outboard meter, Lexicon Opus 8-track hard disk workstation, (4) Sony 1630 w/outboard meters, (3) Sony DMR-4000, (3) Sony DMR-2000, Studer A80 1/4" and 1/2" analog w/Dolby, Sony PCM-7030 time code DAT, (2) Sony PCM-2500 DAT, (2) Panasonic SV-255 DAT, Nakamichi 1000 DAT, Sony D3 and DTC DAT w/outboard meter. **Cassette Recorders/Duplicators:** Nakamichi real time cassette duplication, Sony real time DAT duplication, **Synchronization Systems:** Adams-Smith Zeta-3, Sony 7030 time code DAT, Lexicon Opus w/automation and machine control. **Other Outboard Equipment:** Lexicon 480L, Lexicon 300, Lexicon LFI-10, (2) Apogee AD5000, (3) Apogee DA1000, Yamaha AD2X AEA MS decoder, Jensen microphone splitter. **Microphones:** (6) Neumann TLM 50, (2) Neumann KM 83/84, (7) B&K 4066, (6) B&K 4011, (4) Sanken CI-41, (20) Schoeps CMC series, tube microphones, Neumann M50, Neumann M49 and U67. **Monitor Amplifiers:** B&W MPA-B10, B&W MPA-1, Quad 606, Threshold S500 II, Nakamichi PA7 II. **Monitor Speakers:** B&W 801M, B&W 802M, B&W 803, B&W 805, Quad ESL63. **Video Equipment:** (2) Sony CCD video cameras, Panasonic and NEC monitor, Sony BVU-800 video recorder. **Digital Workstations:** Lexicon Opus w/automation, Sonic Solution, (2) Sony DAE-3000 equipped for 2-track stereo editing, direct DAT editing and 24-track digital editing. **Specialization & Credits:** Since its inception in 1972, Soundmirror has become one of the premier acoustic music recording and post-production com-

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panies in the world. Soundmirror's two post-production suites offer complete mixing, editing and CD mastering entirely in the digital domain. We offer disk-based 24-track mixing and editing using a Lexicon Opus, and our Sony DAE-3000 editing system is available for 2- to 24-track post-production needs. Mix-to-picture or sound can be accomplished in either studio. A fully isolated machine room common to both studios allows complete flexibility to suit the needs of each project. We are New England's most complete CD mastering facility, offering a fully digital mastering process by experienced engineers at attractive rates. All of this complements our extensive location recording capabilities in Europe and North America. Soundmirror provides customized equipment packages designed for the needs of the individual client and for the particular characteristics of the recording venue. The quality of our recording and post-production work is demonstrated by our involvement in numerous Grammy award-winning recordings and frequent listings in the *Billboard* classical and crossover charts. Our clients include Philips Classics, Deutsche Grammophon, Telarc, Teldec, Nonesuch, Erato, Harmonia Mundi, Virgin, RCA, Decca, Rounder and Northeastern.

[24+] **SOUNDTRACK**; also *REMOTE RECORDING*; 162 Columbus Ave.; Boston, MA 02116; (617) 367-0510; FAX: (617) 367-1521. Owner: Robert Cavicchio. Manager: Jeanne McGrail.

[24+] **SOUNDTRACK**; also *REMOTE RECORDING*; 936 Broadway/25 E. 21st St.; NY, NY 10010; (212) 420-6010; FAX: (212) 533-6758. Owner: Rob Cavicchio. Manager: Steve Stephens.

[24+] **SOUNDWAVE**; also *REMOTE RECORDING*; 2000 P St. NW, Ste. 200; Washington, DC 20036; (202) 861-0560; FAX: (202) 466-2377. Owner: James Harmon. Manager: Sabina Emerson.

[24+] **SPLASH PRODUCTIONS**; also *REMOTE RECORDING*; 123 W. 28th St., #2W; New York, NY 10001; (212) 695-3665. Owner: D. DiPaola/G. Ricciardi. Manager: Danny Dee.

[24+] **STAR CASTLE RECORDING**; 155 Shortwoods Rd.; New Fairfield, CT 06812; (203) 746-0464; FAX: (203) 746-0464. Owner: Robert Batesole. Manager: Robert Batesole.

[24+] **STARDUST RECORDING STUDIO**; 615 Valley Rd.; Upper Montclair, NJ 07043; (201) 746-2359. Owner: George Louvis. Manager: Jeff Chambers.



STRONG ISLAND RECORDS INC.
Massapequa Park, NY

[24+] **STRONG ISLAND RECORDS INC.**; PO Box 453; Massapequa Park, NY 11762; (516) 798-2308; FAX: (516) 541-6264. Owner: Robert La Serra. Manager: Robert La Serra.

[24+] **STUDIO 4 RECORDING INC.**; 444 N. 3rd St.; Philadelphia, PA 19123; (215) 923-4443; FAX: (215) 574-0930. Owner: David Johnson, Philip and Joseph Nicolo. Manager: Francis Hogan, Mark Shulz.

[24+] **STUDIO 900**; 900 Broadway, Ste. 905; New York, NY 10003; (212) 529-3285. Owner: Joe Johnson. Manager: Joe Johnson.

[24+] **STUDIO UNICORN**; also *REMOTE RECORDING*; 109 Lenox Ave.; Bridgeport, CT 06605; (203) 333-0736; FAX: (203) 333-0736. Owner: Paul Avgenios. Manager: Lorenzo Dion Lee.

[24+] **STUDIODAD RECORDING/OKEDOKE MUSIC**; 31 Irving Pl.; Brooklyn, NY 11238; (718) 638-1932; FAX: (718) 638-1932. Owner: Daddy-O. Kedar. Manager: Richard Herrera. **Specialization & Credits:** Studiudad recording is a production-recording facility located in Brooklyn's Clinton Hill section. The studio uses two 24-track rooms, one analog and one digital. Private owned, solicited users only. Credits include: Jeffrey Osborne, I.C.F. Crew, Tyler Collins, Jabulani, Nubian M.O. Band and Grace Jones.

[24+] **SUPERDUPE**; 295 Madison Ave., 15th fl.; New York, NY 10017; (212) 683-6854. Owner: Gordon Media Companies. Manager: Jon Adelman. Engineers: Gary Arnold, Tony Brainard, Gordon Miller, Henri Perotti, Mitch Raboy, Arnie Rosen, Bill Smith, Brian Turner. Dimensions: Room 1: studio 12'x8', control room 22'x17'. Room 2: studio 12'x8', control room 22'x17'. Room 3: studio 12'x8', control room 22'x17'. Room 4: studio 12'x8', control room 19'x15'. Room 5: studio 10'x16', control room 12'x17'. Room 6: studio 12'x18', control room 22'x17'. **Mixing Consoles:** Neve 8058 series, Sony 3036, (3) Sound Workshop Series 34, Otari Series 54 Sound Workshop, Otari Series 34 Sound Workshop. **Audio Recorders:** (6) Otari MTR-90, (36) Otari MTR-10, (6) Studer A80, Tascam DAT, Panasonic DAT. **Cassette Recorders/Duplicators:** (25) Tascam 122 MkII, TDT hi-speed reel-to-reel duplicators, computerized labeling and shipping. **Noise Reduction Equipment:** Dolby. **Synchronization Systems:** (2) Adams-Smith 5-machine system, (4) TimeLine Lynx 5-machine system. **Echo, Reverb & Delay Systems:** (6) Yamaha SPX900, (2) Lexicon 224 reverb, (6) Lexicon PCM42. **Other Outboard Equipment:** (6) Orban EQ, (22) dbx 160 limiter, (6) Drawmer noise gate, (8) Technics CD player. **Microphones:** (15) Neumann U87, (8) AKG C-414. **Monitor Amplifiers:** (6) Bryston 4B, (6) Hafler P500. **Monitor Speakers:** (3) JREI 813B, JREI 813C, (6) Yamaha NS-10M, MDM-4, (8) Auratone. (2) Westlake BBSM-12, (2) Westlake BBSM-4. **Musical Instruments:** (19) synthesizers and samplers, full digital recording sequencers. **Video Equipment:** (2) Sony BVH-3100 1", (7) Sony BVU-950 3/4", Sony BVU-850 3/4", JVC VHS, IBM and Macintosh sequencing. **Other:** On-staff composer/musician in his own 24-track MIDI recording studio. **Digital Workstations:** (3) SSL ScreenSounds, DAR Sound Station II.



SYNC SOUND INC.
New York, NY

[24+] **SYNC SOUND INC.**; 450 W. 56th St.; New York, NY 10019; (212) 246-5580. Owner: Bill Marno, Ken Hahn. Manager: Sherrri Fernandez. Engineers: Ken Hahn, Grant Maxwell, Regina Mullen, Pam Bartella, John Purcell, Michael Ruschak, Ray Palagy, David Jauna, Bill Cavanaugh. Dimensions: Room 1: studio 11'x14', control room 23'x22". Room 2: studio 10'x16', control room 16'x14'. Room 3, 4, 5, 6 and 7: AMS editing rooms. Room 8: studio 22'x15', control room 18'x15'. Room 9: NED PostPro room/mixing. **Mixing Consoles:** SSL 6000 G Series automated w/stereo modules, SSL 4000 E Series automated, Sony MXP-3036. **Audio Recorders:** (4) AMS AudioFile digital editing w/4-hour memories, Sony PCM-3324 24-track digital, Sony PCM-3348, Sony PCM-1630 2-track digital, Sony PCM-F1, R-DAT digital, Otari MTR-90/24/16/8-track, Otari MTR-20 4-track, Nagra center-track to stereo and mono, time code DAT, MTM 16/35mm magnetic film recorder, cart machines, Nagra IV STC and NED PostPro. **Cassette Recorders/Duplicators:** Nakamichi. **Noise Reduction Equipment:** Dolby SP-24, Dolby CAT 43, Dolby SR/A, TTM NR frames w/CAT 22 cards, Elison noise reduction. **Synchronization Systems:** Proprietary edit system allowing lockup, edit rehearsal and editing to subframe accuracy of all audio, video and digital machines. CMX compatible auto conform. **Echo, Reverb & Delay Systems:** Lexicon 224Xw/LARC, Lexicon PCM60, Lexicon PCM42, Lexicon Prime Time II, EMT 140 stereo tube plate, Lexicon PCM70, AMS 15-80S, Yamaha SPX90, Yamaha REV7, Marshall tape eliminator, Roland EQ. **Other Outboard Equipment:** Dolby Surround mixing, Neve stereo limiter, dbx subharmonic synthesizer, Tube-Tech PE-1B, Sontec EQ, UREI 1176, Dynafex DX-1, Dynafex DX-2, AN1 stereo simulator, dbx de-essers, Orban de-essers, UREI notch filters, Audio & Design selective limiter, Brain II, Kepex II, dbx subharmonic synthesizer, Eventide 3000H. **Microphones:** Neumann U89, Neumann U87, EV RE20, Sanken, Shure SM57. **Monitor Amplifiers:** Ashly Audio 500 FET, Ashly Audio 200 FET, Yamaha, Crown D-150, Crown D-75, Symetrix A-220. **Monitor Speakers:** UREI 813, Auratone, JBL 4411, Fostex. **Musical Instruments:** Yamaha DX7. **Video Equipment:** Sony BVH-2000 1" w/Dolby, Sony BVH-2830 1" w/digital audio, Sony D2, Sony BVU-850SP, JVC 8250, VHS Hi-fi, Betacam SP, Panasonic 100" video projection system, Sony monitors, monitor switches in all areas for multivideo. **Specialization &**

—LISTING CONTINUED ON NEXT PAGE

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Credits: Nominated for numerous TEC Awards and Recipient of the 1991 Best Audio Production Mixer Award. Sync Sound is a full-service audio post-production house featuring a staff of Emmy Award-winning sound editors and mixers. Sync Sound is specifically designed to accommodate editing and mixing-to-picture (digital or analog). Facilities include (5) non-linear digital sound editing suites, (4) mixing rooms, an ADR (looping) Foley stage, a huge automated sound effects library and sound design suite. Sync Sound performs a wide variety of services for network and cable programming, home video, albums and commercials.

[24+] TAMARAND DIGITAL RECORDING STUDIOS: Garnerville, NY 10923-0368; (914) 639-1000; FAX: (914) 634-7584. Owner: Bill Horwitz. Manager: Julie Bouchet



TAYLOR-MADE PRODUCTIONS
Caldwell, NJ

[24+] TAYLOR-MADE PRODUCTIONS; also REMOTE RECORDING; PO Box 309; Caldwell, NJ 07006; (201) 226-1461; FAX: (201) 226-1462. Owner: Glenn M. Taylor. Manager: Pauline Taylor. Engineers: Glenn M. Taylor, Hannah A. Taylor, Baby Taylor, Blackos Taylor. Dimensions: Studio 23'x18', control room 18'x18', MIDI room 37'x12', Preview room/lounge 10'x8', Vocal booth 8.5'x4'. **Mixing Consoles:** Harrison Raven 76x32 w/M-Wank mod. plus "Optifile" (3-D console automation system). **Audio Recorders:** Otari MX-80 24-track 2", Otari MkIII 8-1/4-track 1/2", Otari MX-5050 4-track 1/4", (2) Otari MX-55 2-track 1/4", Studer A80VU MkIV 2-track 1/2", Panasonic SV-3500 DAT, Casio DA-7 DAT, Sony PCM-501ES (F1) 2-track digital processor, Pioneer 1020L 1/4-track. **Cassette Recorders/Duplicators:** (11) Tascam 122, Marantz Portable PMD-201. **Noise Reduction Equipment:** Dolby SR/A30 channels, dbx Type I Pro 28 channels, Symetrix 511 single-ended system. **Synchronization Systems:** (4) TimeLine Lynx, Mark of the Unicorn MIDI Time Piece, Roland SBX-80, J.L. Cooper PPS-100 SPMT/MIDI event. **Echo, Reverb & Delay Systems:** Roland R-880 digital reverb, (2) Lexicon 224/224XL, Lexicon PCM70 w/3.0 software, Yamaha REV7, EMT stereo plate w/custom electronics, Yamaha SPX90, Lexicon LXP 5, Lexicon PCM41 DDL, ART MultiVerb DDL/reverb/FX, DeltaLab Super Time-Line DDL, Yamaha D1500 DDL, Korg SDD-3000 DDL, MXR DDL, Echoplex tape delay. **Other Outboard Equipment:** Focusrite ISA stereo mic preamp/EQ, Eventide Harmonizer H949 and H3000 SE w/ stereo sampling card, A&D Panscan, (2) dbx 165B limiters, (2) dbx 161 limiters, Aphex Compeller, Pultec EQH-12, Ashly SC-66 parametric EQ, Blamp graphic EQ, White 1/3-octave room EQ, Valley Audio rack; (5) Kepex, (2) Gain Brain, (2) Maxi-Q, Aphex Aural Exciters Type III and 602B, BBE 802 and EXR exciters, BASE spatial environment, TC 1210 stereo expander, Orban stereo simulator, Drawmer DS-201, Aphex 612 gates, (2) Omnicraft 4-ch. gates, (2) Audio Logic 4-ch. gate, (2) Aless Micro-gate, GateX 4-ch. gate, Symetrix mono gate, (3) Orban de-esser, Dyna-Mite dynamic module, Symetrix 205

peak/avg. meter, Groove Tubes guitar preamp, MXR, (2) flanger mini-rack, MXR chorus/doubler, Scholz Rockman, Sans-amp guitar preamp, Samson wireless system. **Microphones:** (2) Neumann U87, U89, (2) AKG 414, (6) Sennheiser 421, AKG "The Tube" and assorted others (plenty). **Monitor Amplifiers:** (4) Hafler P-230, (2) Yamaha BGW 500, (2) Yamaha P2075. **Monitor Speakers:** UREI 813C, Yamaha NS-10M, Auratone 5C Super sound cube, JBL 4408, JBL 100, Sony Minis. **Musical Instruments:** Over 40 keyboards, drum machines and synth modules (yesterday and today... you name it!) Large collection of vintage acoustic and electric guitars, basses, amps and drums/percussion toys. **Other MIDI Equipment:** Macintosh IIci w/Sony 14" monitor, running Performer 3/6.1 sequencing software, Bernoulli Portable 90 removable cartridge drive, Roland MC-500 MkII sequencer/recorder, Phi-Tech pitch-to-MIDI converter, Casio MIDI guitar. **Video Equipment:** Otari 1" audio-for-video layback deck (MX-70), JVC 8250 U-matic 3/4" deck, (2) NEC color monitor, E.S.E. SMPTE reader/time code window generator, iso booth, 12" video monitor. **Other:** Technics SP-P1200 Pro DC player, (3) Optical Media "Universe of Sound", CD library for Emulator II, huge assortment of CD music library and SFX libraries. Even bigger than last year! JVC CD/double cassette for VO and music search. **Rates:** Reasonable rates, per project and hourly. Call to discuss your needs. **Specialization & Credits:** Taylor-Made Productions is the sound source for all media. We are a full-service original music scoring house w/sync-to-picture capability, as well as a production source for bands and individual artists. Additionally, we are a complete audio-for-video post-production studio, with stock music and a huge SFX library at the client's disposal. We offer extensive MIDI programming and music production. We also offer our clients a large talent pool of vocalists, narrators and voice-over talent, as well as in-house creative and scriptwriting services for corporate, industrial, comedy and commercial purposes. Our products include work for AT&T, Lorus Watches, Universal Pictures, World Federation of Wrestling, Sony Corp., Virgin Records, Schering-Plough Pharm., Action Amusement Park, Hertz, Jersey Central Power and Light, Nando Sparkling Wine, WWOR-TV, Schiott Real Estate, New York Airlines, National Public Radio, Fresh Air Radio, Volvo-White Trucks, Warner-Lambert, Parke-Davis, Lederle and Johnson & Johnson Pharmaceuticals, Clorox and Nabisco Brands to name more than a few. Please call us for complete details on how TMP can help you in your next production.

[24+] THIRD STORY RECORDING; 5120 Walnut St.; Philadelphia, PA 19125; (215) 747-1200. Owner: John Wicks, Scott Herzog. Manager: Mark Miliken

[24+] 39TH STREET MUSIC; also REMOTE RECORDING; 260 W. 39th St.; New York, NY 10018; (212) 840-3285; FAX: (212) 840-0923. Owner: Michael Karp. Manager: Jack Maliken. Engineers: Dennis Wall, Matt Sietz. Dimensions: Studio A: 30'x30', control room 25'x20'. Studio B: control room 15'x15'. **Mixing Consoles:** Solid State Logic SL4056 G Series w/Total Recall, MCI. **Audio Recorders:** Studer 827, Panasonic SV-3500 DAT, (4) Studer B67 2-track 1/4", Studer A80VU MkII 2-1/4-track 1/2", Studer A80VU MkII 24-track. **Cassette Recorders/Duplicators:** (6) Tascam 122B. **Noise Reduction Equipment:** Dolby A M16 track 24 channels, (4) Dolby A 361. **Synchronization Systems:** (2) TimeLine Lynx, Roland SBX-80, Garfield Masterbeat Echo, Reverb & Delay Systems: (2) Lexicon PCM42, Lexicon Prime Time 95, Pulsion Infernal Machine 90, Yamaha SPX90, Yamaha SPX90II, (2) Lexicon PCM70 (2) Yamaha D1500 DDL, TC Electronic 2290, Eventide H3000BS Harmonizer, Eventide FL201 instant flanger, (2) Korg SDD-2000 digital delay, EMT 140 mono, Yamaha SPX1000, Lexicon 224 digital reverb. **Other Outboard Equipment:** (4) dbx 160 compressor, Aphex Compeller, Teletronix LA-2A, (4) Drawmer DS201 noise gate, Orban 516EC dynamic sibilance controller, Drawmer 1960 vacuum tube compressor, UREI 535 graphic equalizer, (4) Valley People Kepex II, Orban 674A parabolic equalizer, (2) Pultec EGH2, Neve EQ. **Microphones:** (2) Neumann U87, Neumann U47 FET, Neumann U67 tube, (4) AKG C-414EB, many others. **Monitor Amplifiers:** QSC 1400, (2) Crown PSA-2 (bridged), (2) Crown D-150. **Monitor Speakers:** UREI 813C, Tannoy PBM-6.5, Auratone cubes, (3) Yamaha NS-10M. **Musical Instruments:** E-mu Proteus, Roland D-550, Minimoog w/MIDI (MPU101), Akai S950 and S900, Korg M1R, Yamaha DX7IFD, Hammond B-3 w/Leslie 122, Ludwig drum kit w/Gretsch toms, Yamaha baby grand piano, Emulator II w/Sound Designer, Oberheim Matrix-12, E-mu SP-12 drum machine, Yamaha TX816, percussion kit, timpani 25" and 28", M1 synthesizer, D-50, Matrix 1000, (2) Akai 950, many additional keyboards and samplers, Roland U-8 drum machine. **Other MIDI Equipment:** J.L. Cooper MSB 16/20 switcher, J.L. Cooper MSB+, IBM sequencer plus Gold. **Video Equipment:** Sony VO-5800 3/4" deck. **Other:** Mark of the Unicorn Performer 3.3, Leading Edge Model D w/20MB HD, Voyetra Sequencer Plus MkIII V. 3.0, Opcode DX7/MD-50 editor/librarian, Macintosh SE w/46MB HD. **Specialization & Credits:** Recently in the studio: Nile Rodgers, C&C Music Factory, Ultra Magnetic MCs, Boogie Down Productions, Raheim—Juice Sound Track Album, Elaine Elias, Tom Chapin with Branford Marsalis and Roseanne Cash, Gayle Ann Dorsey, Skadanks, Little Louie Vega, Seduction.

[24+] THIS WAY PRODUCTIONS INC.; 503-11 Broadway, Rm. 519; New York, NY 10012; (212) 431-5894. Engineers: Danny Caccavo, Paul Special, Robert Agnello, Peter Dafini. Dimensions: Studio 11'x19', control room 12'x19'. **Mixing**
—LISTING AND PHOTO/LOGO CONTINUED TOP OF NEXT PAGE

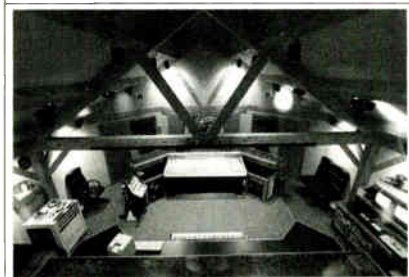
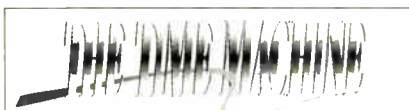
THIS WAY

productions inc.

THIS WAY PRODUCTIONS INC.
New York, NY

Consoles: Soundcraft 1600 24x24 w/Megamix automation. **Audio Recorders:** Ampex MM1 200 24-track, Digidesign Soundtools, Tascam DA30 DAT Recorder, Ampex ATR-102 2-track, Ampex ATR-104 4-track, Postex 20 w/center-track time code. **Synchronization Systems:** Adams-Smith Zeta-3 w/remote. **Echo, Reverb & Delay Systems:** Eventide 2016, Eventide H3000 Ultra-Harmonizer, Yamaha REV7, Eventide 969 Harmonizer, Ursa Major Space Station, Yamaha SPX90, (2) Roland SRV-2000. **Other Outboard Equipment:** (2) ADR Compex II compressor/expander, UREI 1176 limiter, dbx 160X limiters, (2) JBL/UREI 7110 limiters, (2) dbx silencers, Aphex Type C, BBE Sonic Maximizer, (4) Valley People Dyna-Mite, Castle dual Phaser. **Microphones:** Neumann TLM170, AKG 414, (4) AKG 451, AKG D-12, (5) Sennheiser MD-421, (2) PZM, Sony C-37 FET. **Monitor Amplifiers:** Crown Micro-Tech 600, Crown DC-300, Phase Linear 400. **Monitor Speakers:** UREI 809A, Yamaha NS-10M. **Musical Instruments:** Korg M1, M1R, (2) Akai S-1000, (2) E-mu Proteus, (2) Proteus 2, (2) Roland R-8, (2) S-950, (2) Yamaha DX7, (2) Yamaha TX7 modules, (2) Emulator II, Emax, Roland Super JX rack, Oberheim sample player, Roland Octapad, LinnDrum, Sample Cell sample player, Mellotron 400, Ludwig drum kit, Fender Telecaster bass, Stratocaster. **Other MIDI Equipment:** Macintosh Ix, MOTU MIDI Time Piece and Video Time Piece, Performer, Sound Designer, Q-Sheet. **Video Equipment:** (2) JVC 6650 3/4" deck, NEC 26" monitor, MOTU VITC reader-generator, NEC 26" monitor. **Other:** Mesa Boogie Studio 22, Marshall Lead 100 w/4x14 cabinet, Ampeg Reverb Rocket. **Rates:** Call! **Specialization & Credits:** Now in its fifth year, This Way Productions is a comfortable, mid-priced facility for quality recording in both the audio post-production and music fields. We've added Pro Tools for post-production in addition to Sound Tools for digital mastering. We specialize in creative custom sound designing, scoring, music recording and feature a comfortable, relaxed atmosphere in which you can produce high-quality work—the kind of environment we think is unmatched by other studios in our price range. Some of our recent clients and projects include: MTV, TNT, Burger King, Time Warner, David Van Tieghem, Sasson, "Inside Out Boy", British Knights, Reebok "Talking Tennis Balls", Sonic Boom, Tom Pomposello Productions, Chiat/Day, National Geographic, Sony, Liquid TV.

[24+] **TIKI RECORDING STUDIOS INC.;** 186 Glen Cove Ave., Glen Cove, NY 11542; (516) 671-4555; FAX: (516) 671-1306. Owner: Fred Guarino. Manager: Inge Palmieri.



THE TIME MACHINE
Manchester Ctr., VT

[24+] **THE TIME MACHINE;** also REMOTE RECORDING; PO Box 2187; Manchester Ctr., VT 05255; (802) 824-4349; FAX: (802) 824-4543. Owner: Mr. Carbo. Manager: Mike Cordell.

Engineers: Mike Cordell, Terry Cordell, Rebecca Gilley, Jim Gilmour. **Dimensions:** Room 1: studio 24'x24', control room 32'x24'. Soundstage: 40'x20'x20'. Iso 1: 12'x6'. Iso 2: 12'x6'. **Mixing Consoles:** DDA DMR-12 56x12x2 or 32x12x24. **Audio Recorders:** Otari MTR-90 MkIII 24-track, MCI JH-110B 2-track, Digidesign/Yamaha PD5 CD recording system YPR201/YPE301, Panasonic SV-3700 Pro DAT, Panasonic SV-255 portable DAT. **Cassette Recorders/Duplicators:** Nakamichi CR-7A. **Synchronization Systems:** Adams-Smith Zeta-3 w/remote. **Echo, Reverb & Delay Systems:** Lexicon 300, Lexicon 224, Eventide H3000 SE Harmonizer, Lexicon PCM70, Lexicon LXP-15, Roland SE-50, (3) Korg A-3, (2) Roland RE501 tape chorus/delay. **Other Outboard Equipment:** (3) Drawmer DL241, (3) dbx 166, (2) ART MOC 2001, Rocktron Holdsworth Juice Extractor, Tech 21 Sans amp. **Microphones:** (2) Bruel & Kjaer 4003 w/2812, AKG 414, Neumann U87, (3) AKG C-460, (3) Sennheiser MD-241, (2) AKG C-747, Crown SA55-P MkII, (2) Beyer Mx88 T6, (4) Crown PZM 30, (2) EV RE27 ND. **Monitor Amplifiers:** (2) Bryston Pro 7B, Haller 500. **Monitor Speakers:** (2) Tannoy 215 DMT, (2) KRK 900, Toa MEAV 12, EV Sentry. **Musical Instruments:** (3) Roland S-770 sampler w/16 MB RAM, (2) E-mu ProCussion, E-mu Proteus XR, (2) Roland D-50, Yamaha TX802, Yamaha DX7, (2) Fatar Studio 88 MIDBoard, drum Kat percussion controller, (2) Fender "the Twin" guitar amp, (4) Hartke 410 cabinets, Gallien Krueger 400 RB bass amp, Ensoniq Mirage sampler. **Other MIDI Equipment:** MOTU MIDI Time Piece, (2) Digital Music Corp. MX8 MIDI processor. **Video Equipment:** Newtek Video Toaster workstation w/kitchen synch, (2) Sony 5850 3/4" deck, (2) Panasonic 7500 1/2" S-VHS decks, Panasonic 7650 S-VHS deck, Panasonic WWF-250 camera w/dockable A67450 S-VHS, Panasonic SV-5100 camera w/EN6 kit, Stediacam Jr. **Other:** Technics SLP 1300 class AA Pro CD player, Macintosh SE304/80 computer, (3) Elkton MX-2 removable 650MB optical drives, Elkton CD2RX CD ROM/45MB removable drive, Opcode Studio Vision software, Opcode Music Plus editors/albrarian, Coda Finale Scoring software, Apple Laser Writer II NT, Series II Lear Jet. **Digital Workstations:** Digidesign Sound Tools w/Protools, Digidesign Pro I/O analog interface, Digidesign DAT I/O digital interface. **Specialization & Credits:** The Time Machine is not your average professional 24-track recording complex. It is literally a recording retreat! A secluded eight-building compound on 46 acres. The Time Machine is a mountaintop recording lar complete with tennis and racquetball courts, a huge indoor pool and spa facility, fishing and skating pond, skiing, hiking trail and breathtaking mountain views. After a day in the studio retire to your own three story lakefront chateau and enjoy the charming Vermont lifestyle complete with a cooking and cleaning staff. Your trip here can be just as pleasant on our private jet. Gorgeous post and beam construction gives the complex a very warm and unique presence. On-site we feature a completely brand new audio and video recording set-up complemented by on-the-spot digital mastering and CD pressing. Designed for the artist who appreciates a high-quality recording studio in a peaceful paradise.



T.M.P. RECORDING
Berlin, NJ

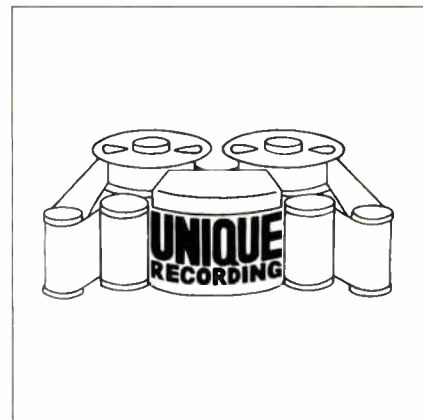
[24+] **T.M.P. RECORDING;** 234-3 Rt. 73; Berlin, NJ 08009; (609) 768-2226; FAX: (609) 768-7135. Owner: Tom Digangi. Manager: Lenny Digangi, Tom Traub. Engineers: Ed Dbona, Steve Kristiansen, Brian McMahon, Anthony Riccobono, Mike Cohn, Lenny Digangi, Tom Digangi, Tom Traub. **Dimensions:** Room 1: control room 15'x20', Room 2: studio 16'x25', Room 3: studio 9'x11'. Room 4: studio 5'x6'. **Mixing Consoles:** Tascam M3500 32x8x32 automated. **Audio Recorders:** Tascam MSR-24 24-track, Tascam MS-16 16-track, Tascam BR-20T 2-track w/time code, (2) Alessis DAT digital 8-track, Tascam DA30 DAT, Technics DA-10 DAT. **Cassette Recorders/Duplicators:** Tascam 122 MkII, Tascam 112, KABA RTS-4TM master, (3) KABA RTDS-4TS slave. **Noise Reduction Equipment:** DX8DS 8-channels, DX2D 2-channels, Symetrix 511A. **Synchronization Systems:** Tascam ES50. **Echo, Reverb & Delay Systems:** Lexicon LXP-1, Lexicon LXP-5, Lexicon LXP-15, Lexicon PCM42, Yamaha SPX900, Roland RSP-500, Korg A-2, Korg SDD-2000. **Other Outboard Equipment:** Orban 424A compressor, Klark-Teknik DN500 compressor, dbx 166 compressor, (2) dbx 160 compressor,

Ashly CL52E compressor, Ashly SG-35E gate, Ashly PQ16 parametric EQ, Rane SP15 parametric EQ, Klark-Teknik DN360 EQ, Yamaha Q2031A EQ, BBF 422A sonic maximizer, (2) Audio Logic MT-44 gate. **Microphones:** (2) AKG 414, (2) AKG D-112, (2) AKG C-5353EB, (2) AKG 460, (2) Beyer M380, (2) Beyer 210, (2) Crown CM100, EV PL20, EV RE27, AKG D-12E, (6) Shure SM58, (6) Shure SM57, Shure VP88, Neumann U87, (6) Sennheiser MD-421, (2) Sennheiser 441-U, (2) Sennheiser 409-U3, Shure Beta 57, Sony ECM56, Yamaha MZ204. **Monitor Amplifiers:** (2) Yamaha 2350, Yamaha 2075, Rane HC6 headphone amp, Symetrix SX204 headphone amp. **Monitor Speakers:** Tannoy SRM-12B, Tannoy PBM-6.5, Yamaha NS-10M. **Musical Instruments:** Roland S-750, Roland U-220, Yamaha TG77, Korg M1R EX, Roland R-8, Tama Artstar drums. **Other MIDI Equipment:** Yamaha MJC8 8-track, JL Cooper MSB, Roland VP-70, Roland MC-500. **Digital Workstations:** Hybrid Arts Digital Master hard disk recording.

[24+] **TULLEN SOUND RECORDING;** also REMOTE RECORDING; 26 Altamont Ct.; Morristown, NJ 07960; (201) 539-8120; FAX: (201) 539-5615. Owner: Skipp Tullen. Manager: Barbara Shalit.

[24+] **TUNDRA STUDIOS LTD.;** also REMOTE RECORDING; 45 Casco St.; Portland, ME 04101; (207) 772-1222. Owner: Tundra Studios. Manager: Tom Tierney.

[24+] **UBIQUITY MUSIC PRODUCTIONS/RECORDING;** also REMOTE RECORDING; PO Box 91; Lindenwold, NJ 08021; (609) 783-7650. Owner: David Hardy. Manager: Alex Ledvin. **Specialization & Credits:** Pre-/post-production facility. We have a highly skilled staff of computer technicians and musicians who can assist producers and save you a ton of money in production costs. We are a consortium of producers who have credits on major record labels and films. We specialize in dance, R&B, pop and rap. No extra charge for the use of an extensive library of sounds. Our technicians/musicians will travel to the studio of your choice for pre-/post-production services. We can provide original music or refine your production to meet industry standards. We have mastering capabilities in-house. Call for free consultation—(215) 742-3067.



UNIQUE RECORDING STUDIOS INC.
New York, NY

[24+] **UNIQUE RECORDING STUDIOS INC.;** 701 Seventh Ave.; New York, NY 10036; (212) 921-1711; FAX: (212) 730-2206. Owner: Joanne and Bobby Nathan. Manager: Tony Doolin, Carla Maenza. Engineers: Angela Pwa, George Karas, Richard Joseph, Peter Robbins, Tony Smalos, Matt Hathaway, Josh Chervokas, Eric "Cory" Lynch, D'Anthony Johnson. **Dimensions:** Studio A 12'x15', Studio B 40'x20' (w/iso booth), Studio C 22'x14', Studio D 25'x20'. **Mixing Consoles:** SSL 4000E w/G Series computer & Total Recall 72-channel, SSL 4000E w/G Series computer & Total Recall 56-channel, SSL 6000E w/G Series computer & Total Recall 48-channel, Trident Series 24 28x24x2. **Audio Recorders:** (4) Studer A800 MkIII 24-track, (2) Otari MTR-90 MkII 24-track, (3) Studer A820 2-track 1/2", (2) Studer A810 2-track 1/4", (2) Studer A80 MkII 2-track, (2) Otari MTR-12 2-track 1/2", (5) Panasonic SV-3500 Pro DAT. **Cassette Recorders/Duplicators:** (10) Nakamichi MR-1. **Synchronization Systems:** (3) Adams-Smith w/compact controllers. **Echo, Reverb & Delay Systems:** (2) Publison Infernal 90 (21 seconds), (2) Sony DRE-2000A, (3) Lexicon 480L, (3) Lexicon 224XL, (3) AMS RMX 16, (3) AMS DMX 15-80S, (3) Eventide H3000S, (3) Klark-Teknik DN780, (3) AKG ADR-16 4.0, (2) Yamaha REV1, (3) Yamaha REV7, (3) Yamaha SPX1000, (6) Yamaha SPX90, (3) Lexicon PCM70, (14) Lexicon PCM42, (3) Roland Dimension D, (3) Eventide H910. **Other Outboard Equipment:** (6) UREI LA-3A, (6) UREI LA-2A, (6) dbx 165A, (6) dbx 160, (8) dbx 160X, (8) Drawmer DS-201, (12) Valley People Dyna-Mite, (6) dbx 902 de-esser, (6) Pultec EQU-2, (6) Pultec EQP-1A, (3) Pultec MEQ-5, (2) Neve 33609 stereo compressor, (24) Neve 1077 micpre EQ, (2) Neve Pnm rack 16 EQ 4 dynamics, (2) Massenberg GML 8200, (4) Focusrite ISA131 dynam., (12) API 550A, (12) API 560A, (8) API 512B, (8) Focusrite ISA 115 EQ, (3) Panscan. **Monitor Amplifiers:** (3) Perreaux 6000, (3) Perreaux 3000, (4) —LISTING CONTINUED ON NEXT PAGE

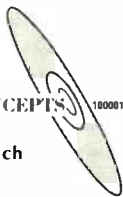
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Crown Macro-Tech 1200, **Monitor Speakers:** Augspurger Westlakes, (2) UREI 813 w/Gauss, UREI 813, (6) Yamaha NS-10M, **Musical Instruments:** (2) Yamaha conservatory grand w/ MIDI, **Other MIDI Equipment:** (4) Yamaha TX802, (4) Yamaha TX81Z, (3) Roland D-50, (4) Roland D-550, (4) Roland MKS-80/MPG-80, (5) Akai S950/S900, S1000 w/8MB & dig board, Korg O1W, Korg BX3 w/MIDI, (4) Korg M1R, (3) Yamaha DX7IFD, Oberheim Matrix-12, Oberheim Matrix-1000, Akai MPC-60, (2) Roland TR-808 w/MIDI, Moog Minimoog w/MIDI, Atan 1040ST, Macintosh SE, Macintosh Ix 8MB w/1.2 gig drive (1.5 hr.), Sound Tools digital editing system w/Pro I/O and DAT I/O, IBM PC286 126MHz. **Specialization & Credits:** Credits include: Another Bad Creation, Aaron Hall, Aerosmith, Al B. Sure!, Al Green, Bel Biv DeVoe, Billy Idol, Billy Ocean, Book of Love, Carly Simon, Chaka Kahn, Cher, Chic, C&C Music Factory, Cover Girls, Diana Ross, Donald Newkirk, Digital Underground, Dionne Warwick, Donna Summer, Duran Duran, E.U., En-Touch, Exposé, Freddie Jackson, Full Force, Heavy D., Information Society, James Brown, Jimmy Cliff, Joe Cocker, Keith Sweat, Kool Moe Dee, Levert, Lisa Lisa, Lisette Mendez, Living Colour, Madonna, Melba Moore, Motley Crue, Naughty by Nature, New Edition, New Kids on the Block, Nona Hendryx, O'Jays, Omar Hakim, Oran "Juice" Jones, Patti LaBelle, Pet Shop Boys, Public Enemy, Queen Latifah, Ric Ocasek, Right Said Fred, Robert Palmer, Roberta Flack, Rod Stewart, Queen, Rolling Stones, Run-D.M.C., Salt-n-Pepa, Sheena Easton, Soul II Soul, Steve Winwood, Stevie Nicks, Sweet Sensation, Sybil, 3rd Bass, Ted Nugent, The Cars, The The, Third World, Tiffany.

[24+] VAN GELDER RECORDING STUDIO INC., 445 Route 9W; Englewood Cliffs, NJ 07632; (201) 567-4145. **Owner:** Rudy Van Gelder. **Manager:** Rudy Van Gelder.

VIDEOMIX
123 West 18th Street, New York, N.Y. 10011

VIDEOMIX
New York, NY

[24+] VIDEOMIX; 123 W. 18th St.; New York, NY 10011; (212) 627-7700; **FAX:** (212) 727-3075. **Owner:** CP Sound Inc. **Manager:** Kathleen Krause. **Engineers:** Barbara Flyntz-Bradley, Chris Argento, James von Buelow, Dick Matland. **Dimensions:** Room 1: studio 23'x20', control room 25'x23'. Room 2: studio 23'x20', control room 25'x23'. Room 3: studio 15'x10', control room 20'x15'. Room 4: studio 15'x10', control room 20'x15'. **Mixing Consoles:** Sony MXP-3000 w/ JL Cooper automation, (2) Sound Workshop 34 w/disc mix automation, Sony MXP-2000. **Audio Recorders:** (3) Otari MTR-9011 24-track, Otari MX-70 16-track, (6) Otari MTR-12-2 2-track, Otari MTR-12-4 4-track, (2) Fostex P-20 time code DAT, (5) Panasonic DAT. **Cassette Recorders/Duplicators:** (10) Kaba Real Time, (2) Nakamichi mastering decks, (4) Tascam 122, (5) Maganafax high-speed 1/4". **Noise Reduction Equipment:** (60) Dolby SR/VA, (16) dbx, Sonic Solution NoNoise w/automated Decrackle and Declick filtering. **Synchronization Systems:** (3) Soundmaster "Smart Synch", Adams-Smith 2500 AV. **Echo, Reverb & Delay Systems:** (2) Lexicon 480, (3) Lexicon 200, (2) Lexicon 3000, (2) Lexicon PCM70, (2) Yama-

ha SPX90, Ursa Major. **Other Outboard Equipment:** (3) dbx 900, (3) UREI 1178, (6) UREI 545 parametric EQ, (2) Aphex Expander, (2) Studio Technologies stereo simulator, (2) BASE, Lexicon PCM42, (2) DigiTech sampler, (2) dbx 166, (2) Aphex Studio Aural Exciter, Aphex compressor, Aphex Expressor, Eventide H3000+, Roland 660 digital EQ, Aphex Exciter III, Ursa Major stereo processor. **Microphones:** (3) Neumann TLM170, (5) Neumann U87, (2) AKG C-414, many others. **Monitor Amplifiers:** Crown, Meyer Sound Labs, Hot House. **Monitor Speakers:** (4) JBL 4425, (8) Yamaha NS-10, Tannoy 15-8-6 Dolby Surround systems, (8) Digital Design. **Other MIDI Equipment:** (2) E-mu Systems E3, (2) E-mu Systems E2, Yamaha DX7, "Putney" synthesizer. **Video Equipment:** (2) Ampex VPR-6 1", (5) JVC 850 3/4", Sony BVW-75 Beta SP, Sony DVR-10 D2. **Other:** (2) Degdesign digital workstation, 6-track online interlock 16/35 Mag, (2) D-20 online SMPTE DAT recorders, Dolby SR on all recorders, computerized music and effects synth, Q-Sheet AV automated MIDI EQ. **Digital Workstations:** Sonic Solution 8 I/O with automated mixing time squeeze, unlimited EQ, NoNoise and Decrackler and Declick options, (2) DigiDesign Sound Tools. **Specialization & Credits:** Certified Dolby Surround, all-Tannoy room audio-for-video post-production. Specializing in SFX, laugh tracks and music scoring. World's finest SFX collection and all major music libraries. Full audio duplication and fulfillment capability, inter-format audio/video/multitrack/Dolby/dbx dubbing.

[24+] VIRT-U-RECORDING DISK MASTERING STUDIOS; 8809-11 Rising Sun Ave.; Philadelphia, PA 19115; (215) 763-2825; **FAX:** (215) 676-8992. **Owner:** Frank Virtue. **Manager:** Maryann Canciano.

[24+] VOICES RECORDING STUDIOS; also REMOTE RECORDING; 16 East 48 St.; New York, NY 10017; (212) 935-9820; **FAX:** (212) 755-1150. **Owner:** Richard Leonard. **Manager:** Phil Gordon. **Engineers:** Mark Francke, Bruce Emerick, Ben Pizzuto, Brian Sherman. **Dimensions:** Room 1: studio 10'x10', control room 20'x25'. Room 2: studio 10'x12', control room 20'x25'. **Mixing Consoles:** (2) Sound Workshop Series 34. **Audio Recorders:** New England Digital PostPro system, MCI/Sony 24-track. **Video Equipment:** Sony BVH-3100 1" video decks.

[24+] THE WAREHOUSE/J.E.M. SOUND INC.; 1030 N. Delaware Ave.; Philadelphia, PA 19125; (215) 423-7300; **FAX:** (215) 426-6104. **Owner:** Michele Niccieri, John Moyer. **Manager:** Ken Haywood.

[24+] WATER MUSIC RECORDERS; PO Box 4; Hoboken, NJ 07030; (201) 420-7848; **FAX:** (201) 420-8676. **Manager:** Ann Selznick.

[24+] WENDELL RECORDING STUDIO; Box 61; Wendell, MA 01379; (508) 544-8288. **Owner:** Jefferson Entertainment Corp. **Manager:** Jeffrey Bauman. **Engineers:** Bruce Kahn, Jeffrey Bauman, Peter Keppler, Mark Miller. **Dimensions:** Studio 25'x25'x19' (tuneable sound panels), control room 18'x14'. **Mixing Consoles:** Trident 24 56-channel w/32 channels of MegaMix VCA automation. **Audio Recorders:** Otari MTR-9011 24-track, 3M M79 2-track 1/2", Otari 5050 2-track 1/4", Sony 501 2-track digital, Panasonic 3700 DAT. **Cassette Recorders/Duplicators:** Esoteric, Awa. **Noise Reduction Equipment:** dbx 150 Type I 10 channels. **Synchronization Systems:** Adams-Smith Zeta-3. **Echo, Reverb & Delay Systems:** Lexicon PCM70, Lexicon PCM60, Lexicon PCM42 w/sampling option, Yamaha SPX90 digital effects processor, DeltaLab Super Prime Time digital delay, Teletronix LA-2A limiter, (2) Pultec MEO-5 equalizer, UREI 1176 compressor, Valley People 610 stereo compressor/expander, dbx 166 stereo compressor/limiter, Orban co-operator compressor/expander, Aphex Type C Aural Exciter, Ashly Audio SE66 stereo parametric equalizer, Klark-Teknik DN360 stereo equalizer, Fostex 330 stereo equalizer, (2) Ashly Audio stereo noise gate, Valley People Dyna-Mite, Alesis Quadraverb, Drawer noise gate. **Microphones:** Neumann U47 tube, (2) Neumann TLM170, Beyer MC740, AKG 451, (2) AKG C-501, AKG CK-22 capsule, (2) Beyer 500, Beyer M69N, Beyer M201N, (2) Sennheiser 421, (2) Sony ECM-23F condenser, (2) Crown PZM, (2) Shure SM58, (2) Shure SM57, (3) Shure SM81 condenser, EV PL20, EV 635A, ATM 1-R, ATM 8501. **Monitor Amplifiers:** Ashly Audio MOSFET stereo, Crown 300 stereo, Yamaha P2050 stereo, McIntosh 250 tube stereo. **Monitor Speakers:** (2) Gauss 7258, (2) Altec 604E, (2) EV Sentry 100, (2) Auratone T-6, (2) Auratone, (2) ADS L700, (2) Yamaha NS-10. **Musical Instruments:** Yamaha conservatory grand piano, Fender (tan) Super guitar amp, Gibson 1947 guitar amp, Fender (tan) guitar reverb, Yamaha RX15 drum machine, Martin OM (herring bone) 1933 guitar, Gibson Sunburst 335 1959 guitar. **Other MIDI Equipment:** Performer software on Macintosh Plus w/20MB HD. **Video Equipment:** Sony U-matic 3/4" recorder/player, Panasonic OmniVision VHS recorder/player. **Other:** (10) AKG headphones. **Rates:** \$750/day 24-hour lockout. **Specialization & Credits:** Wendell Recording Studio is a quality, cost effective residential facility for the artist who desires total control over his or her working environment. Located deep in the woods on ten stonewalled acres, we are a three hour drive from NYC, 1/2 hour drive from Boston and closer yet to Hartford International Airport. Artists stay in a beautiful guest house full of light, wood and detail, complete with cedar Swedish sauna, offering a sense of home and privacy. They often take the one minute walk down the footpath to the studio through the woods, arriving relaxed and ready to record. Why put up

with the problems of city studios, with their claustrophobia, bad air and parking problems when you can be in a place that's all your own—24 hours a day, with you determining the schedule. If you would like to do your next project in a beautiful, total service environment that you control, this is the place for you.

[24+] WESTRAX RECORDING STUDIOS; 484 W. 43rd St.; New York, NY 10036; (212) 947-0533; FAX: (212) 947-0546. Owner: Peter Link. Engineers: Jeremy Harris (chief engineer), Todd Anderson, Jesse Plumley (senior engineer), Laura Fried, William Garrett, Steven Wilds. Dimensions: Room 1: studio 17'x24', control room 17'x20', MIDI room 16'x16'. **Mixing Consoles:** DDA ARM 24, Soundcraft 200B, Roland M-240, Roland M-160. **Audio Recorders:** Otari MX-80 24-track 2", Tascam 85/16B 16-track 1", Otari 5050 MkIII 8-track 1/2", Otari MTR-12 2-track 1/2", Otari MTR-12 2-track 1/4", Technics 1520 2-track 1/4", Sony SL-HF 650 Beta w/Sony PCM-501 digital audio processor. **Cassette Recorders/Duplicators:** (2) Tascam 122, Tascam 122 Mill. **Noise Reduction Equipment:** (28) dbx Type I 150 2/8/16-track. **Synchronization Systems:** Roland SBX-80. **Echo, Reverb & Delay Systems:** Roland R-880, Lexicon PCM70, Lexicon LXP-1. (2) Yamaha REV7, Yamaha SPX90II, Ibanez SDR-1000+, Ecoplate III, Lexicon PCM42. **Korg SDD-2000. Other Outboard Equipment:** Aphex Aural Exciter, Aphex Compellor, Pultec EQH-2, dbx 160X, UREI 1176LN peak limiter, Orban 622B parametric EQ, (2) Drawmer noise gate, RSP Hush 2000. **Microphones:** (2) Neumann U87, (2) AKG C-12, (2) AKG 414, AKG 451, (2) AKG 535, EV RE20, EV 666, (3) Sennheiser 421, (2) Shure SM57. **Monitor Amplifiers:** Hafler 230, Hafler 220, Ashly Audio 200. **Monitor Speakers:** (2) Tannoy LGM-12, (4) Yamaha NS-10M, (2) JBL 4313. **Musical Instruments:** Kurzweil 1000PX Plus, E-mu Proteus, Korg M1R, (2) Roland D-550, Roland S-550, Roland S-50, Yamaha DX7, Yamaha DX7i/IFD, (8) Yamaha TX816, Oberheim OBXa, E-mu SP-12, Alessi HR-16, Alessi HR-16B, Korg Poly-800II. **Other MIDI Equipment:** (2) IBM PC/AT w/20MB HD, Macintosh SE, JL Cooper MSB 16/20, Voyetra Sequencer Plus V, 3.3, Opcode Vision V. 2. **Video Equipment:** VHS, Beta. **Other:** Yamaha C3 6' grand piano, Gretsch drums. **Rates:** 24-track \$110, 16-track \$70, 8-track \$55, 2-track and MIDI room \$40.



WHITE CROW AUDIO
Burlington, VT

[24+] WHITE CROW AUDIO; also REMOTE RECORDING; 19 Marble Ave.; Burlington, VT 05401; (802) 658-6475. Owner: Todd Lockwood. Manager: Todd Lockwood. Engineers: Todd Lockwood, Tom Walters, Chris Bailey. Dimensions: Room A: studio 29'x38', control room 19'x21'. Iso room A-1: 15'x17'. Iso room A-2: 10'x11'. **Mixing Consoles:** Neve 8068 MkII 44x16 w/GML automation. **Audio Recorders:** (2) Sony PCM-2500 DAT, Studer A80RC 2-track 1/4", Studer A810 2-track 1/4" w/SMPTE, Studer A820 2-track 1/2". (2) Studer A820 24-track. **Noise Reduction Equipment:** (54) Dolby SR for all Studer machines. **Synchronization Systems:** (3) TimeLine Lynx SMPTE. **Echo, Reverb & Delay Systems:** AMS DMX 15-80S DDL/sampler, AMS RMX 16, (5) API 550A EQ, Barcus-Berry BBE 802, dbx 165A limiter, (4) dbx 903 limiter, (2) dbx 905 parametric EQ, dbx 906 flanger, (2) Drawmer DS-201 dual gate, EMT 240 Gold Foil, Lexicon 480L w/(2) LARC, Lexicon PCM70, Lexicon PCM42 (4,800ms), Neve 33609 stereo limiter, Studio Technologies AN-2 stereo simulator, (4) Summit Audio TLA-100A tube limiter, Tube-Tech PE-1B EQ, (2) UREI 1176, Valley People 610 stereo limiter, Valley People Gam Brain II, (4) Valley People Kepex II, Valley People Leveller, (3) Valley People Maxi Q, (2) Telatronix LA-2A limiter, (2) Pultec EQP-1A EQ, Pultec EQP-1A3 EQ. **Microphones:** (2) AKG C-414EB, (2) AKG C-451E, (2) AKG C-460/CK61 ULS, AKG D-112, AKG D-12E, (2) Beyler MC740N, (2) Bruel & Kjaer 4006, (2) Crown PZM30, (3) EV RE20, Fostex M88RP ribbon, (2) Neumann KM84, Neumann TLM170, Neumann U47 tube Stephen Paul-modified, (2) Neumann U87 Stephen Paul-modified, (2) Neumann U89, (2) RCA 77-DX, Sanken CMS-2 stereo, (6) Sennheiser 421, Shure SM53, (3) Shure SM57, (3) Shure SM58, (3) Shure SM81, Sony ECM-989. **Monitor Amplifiers:** (2) Bryston 4B, (2) Crown D-150. **Monitor Speakers:** Tannoy NFM-8, UREI 813, Yamaha NS-10M Studio. **Video Equipment:** Sony VO-5800 3/4" VCR. **Other:** (4) AXE DI-100 +4dBm direct box, Crown

SASS/B stereo mic frame, (2) John Hardy M-1 mic preamp, Sony 601ES CPM/F 1 modulator, (5) White Crow artist cue system, (5) White Crow/Jensen direct box, (4) White Crow/Jensen guitar amp input box, Steinway 7' B grand piano, 1956 Hammond B3 organ. **Specialization & Credits:** White Crow serves discriminating clients from the greater New York and Los Angeles areas who desire privacy and elegance at competitive rates. Our clientele covers a wide range of musical territory, from Alice Cooper to Odette. Our large, quiet studio enables us to accommodate acoustically oriented projects not feasible at any other facilities. Producers looking for a classic, "warm" sound will appreciate our complement of vintage tube gear and vast selection of classic instruments. Clients include: Capitol, Atlantic, Warner/Geffen, Sony/Epic, RCA, Rough Trade.

[24+] WINTHROP PRODUCTIONS; also REMOTE RECORDING; 156 W. 94th St.; New York, NY 10025; (212) 662-8685; FAX: (212) 749-8387. Owner: Susan Winthrop.

12- & 16-track studios

[16] ADVANCED AUDIO PRODUCTIONS; 41 Rose Terr.; Trumbull, CT 06611; (203) 459-0869; FAX: (203) 459-0869. Owner: Joseph Cichon. Manager: Elaine Cichon.

[16] ADVANCED AUDIO PRODUCTIONS; also REMOTE RECORDING; 6751 Michael Rd.; Orchard Park, NY 14127; (716) 675-3955. Owner: David Pruski. Manager: David Pruski.

[16] AUDIOMIND; 4510 Kingsessing Ave.; Philadelphia, PA 19143; (215) 222-2159. Owner: Adam L. Goldman.

[16] BEBOP PRODUCTIONS INC.; also REMOTE RECORDING; 1006 Brice Rd.; Rockville, MD 20852; (301) 279-0937. Owner: Bob DeWald. Manager: Marco Delmar.

[16] CHEMEL MUSIC CO.; PO Box 7; North White Plains, NY 10603; (914) 948-5811. Owner: Chester M. Soares. Manager: Chemel Soares.

[16] THE COMMERCIAL REFINERY INC.; 2105 Maryland Ave.; Baltimore, MD 21218; (410) 685-8500; FAX: (410) 685-0313. Owner: Michael Collins, Mark Young. Manager: Jacqui Burfield.

[16] COTTON HILL STUDIOS INC.; also REMOTE RECORDING; 18 Walker Way; Albany, NY 12205; (518) 869-1968; FAX: (518) 869-1969. Owner: Ray Rettig. Manager: Allan Carr.

[16] COUNTDOWN STUDIOS INC.; 122 W. 26th St., Ste. 2R; New York, NY 10001; (212) 691-9279; FAX: (212) 691-9397. Owner: Rhea Nierenstein, president. Manager: Ilona Nierenstein, VP.

[16] CREATIVE SOUND STUDIOS; 601 N. Sixth St.; Allentown, PA 18102; (215) 439-8004; FAX: (215) 439-0103. Owner: Hal Schwoyer. Manager: Carole Silvov. Engineers: Hal Schwoyer, John Mark Miller, Mark Stocker. Dimensions: Room 1: Studio 11'x17', control room 11'x13'. Room 2: Studio 4'x8', control room 9'x14'. **Mixing Consoles:** Soundcraft 600 24x16x2, Tascam 5B 8x4x2. **Audio Recorders:** Digidesign ProTools Digital Audio Workstation 4x4 with Video Slave Driver, JL Cooper CS-10, Otari 5050 MkIII 8-track, Tascam ATR-60 8-track, Otari 5050 MkIII 4-track, Otari 5050 MkIII 2-track, (2) Otari 5050 BII 2-track, Panasonic SV-3700 R-DAT. **Cassette Recorders/Duplicators:** Nakamichi MR-1, (2) Nakamichi MR-2, Telex 6120 high-speed duplicator. **Noise Reduction Equipment:** dbx Type 1 24-track. **Synchronization Systems:** Cipher Digital Shadow II. **Echo, Reverb & Delay Systems:** Yamaha REV7 digital reverb, Yamaha SPX90 digital reverb, Lexicon PCM42 digital reverb, Alesis Quadraverb. **Other Outboard Equipment:** Tascam CD-501, compact disc player, dbx 166 limiter/compressor, Orban 424a limiter/compressor de-esser, Orban 622b parametric equalizer, Klark-Teknik DN-360 Y3 octave graphic equalizer. **Microphones:** Neumann TLM-170, AKG 414EB, AKG 451 w/CK3 & CK22 capsules, (3) Sennheiser 421, Beyler CV7 10N, (2) Shure SM58. **Monitor Amplifiers:** (3) Crown DC-300II, Crown DC75. **Monitor Speakers:** (2) Tannoy PBM-8, (2) JBL 4411, (4) Auratone 5C. **Musical Instruments:** Roland S-50 sampling keyboard, Roland R-8 human rhythm composer, E-mu Systems Proteus 1 & 2, Roland D-550 L/A synthesis sound module, Roland S-330 Digital Sampler, Roland DT-100 Digitizer Waveform Ped. **Other MIDI Equipment:** Hybrid Arts SMPTE track Gold software, Atan 1040ST computer, Hybrid Arts MIDIplexer-64 channels, SMPTEmate Sync box. **Video Equipment:** JVC BR7700V VHS recorder, (2) JVC BR6400 Recorder, BARCO CVM 51 Color Monitor. **Other:** Total Video Capability in-house via link with on site video post-production facility, Sony PCM-501 digital processor, Symetrix TI-101 telephone interface, NEI 2709 1/3-octave real-time analyzer.

[16] DEREK STUDIOS; also REMOTE RECORDING; 850 Main St., PO Box 304; Dalton, MA 01226-0304; (413) 684-0198. Owner: Gregory K. Steele. Manager: Gregory K. Steele. Engineers: Greg Steele, Bob Sweet. Dimensions: Room 1:

—LISTING CONTINUED ON NEXT PAGE

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NORTH EAST

12- & 16-track studios

—LISTING CONTINUED FROM PREVIOUS PAGE

studio 45'x30', control room 18'x16'. Room 2: studio 45'x30', control room 23'x21'. Room 3: studio 10'x8'. Room 4: studio 8'x8'. **Mixing Consoles:** Amek/TAC Scorpion II 32x16 w/monitor EQ, Tascam 8x2. **Audio Recorders:** Tascam MS-16 16-track w/autolocator and dbx, Tascam 58 8-track w/autolocator and dbx, Otari MX-5050B MkII w/remote and dbx, Panasonic SV-3700 DAT, Ampex 351 2-track. **Echo, Reverb & Delay Systems:** Lexicon 200 digital reverb, Lexicon PCM70, (2) Lexicon PCM60, Lexicon 95 Prime Time II, Lexicon PCM42, Lexicon PCM41, Eventide H3000 SE Ultra Harmonizer, ADA STD-1 stereo tapped delay, ADA D-1280 digital delay, Loft 450 delay/flanger. **Other Outboard Equipment:** Valley People 430 dual Dyna-mite, Valley People GateX quad noise gate, Valley People 415 dynamic sibilance processor, dbx 166 gated compressor/limiter, (3) dbx 160x compressor/limiter, UREI LA-4, BBE 822A, Symetrix 528 vocal processor, Symetrix SX-202 dual mic preamp, Audioarts Model 1200 compressor/limiter, (2) MXR Auto-Flanger, Aphex Type B Aural Exciter. **Microphones:** AKG C-414 EB, (3) AKG C-451, Beyler MC-740, Beyler MC-734, (2) Beyler M250 ribbon, (2) Beyler M-201, (2) Countryman EM-101, (2) Countryman Isoxam III, Electro-Voice RE20, (2) Sennheiser MD-421, Sennheiser MD-441, (4) Shure SM57, (2) Shure SM81, (2) Shure SM53. **Monitor Amplifiers:** Yamaha P-2200, Harman Kardon Citation 12. **Monitor Speakers:** JBL 4425 bi-radial, KEF 103.2, Auratone 5C. **Musical Instruments:** Chickering Baby grand piano, Hammond B3 w/2 (2) 122 Leslie, Yamaha DX7 IIFD, E-mu Proteus-1, E-mu Performance 1 piano module, E-mu SP-12 Turbo sampling percussion, Roland R-8 Human Rhythm Composer, Roland D-110 multi-timbral synth, Oberheim Matrix 6R ARP Model 2600 synth, 360 Systems MIDI Bass, Casio CZ-101, Fender Twin reverb, Marshall JCM-80I, Sansamp, Scholz Rockman sustainer/chorus, Gibson '59 Les Paul, Fender Precision Bass, Korg DSS-1 sampler. **Other MIDI Equipment:** Macintosh SE w/2MB RAM-40MB HD, Mark of the Unicorn Performer 3.61 w/Mark of the Unicorn MIDI Time Piece. **Other:** Headphones from AKG, Sony and Koss.

[16] **EASTWIND RECORDING;** 6820 Elliott Dr.; East Syracuse, NY 13057; (315) 463-6759. **Owner:** Michael Jaffarian. **Manager:** Ken Hoston.

[16] **ELECTRIC WILBURLAND STUDIO;** 1573 Ellis Hollow Rd.; Ithaca, NY 14850; (607) 277-0770. **Owner:** Will Russell.

[16] **ELECTRO-NOVA STUDIOS;** 342 Madison Ave.; New York, NY 10173; (212) 687-5838; FAX: (212) 687-5924. **Owner:** Mark Sydorak. **Engineers:** Mark Sydorak, Roman Bidiak. **Dimensions:** Room 1: studio 28'x17', control room 16'x12'. Room 2: studio 16'x9', control room 16'x15'. **Mixing Consoles:** Roger Mayer custom 16x16x4, Studer 900 Series 12x4. **Audio Recorders:** Studer A80 MkIII 16-track 2", Studer A80 MkIV 4-track 1/2", (3) Studer A810 1/4", Ampex ATR-102 1/4", (2) Ampex 350 1/4", Studer/Revox PR99 1/4", (2) Revox HS77 1/4", Panasonic SV-3500 DAT, Panasonic SV-3700 DAT, Panasonic SV-250 DAT, Crown 700 Series 1/4" DAT. **Cassette Recorders/Duplicators:** (11) Proton, Telex 6120 w/11 slave, KABA Real Time system w/12 slave. **Noise Reduction Equipment:** dbx 154. **Synchronization Systems:** Audio Kinetics Q-Loop 3.10. **Echo, Reverb & Delay Systems:** AKG BX-10E, Lexicon PCM70, Lexicon Prime Time, Ursa Major Space Station, Eventide Harmonizer w/keyboard, (2) Echoplexes. **Other Outboard Equipment:** (2) UREI LA-3A levelling amps, UREI 1178 stereo limiter, UREI 546 parametric equalizer (stereo), (4) Roger Mayer noise gate. **Microphones:** (2) Neumann U87, (2) Neumann KM84, Neumann U47 tube, (2) AKG C-451, (2) BK 4006, BXO stereo ribbon, (2) Beyer M260, (2) Beyer M500, (2) Beyer XIN, Beyer M160, AKG D-12, AKG D-202E, (2) AKG D-1000, (2) EV RE20. **Monitor Amplifiers:** Yamaha P2200, Studer A-68, Crown D-75, Harman Kardon Citation 12, Dynaco 120, Dynaco 70 tube. **Monitor Speakers:** (2) Altec 9849B, (2) Studer, (6) Auratone 5C, (4) Toa RS-21M. **Musical Instruments:** Baldwin 6'3" grand, Kurzweil 250 w/Full Mac support, Yamaha DX7, Minimoog, (3) EML 101, 200, 416 w/Polychord, Fender Rhodes TX, Hohner D6 Clavinet, full size Pearl drums set, Yamaha RX11 drum machine. **Video Equipment:** (2) JVC 8120 3/4" U-matic, Sony 2860 3/4" U-matic, (20) Panasonic 1230 professional duplicating decks, Panasonic AG-W1 PAL/SECAM converter. **Other:** Magnatech 2031 16/

35mm Mag XPer w/60Hz resolver, Concept Design CD-9000 cassette loader, Clamco Shrink wrapping machine. **Rates:** Prices upon request.

[16] **CHARLES ELLER STUDIOS;** also REMOTE RECORDING; 335 So. Union St.; Burlington, VT 05401; (802) 862-2605. **Owner:** Chas Eller.

[16] **EMERALD STUDIO;** REMOTE RECORDING only; RFD #2 Box 3675 Wiley Rd.; Greene, ME 04236; (207) 946-5258. **Owner:** Jeff Strout, Gary Bennett, Greg Wilkinson.

[16] **FULL BOAR PRODUCTIONS;** also REMOTE RECORDING; Sunset Ridge; Norfolk, CT 06058; (203) 542-6847. **Owner:** John P. Bazzano. **Manager:** Matthew Ayers.

[16] **GRAMPA STUDIOS;** 502 Warren St.; Brooklyn, NY 11217; (718) 260-9803. **Owner:** Mick Cantarella. **Manager:** Copter Pelagus.

[16] **GREGMAR STUDIOS;** Eatontown, NJ; (908) 542-5116; FAX: (908) 389-8019. **Owner:** Gregmar Productions Inc. **Manager:** Marcelo Oliveira. **Engineers:** Marcelo Oliveira, Gregory LaSorsa. **Dimensions:** Room 1: studio 10'x10', control room 11'x19'. Room 2: studio 12'x12'. Room 3: studio 6'x6'. **Mixing Consoles:** Ramsa WRT-820B, Mackie Designs 1604. **Audio Recorders:** Tascam MS-16HS 16-track 30 ips w/dbx and autolocator/remote, Tascam ATR-60-2HS 2-track 30 ips w/dbx and remote, Sony PCM-2500 R-DAT, Sony TCD-D10 R-DAT. **Cassette Recorders/Duplicators:** TEAC V-670. **Noise Reduction Equipment:** RSP Hush 2000 single-ended 2-channel. **Echo, Reverb & Delay Systems:** Lexicon LXP-1, Lexicon LXP-5, Alesis Quadriver, Alesis MIDiverb II, (2) Alesis Microverb, Yamaha SPX90, (2) Ibanez SDR-1000+, Digitech DSP-128, ADA S-1000 delay, Lexicon PCM 70, Alesis MIDiverb III, BBE 822A Sonic Maximizer, Digitech RDS 3.6 digital delay, Digitech Ips 33 smart shift, Digitech vocalist, Roland RSP-550, Roland VP-70, Alesis MEQ-230. **Other Outboard Equipment:** Lexicon MRC w/V. 3.0 software, (2) Symetrix 5252-channel comp/lim/expander/gate, ARTHD-15 stereo 15-band graphic EQ, BBE 422A Sonic Maximizer 2-channel, Aphex Type C Aural Exciter, Alesis Micro Enhance. **Microphones:** Neumann U87A, Shure SM58, EV RE20, EV PL20, (2) EV BK1 condenser, (10) EV 757 N/Dym, (2) EV 457 N/Dym, (6) EV 408 N/Dym. **Monitor Amplifiers:** Haller P-125, Haller Pro 5000. **Monitor Speakers:** Tannoy PBM-6.5, (6) Toa SM-25M monitor/cue, (PR) Nanny NFM/DMT-12. **Musical Instruments:** Kurzweil K-1000SE, Roland D-110, Yamaha CP60M piano, Korg P-3, Hohner D-6 clavinet, Rogers 5-pc drums w/3 roto toms, Istanbul cymbals, x-hat, cable hat, double bass pedal, Alesis HR-16/HR-16B combo. **Other MIDI Equipment:** Alesis MM18 sequencer. Alesis data disk, Roland PAD-80, MIDI time piece, JL Cooper MSB+, Roland GM-70 guitar to MIDI converter. **Video Equipment:** Panasonic PVS-350 1/2" S-VHS D/FX camcorder, JVC HRS8000-U 1/2" S-VHS Hi-Fi D/FX VCR. **Other:** Sony CD-999 headphones, Sony MDR-V2 headphones, (4) Sony MDR-V202 headphones, AKG KD-240 DF headphones, AKG K-141 headphones, The Patchbay that ate New Jersey. **Digital Workstations:** Macintosh IIsi w/co-processor, 17MB RAM, 80MB internal, 1.6 gigabyte external hard drives, Sony multiscan HG monitor, Sound Tools, Studio Vision, Performer, Composer, Encore and Galaxy Plus.

[16] **HBS PRODUCTIONS INC.;** also REMOTE RECORDING; PO Box 533; Cambridge, MA 02238; (617) 661-1971; FAX: (617) 661-1971. **Owner:** Bruce Bartone.

[16] **HI-TOUCH STUDIOS;** also REMOTE RECORDING; 10200 Owen Brown Rd.; Columbia, MD 21044; (301) 596-6612. **Owner:** N.B. Tharp. **Manager:** Steve Antosca.

[16] **THE JAMATORIUM;** PO Box 787-M; Seneca Falls, NY 13148; (315) 568-5755. **Owner:** Harry Towers. **Manager:** Harry Towers.

[16] **JOYFUL NOISE STUDIO;** 47 E. Walnut St.; Metuchen, NJ 08840; (908) 549-7928. **Owner:** Ted Coleman. **Manager:** Ted Coleman.

[16] **LAST CHANCE STUDIOS;** 914 Madison Pl.; Merrick, NY 11566; (516) 485-5853. **Owner:** Ed Warrin. **Manager:** Shelly Greaves. **Engineers:** Ed Warrin, Al Price, Robin DeLorenzo (assistant manager), Kathy Morrell, Bill Barone. **Dimensions:** Room 1: studio 11'x13', control room 12'x14'. Room 2: studio 10'x6'. **Mixing Consoles:** Carvin MX2488 24x8x2, Foxtex 450-16 16x4x2. **Audio Recorders:** Tascam MSR16 w/dbx I and remote, Foxtex Model 80, Tascam DA-30 DAT, Denon DTR-2000 G DAT. **Cassette Recorders/Duplicators:** Nakamichi MR-1. **Synchronization Systems:** JL Cooper. **Echo, Reverb & Delay Systems:** Eventide H3000S/SE, Lexicon LXP-15, (4) Yamaha SPX90II, Alesis Quadriver Plus, ART Multiverb III, Korg DRV-1000, Digitech RDS-1900, (2) Alesis Microverb II, Yamaha R100. **Other Outboard Equipment:** Alesis 3630 compressor, Rocktron 300A compressor, ADA MP-1 preamp, Ross 8x2 mixer used for four extra sends. **Microphones:** AKG 414 B-U.L.S., Philips 7300, Shure. **Monitor Amplifiers:** Yamaha P2075. **Monitor Speakers:** JBL 4406. **Musical Instruments:** Korg M-1, Roland D-10, Yamaha TX16W sampler, Oberheim Matrix 1000, Casio VZ-10M, Roland R-8M, Gibson Les Paul custom, Ibanez custom Blazer, Ibanez Pro Line series, Fender Telecaster Deluxe, Guild bass, Ibanez G string, Fender Classical, Korg Poly-800, Roland TR-707. **Other MIDI**

Equipment: Macintosh II, Atari 1040ST w/Master Trax Pro, Roland Octapad II Pad-80 w/DW5000 Kick Trigger, Passport MIDI transporter w/32 MIDI channel for ST, Opcode Studio 5. **Other:** Marshall JCM800 w/2 4-12 bottoms, Peavey Deuce, assorted foot pedals, other equipment available on request, Samson wireless. **Digital Workstations:** Sound Tools.

[16] **LAUGHING DOG PRODUCTIONS INC.;** also REMOTE RECORDING; 80 Van Duzer St.; Staten Island, NY 10301; (718) 720-9497; (800) 955-4DOG. **Owner:** Bill Donnelly. **Manager:** Daniel Friedman.

[16] **LEVELHEAD RECORDING/STUDIO AT SOUNDSCAPE;** also REMOTE RECORDING; 500 W. 52nd; New York, NY 10019; (212) 664-1033. **Owner:** Gary Wade. **John Dee. Manager:** Gary Wade, John Dee. **Specialization & Credits:** Levelhead/Soundscape is a 24-hour recording and rehearsal facility offering 2" 16-track, 1/2" 8-track, 1/4" 4-track, and 1/4" 2-track recording. We have over 2,000 square feet of space as well as a large selection of instruments, amps and outboard gear. Our staff features experienced engineers with major engineering and production credits. We also offer in-house music production, from jingles to soundtracks to albums. Past clients have included: CBS Records, Famous Music Publishing, Damn Yankees, White Trash (Elektra Records), The Jaz (EMI Records), D.L. Byron (Arista Records), John Popper (The Blues Traveller/A&M Records), Ted Nugent, Tommy Shaw (Styx), Chns Stein (Blondie), Terence Trent D'Arby, Jack Blades (Night Ranger), Peter Noone, (Herman's Hermits/VH-1/Cypress Records), Aztec Two Step, Dave Liebman, Yomo Toro, Richard X. Heyman (Sire Records), The Triplets (Mercury Records), Miller Beer and Miller Concert Series, Bed & Bath, National Dance Company of Senegal, Aid to Afghanistan Relief Fund Committee, Helen Slater (*Supergirl*), Peter MacNicol (*Ghostbusters II*), Mary Stuart Masterson (*Immediate Family*), Fisher Stevens (*Short Circuit I & II*).

[16] **MANOR HOUSE PRODUCTIONS;** also REMOTE RECORDING; PO Box GG; Millwood, NY 10546; (914) 241-2028. **Owner:** Robert J. Cancro. **Manager:** Anne Marie Vaujoies.

[16] **MIDNIGHT MODULATION;** also REMOTE RECORDING; 2211 Pine Ln.; Saugerties, NY 12477; (914) 246-4761. **Owner:** Michael Bitterman. **Manager:** Michael Bitterman.

[16] **MIRROR SOUND STUDIOS;** also REMOTE RECORDING; 1731 Cinnaminon Ave.; Cinnaminon, NJ 08077; (609) 829-9413. **Owner:** Ken Fordyce. **Manager:** Thomas Bitzer. **Engineers:** Jon Udell, Ken Fordyce, Diane Carberry. **Mixing Consoles:** Soundcraft Series 600 40x8. **Audio Recorders:** Tascam MS-16 16-track w/autolocator, Technics RS-1500 2-track, Panasonic SV-3700 DAT. **Cassette Recorders/Duplicators:** Nakamichi MR1-B. **Noise Reduction Equipment:** (4) dbx 150. **Synchronization Systems:** Zeta-3 synchronizer. **Echo, Reverb & Delay Systems:** Lexicon PCM70 w/3.0 software, (2) Lexicon LXP-5 w/MRC controller, DeltaLab ADM 1024/ADM64, Eventide instant flanger. **Other Outboard Equipment:** dbx 160, dbx 166, Symetrix 522, Omni Craft GT4, Orban 621B parametric EQ, Valley People Dyna-Mite, BBE4C2 Maxie, Drawmer DS-201. **Microphones:** (2) AKG 451EB, Neumann KM84, EV RE20, (3) Sennheiser MD-421, (2) Shure SM57, AKG 224, AKG D-2000E, Shure PL9, EV 660, (3) Crown PZM, AKG C-41EB-US. **Monitor Amplifiers:** BGW 7000B, Crown DC-150. **Monitor Speakers:** JBL 4412, Yamaha NS-10M. **Musical Instruments:** Roland S-330, Roland U-220 sampler, Roland Octapads, Korg CX-3, Fender guitar amps, Roland guitar amps, Music Man HD-120, Ludwig drums, Gibson, Fender, Ibanez guitars, Alesis D-4 drum module. **Other MIDI Equipment:** IBM AT w/VGA monitor w/ Twelve Tone's 4.0E Pro Cakewalk sequencer, drummer, Band-in-a-Box 5.0, Roland MKB-300 keyboard controller.

[16] **MUSIC FACTORY ENTERPRISES INC.;** also REMOTE RECORDING; 500 E. Washington St., Ste. 300; Norristown, PA 19401; (215) 277-9550. **Owner:** Jeffrey Calhoun, Dan Charles. **Manager:** Wesley Ochs, Cathy Raymond.

[16] **NOMAD RECORDING;** also REMOTE RECORDING; 324-2 Larkfield Rd.; E. North Port, NY 11731; (516) 368-3909; FAX: Call first. **Owner:** Nomad/Advance Artist Inc. **Manager:** Jim Brown. **Specialization & Credits:** NEW CONCEPTS IN CREATIVE AND REFLECTIVE PRODUCTION AND RECORDING. This is our new facility with the room (dead or live) for everyone, from rehearsal to tracking to digital editing to pre-/post-production to video to artwork. We get it done right, on time and under budget. Producers on staff and our own small record label make NOMAD the perfect "test bed" for newcomers or industry veterans trying out new ideas. As always we are looking for new artists for our label. Some recent artists include: AMELIA TERRY, ELK MOTEL, Tin Prince, Larry Gallagher, New Breed, J.L., Eric Weiss, BLAK SHIP, Scott Kahan, and inaudible noises.

[16] **JERRY NORELL PRODUCTIONS;** 71 Willowood Dr.; Wantagh, L.I., NY 11793-1248; (516) 731-7020. **Owner:** Jerry Norell, pres.

[16] **PARADOX PRODUCTIONS INC.;** also REMOTE RECORDING; 50 Anna Ct.; Gaithersburg, MD 20877; (301) 869-9122. **Owner:** Mark L. Crowe, William B. Baker. **Manager:** William B. Baker.

[16] P.P.I. RECORDING; 106 W. 32nd St., 3rd Fl.; New York, NY 10001; (212) 279-1631. Owner: Chip Fabrizio. Manager: Harold Hagopian.

[16] THE REC ROOM DIV. OF GRAHAM AUDIO SERVICE; 709 N. Monroe St.; Butler, PA 16001; (412) 287-1909. Owner: Stephen "Stush" Graham. Manager: Stephen "Stush" Graham.

[16] RECORDING AT LEISURE; 427 Shore Rd.; Somers Point, NJ 08244; (609) 927-0930. Owner: Bob Kimmel. Manager: Bob Kimmel.

[16] RED APPLE WORX INC.; also REMOTE RECORDING; PO Box 441532; Fort Washington, MD 20749; (301) 292-4415. Owner: Carl W. Fletcher. Manager: Carl W. Fletcher. Engineers: Jorge A. Zamorano (MIDI engineer), Ralph E. C. Maunder (principal engineer), Jesse A. Meman (staff arranger), Dave Krammic, C. W. Fletcher (producer, engineer). Dimensions: Room 1: studio 23'x18', control room 13'x11'. Room 2: studio 7'6"x7'6", control room 5'x5'6". Mixing Consoles: Allen and Heath CMC-32 32x16, Sound Workshop 1280-B 12x8. Audio Recorders: Fostex E-16 16-track w/Dolby C, Fostex E-2 3-track, Tascam 234-Syncassette 4-track, Panasonic SV-3500 DAT. Cassette Recorders/Duplicators: (2) Technics RS-B905 w/Dolby B, C, dbx. Noise Reduction Equipment: (2) Valley People Kexep II, Ashly Audio SG-33 noise gate, BBE aural processor. Synchronization Systems: (2) Fostex 4030/4035 synchronizer and remote. Echo, Reverb & Delay Systems: Alesis 1113B dual reverb, Orban 1113B dual reverb, Biamp MR 140 pro reverb, RDS digital delay system, Valley People Gain Brain II, (2) Yamaha analog delay, (2) MIDiverb II, Korg DRV-3000 digital reverb system, Yamaha SPX90, DSP 128+. Microphones: (2) AKG C-414B-ULS acoustic condenser, (10) Electro-Voice N/D357, (2) Nakamichi CM-100, (2) AKG D-12E, (4) Yamaha ME50, Beyer dynamic ME-500. Monitor Amplifiers: McIntosh 2105, McIntosh 2100, Bose 1801, Yamaha P-2150, Yamaha P-2075, BGW 6500. Monitor Speakers: (2) Gauss 7258 studio monitors, (4) Toa 280-ME 3-way reference monitors, (2) Toa 265-ME 2-way reference monitors, (4) Hot Spots. Musical Instruments: Fender Chroma Polaris, Ensoniq ESQ-M synthesis module, Korg EX-8000 synthesis module, Korg EX-8000, Yamaha TX81Z FM tone generator, E-mu SP-1200 digital sampling percussion system, Akai S900 digital MIDI sampler, Akai VK900 Moog Source, Korg M1 digital workstation, Kurzweil GX-1000 guitar expander. Other MIDI Equipment: Voyetra sequencer Plus MkIII, Yamaha KX88, Korg RK-100 remote MIDI controller, (2) Yamaha MJC 8 MIDI patch bays keyboard controller. Other: Premier drum set, Premier Roto-toms, Mesa Boogie studio 22 amplifier, Peavey TNT-150 w/black widow speaker, IBM PC (Vendex) XT, Omni service PC (IBM XT-clone) 80MB hard drive, New Service—Complete photography studio (Portrait or Band Photos). Rates: \$35/hour (includes engineer) plus materials (tape), Bulk Rate \$30/hour (includes engineer) plus materials (tape).

[16] SAINTS AND SINNERS SOUND STUDIO; 432 West-ern Ave.; Albany, NY 12203; (518) 454-5278. Owner: College of St. Rose. Manager: M. A. Nelson.

[16] SHUSTER SOUND; also REMOTE RECORDING; 29 Burt Ct.; Valley Stream, NY 11581; (516) 791-2985. Owner: Bob Shuster. Manager: Bob Shuster.

[16] SILVER LININGS INC.; also REMOTE RECORDING; 25 Huntington Ave., Ste. 617; Boston, MA 02116; (617) 262-9289; FAX: (617) 266-3067. Owner: Arklay King. Manager: Arklay King.

[16] SOUND SITUATION; also REMOTE RECORDING; 130 Griswold St.; Glastonbury, CT 06033; (203) 633-1952. Owner: David Budries. Manager: David Budries.

[16] SOUNDWORKS STUDIO; also REMOTE RECORDING; 10 Wheeler Ct.; Watertown, MA 02172; (617) 924-0665. Owner: Brian Capouch. Manager: Diane Menyuk.

[16] STAR BASE STUDIO; 41-53 53rd St.; Woodside, NY 11377; (718) 476-0665; FAX: (718) 476-0665. Owner: Chuck Thompson. Manager: Chuck Thompson. Engineers: Chuck Thompson. Dimensions: Studio 17'x15', control room 25'x20'. Mixing Consoles: Amedk Tac Scorpion 32x8x8x2, Tascam MM-1 20x2. Audio Recorders: Otari MX-70 16-track, (2) Sony PCM 2500 2-track, Tascam 32 2-track, Teac 3340S 4-track. Cassette Recorders/Duplicators: Sony TC WR-930 double deck, Bang & Olufsen BE2200. Noise Reduction Equipment: (4) Symetrix 511A. Synchronization Systems: Akai MPC-60. Echo, Reverb & Delay Systems: Lexicon 480L, Lexicon PCM70, Lexicon PCM60, Yamaha REV7, (2) Yamaha SPX90, (2) Yamaha SPX900, TC Electronics 2290, (4) Drawmer DL-241, (4) Drawmer DS-201, Focusrite ISA 115HO, Massenburg 8200, BBE 802, Orban 464A, Orban 536A, Eventide H3000-S, UREI 1176LN, Roland SRV-2000, Roland SRV-3000, (4) dbx 160X, (4) dbx 166, Deltalab Super Time Line, MXR 1/3-octave graphic EQ, Loft 400 quad gate/limiter, Furman PQ-6 parametric EQ, Aphex Type C Aural Exciter, (2) dbx 165A, Orban 642B, MEQ 28 (DigiTech). Other Outboard Equipment: (2) Studiomaster IMP-1, Lexicon MRC. Microphones: Neumann U89, (2) Neumann U87, AKG 421, AKG 414, (5) Shure SM58, (2) Shure SM57, (4) EV D054, (2) EV RE20, (2) Sennheiser MD441, (2) Sennheiser 421,

(2) Beyer 160. Monitor Amplifiers: (2) Crown Micro-Tech 1200, (2) Crown DC-300, JBL 6260, Yamaha P2350. Monitor Speakers: (2) KKR 707, (2) EV MS-802, (2) Yamaha NS-10, (2) JBL 4412. Musical Instruments: Akai S-1000 HD, Casio FZ-1 sampler, Roland D-50, Korg M-1, Roland MKS-20, Roland MKS-70, Yamaha DX7 Video Equipment: (2) Panasonic AG-7500A editing VCR S-VHS, Panasonic AG-A750 editing controller.

[16] STRAIGHT ARROW RECORDINGS (FORMERLY BACKTRACKS); also REMOTE RECORDING; 3 Kent St.; Montpelier, VT 05602; (802) 223-2551. Owner: Mike Billingsley. Manager: Geoff Brumbaugh, Lin Haley. Specialization & Credits: Starting with blues and folk music in the sixties, our experience extends now to all acoustic music, ranging from European Classical solos, ensembles and orchestras; African and Caribbean percussion; American and European folk music; Gamelon and Klezmer orchestras; jazz ensembles and contemporary experimental compositions. Since 1985 we have had our digital recording equipment modified to meet the highest standards of recording and reproduction. While we have multitrack recorders in our new two-room studio, we still encourage live mix and direct-to-stereo recordings, particularly in fine halls. Our monitoring environment is accurate, using Tannoys and B&W 801s driven by Bryston and Yamaha amps, and we employ a variety of direct-to-stereo techniques (including SASS-B and SASS-P microphones, designed here in 1982). The just completed studio complex is comfortable and spacious, with 16' ceilings and a soft, full-range room tone in the main room, plus 13' ceilings in the control/editing room. We also do CD pre-mastering with our digital editors and a full-complement of digital signal-path processors. Inquiries for field recordings, custom sound effects and ambience recordings are also welcomed.

[16] SUBTERRANEAN SOUND; also REMOTE RECORDING; 504 High St.; Long Branch, NJ 07740; (908) 870-1379. Owner: Stacy Phelon. Manager: Stacy Phelon.

[16] SUNSET RIDGE RECORDING; also REMOTE RECORDING; 194 Kensington Rd.; Hampton Falls, NH 03844; (603) 926-2907; FAX: (603) 926-2907. Owner: Christopher Bigg. Manager: Christopher Bigg. Engineers: Christopher Bigg. Dimensions: Studio 15'x25', control room 13'x13'. Mixing Consoles: Tascam M-600. Audio Recorders: Tascam MS-16 1", (2) Toshiba DX9000 PCM (VHS), Tascam 42B 2-track, Panasonic SV-3500 R-DAT, Sony DTC 700 DAT. Cassette Recorders/Duplicators: (2) Tascam 122. Noise Reduction Equipment: (2) dbx DX8DS, Rocktron Hush IICX. Synchronization Systems: SMPTE trac. Echo, Reverb & Delay System: Lexicon PCM70, TC Electronic 2290 digital delay, TC Electronic 1210 chorus/flanger, (4) DigiTech Smart Shift, (2) Alesis QuadraVerb, Yamaha SPX90II, Barcus-Berry 802 signal processor, Korg A2, A3 performance signal processors, Roland SRV-2000 reverb. Other Outboard Equipment: (2) Audio Logic SC-31 equalizer, (2) Furman Quad noise gates, (2) dbx 163x compressor/limiter, dbx 166 compressor/limiter, Symetrix 525 stereo compressor/limiter, dbx 463X noise gate, dbx 263X de-esser, Rane HC6 headphone amp, Aphex Aural Exciter type III, Aphex Compellor Trace Elliot gp11 bass preamps. Microphones: Neumann U87, (2) AKG C-414BULS, (2) EV RE20, (3) EV ND308, (2) EV RE11, (3) Audio-Technica 813R, (2) Beyer M160, (3) Audio-Technica 33R, CAD Equitek II. Monitor Amplifiers: AB Electronics 900A, and 600A Crown 75. Monitor Speakers: (2) UREI 809, (2) Yamaha NS-10M studio, (2) Auratone, (2) Snell Acoustics Model A, (2) Westlake audio M-4. Musical Instruments: Alesis HR-16 (& SR 16) drum machine, Korg M1, Roland D-70 linear synth, Roland JX-8P polyphonic synth, Roland Octapad, Baldwin Spinnet, Ludwig 1972 5-piece drum kit, Hohner "Jack" bass, Korg DSM-1 sampler/synth. Other MIDI Equipment: Atari 1040. Video Equipment: Minolta V10R camcorder, (2) Kodak MVS-5000 8mm audio/video recorder. Rates: Call for block rates.

[16] TARGET RECORDING STUDIOS; also REMOTE RECORDING; 801 Valley Rd.; Newark, DE 19711; (302) 731-4431. Owner: Marc Moss. Manager: Keith Moss.

[16] TASHA STUDIOS; also REMOTE RECORDING; 53 Stirrup Ln.; Levittown, NY 11756-3817; (516) 579-5036; FAX: (516) 579-5036. Owner: Bob Ardito. Manager: Sharon Ardito. Engineers: Bob Ardito. Dimensions: Room 1: Studio 12'x8', control 13'x14'. Mixing Consoles: Tascam M-520B board, (2) Mackie Designs 16-channel line mixer. Audio Recorders: Tascam MS-16 HS 16-track recorder, JVC DS DT900N DAT recorder. Echo, Reverb & Delay Systems: Lexicon LXP-15, Lexicon LXP-5, (2) Lexicon LXP-1, Roland DEP-5, Roland VP-70 voice processor, Roland SDE-2500 digital delay, (4) dbx 163x compressor, BBE 802 enhancer, Symetrix 533 quad expander gate, Yamaha SPX900, Alesis 3630 compressor, Alesis QuadraVerb Plus. Other Outboard Equipment: Tascam AQ-65 autolocator. Microphones: AKG C414B-ULS, AKG C451EB, (2) Crown PZM-6FS, (2) EV N/DYM 408, EV N/DYM 757, Sennheiser MD-421-U5, Sennheiser MD-441-U3, Sennheiser MKH-40-P48, Shure SM58. Monitor Amplifiers: Carver PM1200, QSC 1400, Crown MT600. Monitor Speakers: (2) Yamaha NS-10M, (2) Auratone 5C cube, (2) UREI 809. Musical Instruments: Yamaha TG77 Synth module, Korg wavestation EX keyboard, Roland D-70 keyboard, Korg M1-EX keyboard, Roland MKS-70 Super JX sound module, Moog Minimoog, Roland D550 sound module.

—LISTING CONTINUED ON NEXT PAGE

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—LISTING CONTINUED FROM PREVIOUS PAGE

Yamaha TX802 sound module, Roland S550 sampler, Akai S1000 sampler E-mu Proteus/1 sound module, E-mu Proteus/2 sound module, Roland R-8 drum machine, Ensoniq VFX-SD keyboard, Alesis HR-16 drum machine, Alesis HR-16B drum machine, Kawai K1R sound module, Roland U-220 sound module, Ensoniq ESQ-M sound module, Oberheim Matrix-6R sound module, E-mu Performance/1, Roland Pad 80II Octapad, Simmons S1000 electronic drum set. **Other MIDI Equipment:** (4) MOTU MIDI Time Piece, Lexicon MRC MIDI remote. **Video Equipment:** Panasonic AG-6300 1/2" VHS VTR, Hitachi CT 13x1 monitor, JVC CR-6300U 3/4" U-matic VTR. **Other:** Apple Macintosh SE30 computer, Micro-Tech 45MB removable hard drive, MOTU Performer software, Opcode Vision software. **Rates:** Call for rates.

[12] **THREE COMMUNICATIONS PRODUCTIONS;** also REMOTE RECORDING; 510 Main St.; Middletown, CT 06457; (203) 347-8439. Owner: Michael Arafah. Manager: Michael Arafah.

[16] **THURSDAY PRODUCTION INC.;** 189 Norman Rd.; New Rochelle, NY 10804; (914) 235-7505. Owner: Daniel M. Welsh. Manager: Susan J. Welsh. Engineers: Daniel Welsh, Len Fassett, Ernie Sprance. **Dimensions:** Studio A: 23'x16' w/ movable ceiling-to-floor gobos, drum booth 11'x6' w/floating floor, control room 12'x11'. Studio B: voice booth/studio 10'x8', control room 10'x12'. **Mixing Consoles:** Tascam M16 24x24x8, Ramsa WRT-812 12x8, Carvin MX-1202 (remote board). **Audio Recorders:** Tascam DA 30 DAT, Otari 5050-MkIII-8 8-track, Tascam 80-8 8-track, Otari MX-70 16-track, Otari MTR-10 2-track, Ampex 440C 2-track, Ampex 440C 4-track, Otari MX-5050 MkII 2-track, (2) Otari MX-5050 mono full-track. **Cassette Recorders/Duplicators:** Tascam 122B, Tascam 112, Sony TCM-5000 mono, (3) Telex CDM 4-cassette duplicator. **Echo, Reverb & Delay Systems:** Lexicon PCM60, Lexicon Prime Time, Master-Room XL-305, Orban stereo reverb, MXR System II, ART Proverb, Alesis MIDIVerb II, Yamaha SPX90, ART Multiverb EXT, Effectron II, Alesis MIDIVerb. **Other Outdoor Equipment:** dbx 160, UREI limiters, (2) Aphex Studio Dominator limiter, Ashly Audio parametric EQ, Orban 245F, Aphex Exciter C, Rane and MXR graphic EQ. **Microphones:** Neumann U87, AKG 414ULS, Shure SM80, Sennheiser 421, (5) Electro-Voice RE80, Shure, Beyer, Crown PZM, Audio-Technica 4033 etc. **Monitor Amplifiers:** McIntosh 2120, Hafler, JVC JAS 41. **Monitor Speakers:** JBL 4312, Yamaha NS-10M, Tannoy PBM-8, Auratone 5C. **Musical Instruments:** Baldwin custom upright, Yamaha DX7FD, Korg M1 workstation, Roland MKS digital piano, Korg DD-1, Roland Juno-106, Yamaha TX rack, Korg DVP, Ludwig full set of drums (three snares), E-mu Proteus II Module. **Other MIDI Equipment:** Atari 1040ST, many multitrack programs available. CD effects libraries and Macintosh-based computer programs available. **Video Equipment:** Complete interformat edit system including: (3) Panasonic AG 7550 edit deck, Alta Centaurus, UM1 450 edit-controller, all Sony broadcast monitors. Audio layback to video available. **Rates:** Available upon request. Project rates available. **Specialization & Credits:** Thursday Productions offers a relaxed yet professional recording environment capable of handling a wide variety of audio-video projects. Our engineers are not just tweakers...they are solid, creative people dedicated to making the best possible audio product available. Attention to detail is the working standard—no aspect of the production process is overlooked. Thursday has become a leader in making soundtracks for education...many of which have won major awards for their clients. It's gratifying to know that some of these same clients have been filling the datebooks for over ten years. They recognize our studio's ability to consistently deliver clean product year after year. Perhaps one of our long-term clients sums it up best...and they seem to be able to rate everything. Says executive producer Ed Partikian for the radio version of *Consumer Reports Magazine*: "Thursday has produced our nationally distributed radio feature since 1985. Obviously they're pros. But more than that, they are dedicated to the project...and our program is the happy beneficiary."

[16] **THUS & SUCH PRODUCTIONS;** PO Box 325; Crompond, NY 10517; (914) 526-2124. Owner: Bill Philbrick. Manager: Dinah Mondoneda.

[16] **VISCOUNT RECORDING STUDIOS;** also REMOTE RECORDING; 486 Wellington Ave.; Cranston, RI 02910; (401) 467-9362. Owner: Russell J. Martin. Manager: Russ Martin.

[16] **WINGS AS EAGLES;** also REMOTE RECORDING; 151 Keeley Ave.; Warwick, RI 02886; (401) 738-6914. Owner: Bill Montella Jr.

[16] **ZEDZ MUSIC;** also REMOTE RECORDING; 49 Hanover St.; Malden, MA 02148; (617) 324-1989. Owner: Zed McLarnon. Manager: Zed McLarnon.

2-, 4- & 8-track studios

[4] **ALPHA PROFESSIONAL AUDIO INC.;** also REMOTE RECORDING; 12 Charcoal Rd.; Norwalk, CT 06854; (203) 866-4139. Owner: David LeVan. Manager: Annamare LeVan.

[2] **AUDIOFORCE;** 6309th Ave., Room 1012; New York, NY 10036; (800) 847-4123; (212) 262-2626; FAX: (212) 262-2632. Owner: Ray Buccafusco. **Specialization & Credits:** Complete digital mastering, editing and transfer service. Audioforce technicians are experts in a wide range of CD prep and mastering services, including digital-to-digital format conversion using Harmonia Mundi sample rate converter. With this amazing device, we can transfer your tracks or final mixes to Sony 1630 (the standard for CD mastering) from Mitsubishi X-86HS, Sony 3042, DAT, and DASH or Pro-Digi multitrack and other formats—entirely in the digital domain. We also offer CD mastering services using the Sony 3000 digital editing package along with Sony digital EQ, limiting and compression. Digital format incompatibility? At Audioforce, there's no such thing.

[8] **"BIG T" PRODUCTIONS;** 24 Haviland St. #8; Boston, MA 02115; (617) 267-2802. Owner: Anthony Schultz. Manager: Anthony Schultz.

[8] **C & M RECORDING;** also REMOTE RECORDING; 9 1/2 Gray Ave.; Kingstons, MA 02364; (617) 585-3716. Owner: Michael A. Rego. Manager: Cheri-Anne Rego.

[8] **CITY SOUND PRODUCTIONS;** 39 E. 7th St., Ste. #2; New York, NY 10003; (212) 228-9494; FAX: (212) 228-9494. Owner: Bob Kirschner. Manager: Bob Kirschner.

[2] **COMMON MODE;** also REMOTE RECORDING; 50 Northfield Ave.; West Orange, NJ 07051; (201) 736-7191. Owner: Paul Fowlie. Manager: Duke Markos.

[4] **CREATIVE MEDIA MARKETING INC.;** 2175 Allen St.; Rahway, NJ 07065-4401; (908) 574-8984; FAX: (908) 574-1830. Owner: Russ Panter.

[8] **CYRUS SOUND;** also REMOTE RECORDING; 3545 South Park Rd.; Bethel Park, PA 15102; (412) 854-2076. Owner: Cyrus V. Anderson Jr. Manager: Cy Anderson.

[8] **JACK DANIELS PRODUCTIONS;** 8056 Tuckerman Ln.; Potomac, MD 20854; (301) 983-9595; FAX: (301) 983-8750. Owner: Jack Daniels. Manager: Jack Daniels.

[8] **DEMO-VOX®/D-V-X INTERNATIONAL®;** also REMOTE RECORDING; 1038 Bay Ridge Ave.; Brooklyn, NY 11219; (718) 680-7234. Owner: Demo-Vox Sound Studio Inc. Manager: Laura Grassi.

[8] **EMERALD PRODUCTIONS;** 528 N. New St.; Bethlehem, PA 18018; (215) 691-8205; FAX: (215) 691-8465. Owner: Patrick Galgon. Manager: Andrea Czarnecki.

[8] **FISHBOWL PRODUCTIONS;** 89 Clinton St., 3rd Floor; Everett, MA 02149; (617) 389-5816. Owner: Joe Miraglio. Manager: Joe Miraglio.

[4] **FOOTHILL DIGITAL PRODUCTIONS INC.;** also REMOTE RECORDING; 215 W. 91st St.; New York, NY 10024; (212) 877-0973. Owner: Allan Tucker. **Specialization & Credits:** Two editing and mastering suites, each with a Sonic Solutions digital audio system. Serving the majors, minors, indies and outies. Call for rates and availability.

[8] **SCOTT GORDON ENTERPRISES INC.;** also REMOTE RECORDING; PO Box 791; Paramus, NJ 07653-0791; (201) 670-0054; FAX: (201) 670-7785. Owner: Scott Gordon. Manager: H.S. Buehlmeier.

[8] **GREAT EGG STUDIOS INC.;** also REMOTE RECORDING; 137 St. Charles St.; Drexel Hill, PA 19026; (215) 284-4760; FAX: (215) 284-4760. Owner: Marc A. Gallo. Manager: Dan H. McKay.

[8] **HELIOTROPE STUDIOS LTD.;** also REMOTE RECORDING; 21 Erie St.; Cambridge, MA 02139; (617) 868-0171; FAX: (617) 868-0172. Owner: Boyd Estus. James Griebisch.

[8] **HONEYBEAR RECORDING STUDIO;** 2510 Raspberry St.; Erie, PA 16502; (814) 459-BEAR (2327). Owner: Walter Silivinski.

[8] **JAMLAND RECORDING STUDIO INC.**; 8610 Evergreen Pl.; Philadelphia, PA 19118; (215) 242-5002; FAX: (215) 242-5519. **Owner:** Grover Washington III. **Manager:** Grover Washington III. **Engineers:** Grover Washington III. **Dimensions:** Studio 25'x20', control room 10'x20'. **Mixing Consoles:** Tascam M 3500 24x8, Roland M-24E line/sub. **Audio Recorders:** Tascam TSR-8 8 track w/remote. **Cassette Recorders/Duplicators:** Technics. **Synchronization Systems:** JL Cooper PPS-2 Sync Box. **Echo, Reverb & Delay Systems:** Yamaha SPX900 multi-effect processor, Lexicon PCM-60 digital reverb. **Microphones:** (4) Countryman EM 101 condenser, Sennheiser MKE-40, (2) Beyer Dynamic, AKG D-2000 E. **Monitor Amplifiers:** Tapco CP 500M, Crown DC-300A, GW System 250 D, Carver C 1 preamp. **Monitor Speakers:** (2) JBL 4312, (2) JBL 4401. **Musical Instruments:** Roland D-50 keyboard, Roland D 20 keyboard, Yamaha DX71FD keyboard, Sequential Circuits Prophet-5 analog keyboard, Akai/Linn 9000 drum machine w/91 updates, Akai S-1000 HD digital stereo sampler. **Other MIDI Equipment:** Macintosh IIcx (color monitor) w/Performer, Studio Vision, Master Traks Pro software, Studio Plus Two MIDI box, Eltekon 600MB hard drive. **Digital Workstations:** Alchemy digital sampler/editing for Mac, Digidesign Audio Media software. **Rates:** \$50/hour studio time. \$25/hour production services. \$20/hour for engineering services. \$50/tape (8-track)

[8] **BOB JOHNSON AUDIO ENGINEERING**; also *REMOTE RECORDING*; 7 Crofut Rd.; Naugatuck, CT 06770; (203) 729-7871. **Owner:** Robert D. Johnson.

[8] **K STUDIOS**; also *REMOTE RECORDING*; 95 Laffin Rd.; Wilkes-Barre, PA 18702; (717) 654-2299. **Owner:** Al Kennedy. **Manager:** Al Kennedy.

[8] **LA 'CON MUSIC & STUDIO/MIDI PRODUCTION**; 47 Heritage Ln.; Fords, NJ 08863; (908) 855-9219. **Owner:** Larry Merrweather. **Manager:** Connie Merrweather.

[4] **MASTERS BY JOHNSON**; 832 Montgomery Ave.; Narberth, PA 19072; (215) 664-1188; FAX: (215) 664-1434. **Owner:** Stephen Johnson. **Manager:** Stephen Johnson.

[8] **METRO RECORDING STUDIOS**; also *REMOTE RECORDING*; 364 Worthington St.; Springfield, MA 01103; (413) 734-3240; FAX: (413) 734-3240. **Owner:** Chalero Music Company. **Manager:** Bill Myers.

[8] **MOMMA EVE SOUNDS**; also *REMOTE RECORDING*; 4209 Fords Lane; Baltimore, MD 21215; (301) 764-7704. **Owner:** Larry Lee McCants. **Manager:** Evelyn Floyd. **Engineers:** Larry Lee McCants, Carel Floyd, Jr. **Mixing Consoles:** SECK 1882 MkII, Yamaha MV1602. **Audio Recorders:** Tascam TSR-8 8-track. **Cassette Recorders/Duplicators:** Tascam 122 MkII. **Noise Reduction Equipment:** Hush II CX, built-in dbx TSR-8, Dolby B, C 122 MkII. **Synchronization Systems:** SMART FSK. **Echo, Reverb & Delay Systems:** Alesis Quadraverb multi-EFX unit, Yamaha R100 reverb unit, (3) Alesis MIDiverb II reverb unit. **Other Outboard Equipment:** Yamaha Q 2031 31-bank graphic stereo EQ, Yamaha GC 2020 compressor/limiter, BBE 422 A sonic maximizer, BBE 822 A sonic maximizer, Symetrix stereo parametric EQ, Alesis micro cue amp. **Microphones:** (13) various. **Monitor Amplifiers:** Hafler P225. **Monitor Speakers:** (2) Yamaha NS-10Ms, (2) custom-made Big Boys. **Musical Instruments:** (3) Yamaha TX812 w/over 2500 voices, Roland U220, Roland R8M w/complete card library, Yamaha RX5 w/complete cartridge library. **Other MIDI Equipment:** Yamaha QX5 sequencer, Yamaha MJCB, Yamaha KX88.

[4] **NARWOOD PRODUCTIONS**; also *REMOTE RECORDING*; 425 Madison Ave.; New York, NY 10017; (212) 755-3320. **Owner:** Narwood Productions Inc. **Manager:** David LeVan.

[8] **PANETTA STUDIOS**; also *REMOTE RECORDING*; 6 Miller Ave.; Elmwood Park, NJ 07407; (201) 791-0254. **Owner:** Angelo Panetta. **Manager:** Rob Pashman.

[4] **RANDOM ACCESS**; also *REMOTE RECORDING*; 50 Amory St.; Cambridge, MA 02139; (617) 547-7973. **Owner:** Jonathan A. Wyner. **Manager:** Robin Coxo-Yeldham.

[8] **REED W. ROBINS PRODUCTIONS**; 874 Broadway, Ste. 901; New York, NY 10003; (212) 673-5139. **Owner:** Reed W. Robins. **Manager:** Reed W. Robins.

[8] **FRANK SCHEIDT AUDIO PRODUCTIONS INC.**; 15 Charlotte St.; Rochester, NY 14607; (716) 232-5210; FAX: (716) 232-5212. **Owner:** Frank Scheidt. **Manager:** Matthew Scheidt.

[2] **SELTZER SOUND**; also *REMOTE RECORDING*; 185 E. Broadway; New York, NY 10002; (212) 477-2372. **Owner:** Carl Seltzer.

[8] **SOUND OF GLASS**; PO Box 2329; Worcester, MA 01613; (508) 835-2501. **Owner:** Charles E. Blaum. **Manager:** Charles E. Blaum.

[8] **STUDIO PASS**; 596 Broadway, #602; New York, NY 10012; (212) 431-1130. **Owner:** Harvestworks Inc. **Manager:** Alex Noyes. **Engineers:** Alex Noyes, Brenda Hutchinson, Ted

Orr, Connie Kietlyka, Dana McCurdy. **Dimensions:** Room 1: studio 12'x15', control 15'x22'. **Mixing Consoles:** Soundcraft 600 24x8x16. **Audio Recorders:** Otari MX-5050 MkIII-8 8 track, Panasonic SV-3700 DAT recorder, Teac DA-P20 Portable DAT recorder, Otari MX 5050 BII 2-track, Otari MX 5050 BII 2-track w/center time code track, Sony PCM-F1, Tascam 40-4 4 track. **Cassette Recorders/Duplicators:** (2) Tascam 122. **Noise Reduction Equipment:** (10) dbx Type I, (2) dbx 929 single-ended. **Synchronization Systems:** Tascam ES-50 control unit, (2) Tascam ES-51 synchronizers. **Echo, Reverb & Delay Systems:** Eventide H3000 (SE, B, sampling), Lexicon PCM60, Lexicon LXP-1, Lexicon LXP-5. **Other Outboard Equipment:** dbx 166 stereo compressor w/gates, Drawmer DS 201 stereo noise gates, BBE 422 sonic maximizer. **Microphones:** AKG 414, (2) AKG 451, (2) Sennheiser 421, Shure SM57, (2) EV CS 51e. **Monitor Amplifiers:** Crown D-150, Harman Kardon Citation Sixteen. **Monitor Speakers:** (2) Meyer HD-1, (2) Yamaha NS 10M. **Musical Instruments:** Digidesign SampleCell sampler w/BMB RAM, E-mu Emax sampler, Akai S950 sampler, E-mu Proteus I XR, Yamaha TX802 FM synthesizer, Roland MKS 80 analog synthesizer w/programmer. **Other MIDI Equipment:** Opcode Studio Three MIDI/SMPTE interface, Roland MKB 1000 master keyboard, Roland Octapad percussion controller, extensive software library including Opcode (Studio Vision, Vision, MAX, Galaxy Plus Editors, Track Sheet, Cue), Digidesign (Sound Designer, Deck, Turbosynth, Soltsynth, etc.) and more. **Video Equipment:** JVC CR 6650 3/4" VCR, Sony SLV 50 VHS VCR, Sony SL-2000 Beta VCR, Panasonic CT-2010Y 20" monitor, Hitachi 13" video monitor. **Other:** Technics SL 1200 MkII turntable, Sony CD P-208 ESD CD player. **Digital Workstations:** Digidesign Soundtools system based around a Macintosh Iix w/BMB ram and an 80MB internal hard disk, 180MB external hard disk, 600MB external hard disk, Digidesign PRO I/O analog interface and DAT I/O digital interface. **Rates:** Available upon request, including special rates for CD pre-mastering and audio for video sweetening.

[8] **TAKE FIVE STUDIOS**; PO Box 4091; Linden, NJ 07036; (908) 486-0129. **Owner:** William V. Weist. **Manager:** Willie West.

[8] **THE TURNING MILL**; PO Box L; Palenville, NY 12463; (518) 678-9293; FAX: (518) 678-9293. **Owner:** Lucy Swenson. **Manager:** Owen Swenson.

—CONTINUED FROM PAGE 141, N.Y.

East Hill, which formerly operated across the river in New Jersey, opened in New York in March of last year. Why open a mainly music recording studio in Manhattan in the dead of the recession? "We wanted to offer people more than they could get at most studios," co-owner Joel Kipnis says. "You can't get by with just another 2-4-track room." Kipnis says that a combination of in-house production work carried over from the studio's previous incarnation and a good rep among producers like Nile Rodgers and Russ Titelman keeps the phones ringing. East Hill's large control room sports a hydraulically operated MIDI setup that keeps MIDI in the control room, not in a separate suite.

Institute of Audio Research in Manhattan opened a new room in January. It sports a 28-input Trident Series 24 console, Studer multi- and 2-track with Dolby SR and a Zeta-2 synchronizer. Design was by the Institute's faculty under the supervision of chief engineer Greg Curry. ■

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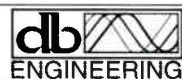
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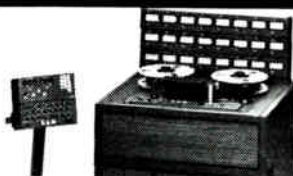
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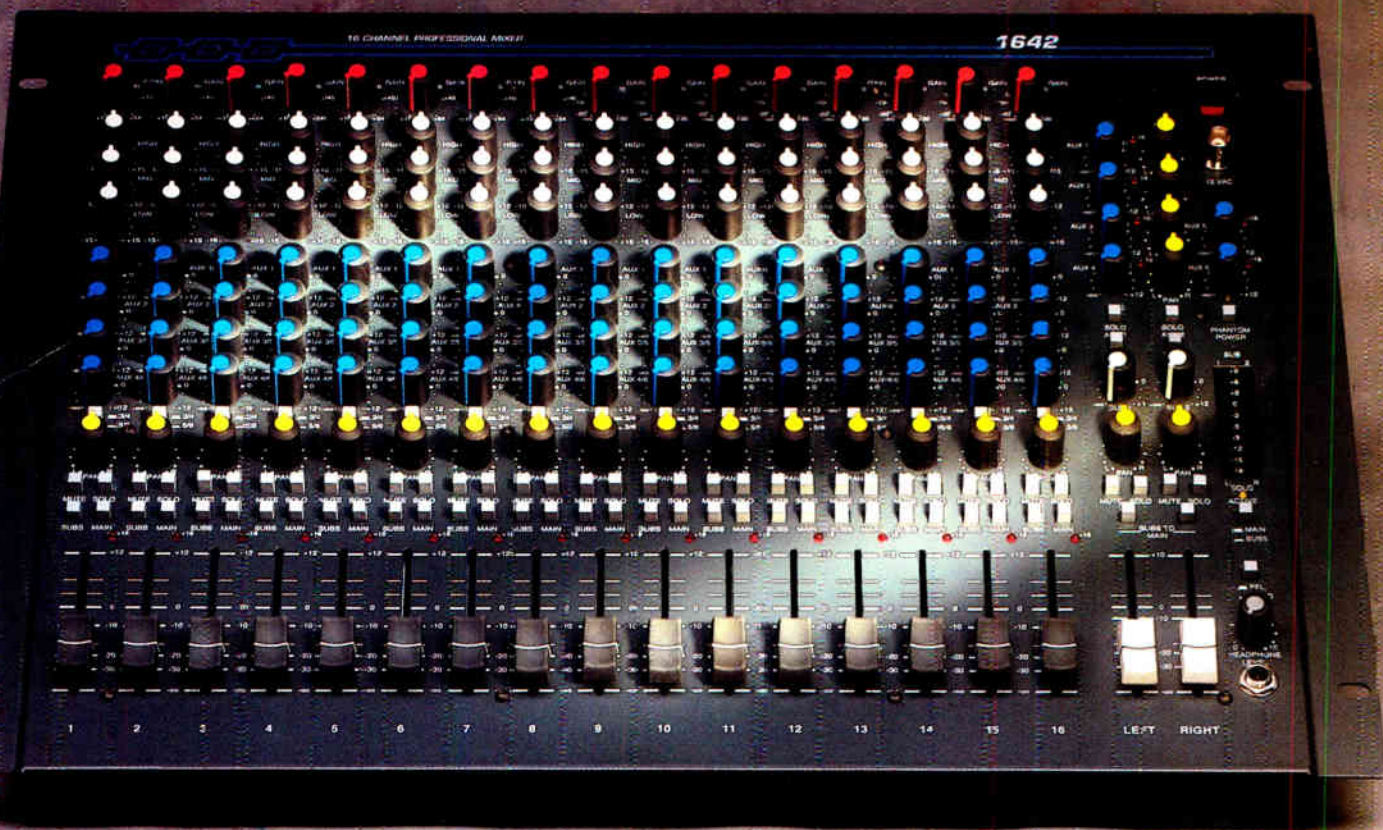
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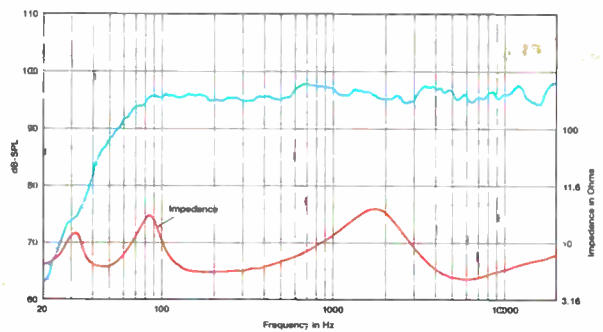
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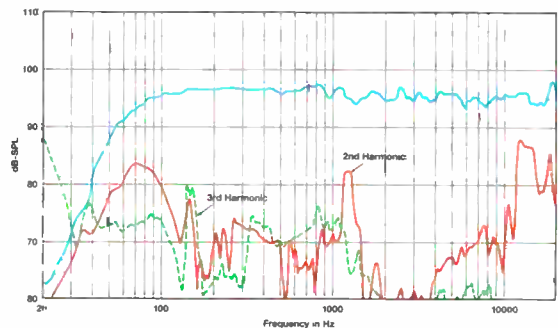
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